

# PROFESSIONAL BOATBUILDER

## SUBJECT INDEX

ISSUES 1 – 173

---

### A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

---

- A&S Building Systems, Inc.: pre-engineered metal buildings, 17:34, 26:18
- Abaris Training: advanced-composite workshops, 47:57, 52:67, 69:125; ultrasonic inspection/survey techniques, 35:42; vocational training program, 20:26
- Abbass, D.K. (Kathy): on surveyor Paul Coble and development of his Marine Survey Seminars, 93:4
- Abbey, Howard: profile of, 104:100; Wyn-Mill racer/Jim Wynne/Walt Walters, 132:36
- Abbott, Daniela T.H., author: "Olin Stephens's Last Project," 119:20
- ABBRA. See American Boat Builders and Repairers Association
- Abeking & Rasmussen: Concordia yawl, 50:32; Michael Peters Yacht Design 44m motoryacht, 66:52; waterjet-powered fast motoryacht/Michael Peters Yacht Design, 126:38; *Vamarie*, steel ketch, 68:11
- Abely Wheeler*, aluminum constructed commuter boat, 91:20
- Able Marine (Trenton Marine): fabric impregnator applications, 5:34; foam core installation, 9:36; 91'/93' megayacht, 3:11, 10:42, 29:58; one-off tooling, 10:42; 3M protective tape, 29:58
- Abma, Albert, author: "A Study in Slender," 147:18,
- Abramson, Tim: on displaying hull identification numbers, 61:5
- abrasive discs. See abrasives, diamond; grinders/polishers, discs for; sandpaper
- abrasive pads: Micro-Mesh, 12:60
- abrasives, diamond: Mister Blister, 12:60; Tech-Lok diamond discs, 25:59
- Abrasive Technology Inc.: Tech-Lok diamond discs, 25:59
- ABS. See American Bureau of Shipping (ABS)
- ABS Construct: parts generation software, 8:35
- ABS plastic: ABS/acrylic coextrusions, 10:34, 11:20; ABS/Rovel coextrusions, 34:59; performance, 10:34. See also Royalex
- ABYC. See American Boat and Yacht Council (ABYC); ABYC safety standards
- ABYC safety standards: battery chargers, 61:128; bilge pumps, 44:26, 57:48; boat lifting and storage, 50:3, 50:38; booklet *Standards and Recommended Practices* and UL Marine Listing, 61:128; cabin heaters, 45:32; Canadian phase-in of ABYC standards, 154:56; carbon

monoxide detectors, 45:32; on CD-ROM, 49:79; certification/harmonization/European market, 28:54, 37:66, 41:38, 41:42, 43:17, 75:22, 104:96, 154:56; and cogeneration requirements/“anti-islanding,” 77:28; cross-referenced to ISO standards, 55:87; development/writing process, 36:46, 36:48; electrical system standards and AS/NZS standards, 154:56; electrical systems/cables/wiring, 8:12, 8:24, 35:18, 35:19, 35:23, 36:41, 37:4, 38:4, 38:55, 54:32, 82:40, 98:50, 134:4; exhaust systems, 45:32, 49:16; fire extinguishers, 36:46; guidelines on gas and diesel fuel systems, 84:82; Homeland Security Response Boat, 87:4; flotation foam, 37:48, 37:58; fuel injection, 36:46; fuel/water tanks, 52:18; galley stoves, 45:32; galvanic isolators, 33:4, 41:21, 43:5, 45:105, 138:18; International Marine Standards Summit/hosting of, 104:96; introduction of new standardized warning labels, 156:12; isolation transformers, 45:105; jet boats, 36:50; lightning protection, 38:55, 43:64; liquefied petroleum gas (LPG) standard/LPG-A-1, 169:72; lithium-ion battery hazards/technical paper, 136:80, 149:34; nonskid surfaces, 69:92; overcurrent protection, 36:41, 45:32, 57:48, 85:114, 94:84; personal injury/product liability, 15:50, 34:13; product warnings/safety labels, 45:14; Project Technical Committees (PTCs), 98:50; pump wiring, 44:26; railings, 69:92; refrigeration/air-conditioning exhaust drains, 45:32; running AC and DC wires together, 154:56; seats, 36:46; residual current

protection devices for AC circuits, 154:56; sea valves/through-hulls, 8:42, 38:4, 49:16; small craft, 4:10, 8:24; *Standards and Technical Information Reports for Small Craft*, 117:18; Standard for Wet-Exhaust Components for Marine Engines, 172:4; technical standards/updates, 117:18; tinned wire, 138:3; wet-exhaust systems, 43:44, 172:4. *See also* American Boat and Yacht Council (ABYC)

AC Products: 940-blue plastic film, 39:98  
 AC/shore-power electrical systems: Bender Monitor/shore power cord, 94:84; design/engine room layout, 37:26; “anti-islanding,” devices, 77:28; Equipment Leakage Circuit Interrupter (ELCI), 118:64; evaluation matrix for, 77:28; galvanic isolators/stray-current corrosion, 41:21, 43:5, 45:105; grounding/safety/stray-current corrosion, 30:38, 30:44, 33:28, 70:35, 94:84; isolation transformers, 45:105, 103:174, 104:30, 108:114; Marina Guard, 104:30; marine systems technician training/certification, 57:99, 57:100; overcurrent protection, 36:41, 38:4, 57:48, 118:64; shore-power wiring/fire protection, 44:18, 44:22, 70:35, 77:28, 98:50; shoreside distribution boxes, 77:28; voltage and frequency converter, 77:28; vulnerability of isolation transformers, 108:114

AC tester: pen-sized/Santronics, 34:59; troubleshooting wave-form output/Fluke Multimeter, 91:56

Accelerations and impacts: Vessel Motion Monitoring System, 155:10

accelerators/promoters: DMA (dimethylaniline), 6:16, 44:30; for polyester resin, 33:46, 35:4; for vinyl

ester resins, 6:16, 33:46, 35:4, 42:62, 44:30. *See also* catalyst

accelerometer record: 68:32

accessories, marine. *See* components/ancillary equipment/accessories

accidents, boat/marine: collisions/occupant protection, 34:13, 50:18; data study, 156:12; injuries/boat defects, 39:12, 50:18, 50:20, 50:25, 79:86; investigation seminar (SAMS/UL), 26:51; owners' manuals/liability, 27:46; standardized warning labels (ABYC), 154:12. *See also* boating safety; lawsuits/litigation; product liability

accidents/injuries, workplace: prevention/safety programs, 17:2, 23:13, 23:14, 24:62, 28:54; response to/workers' comp, 23:13, 24:1. *See also* worker safety/occupational health

Acco Babcock Industries: rack-and-pinion steering system, 3:60

accommodations. *See* interiors, arrangements/decoration

accounting: in market downturn, 9:13; for small businesses, 1:38, 57:74, 63:29; software, 3:60, 18:54, 21:38, 23:50, 27:70, 50:59, 57:74, 57:80; tooling amortization, 9:13. *See also* production boatbuilding, financial management/planning

Accustrip: baking-soda blasting equipment, 7:13

Acebo, Mike: Brewer Yacht Yard/hurricane salvage, 20:6

acetone: applications, 33:26, 115:142; automatic cleaning cycle for/Poncin Yacht Group, 115:142; exposure limits/1989, 1:30; incineration, 28:48; effect on marine hose, 49:16; reagent-grade, 43:62; recycling/recovery (batch

distillation) systems, 10:8, 27:70, 28:48; reduction/replacement/compliance, 20:40, 21:18, 25:8, 28:48, 33:20, 33:26, 33:69; replacement for/nonflammable low-VOC resin remover, 143:52; solvent wipes/secondary bonding, 20:32, 39:19, 52:67; solvent wipes/structural bonds/laminate repairs, 43:54, 43:62, 52:67; SurfaSolve acetone replacement, 115:56; VOC declassification, 39:90

acetone, replacements for: AquaClean, 33:20; BBA Solvent F302, 33:20; cleanup tools/procedures, 33:26; demand for, 39:90; DBE (dibasic ester), 6:10, 10:8, 10:17, 33:20, 42:62; diacetone alcohol (DAA-FRP), 25:59, 33:20; Dynasolve M-30, 20:56; emulsifiers/solvent-based, 20:56, 25:8, 33:20; emulsifiers/water-based, 2:70, 6:10, 33:20; N-methyl-pyrrolidone (NMP), 33:20; propylene carbonate (PC), 33:20, 33:26; recycling/waste disposal, 33:20; Replacetone, 20:56, 25:8, 33:20, 33:26; ShipShape Resin Cleaner, 4:58, 33:20; solvents, 33:20; Templex 853-NB, 33:20; ThermaClean, 33:20. *See also* DBE (dibasic ester) solvent

Ackland, Bob: on bottom prep/environmental compliance, 31:10, 31:16, 31:18

ACRC (Advanced Composite Riverine Craft), 146:24

acrylic adhesives: for bonding fastenings/hardware, 18:4, 67:5; for bonding thermoplastics, 41:44; Crestomer 1152 PA, 67:5; description/applications, 41:44, 67:5

acrylic hulls: development/construction/performance, 10:34, 11:20

acrylic resin: Elixir resin, benefits of, 163:44

acrylic sealant: gelcoat restoration, 15:44

acrylic sheeting: Acrysteel M, 11:20; Altair Plus, 11:20

acrylic skincoat: blister prevention, 15:60

Active Noise and Vibration Technology: noise/vibration control, 5:48

Adams, E.J.D.: on deterioration of balsa cores, 57:7

Adams, Eric: on ethanol fuel/flexible bagtank/and professional engineer (p.e.) licensure, 111:4; on largest welded aluminum yacht/*Dyna* vs. *Morag Mhor*, 86:4

Adams Yachts: Adams 36/stealth lobsterboat, 51:96

additives, resin: for delayed gel time/SCRIMP, 44:30; and moisture meter readings, 60:48. *See also* accelerators/promoters; adhesion enhancers; catalyst; gel-time retarder; promoters; resin inhibitors; resin surfactants; resin thixotropes; styrene suppressants

Adey, John, author: "Revising the Standard," 117:18. *See also* Johnson, Eric.

Adey, John: on ABYC's Electrical Standard, E-11, 121:9; on ABYC's position on smoke detectors for boats, 91:10; response on Uncertain About Certification and an incentive for ABYC, 171:4

adhesion enhancers: QP20, 42:5; for repairs/damaged laminates, 43:54

adhesives: for bedding contour-cut foams, 31:34, 33:4, 115:18; for bedding/deck repair/waterlogged foam, 37:48; classification/definition, 28:27; Click Bond, 147:6; for cold-molding, 51:36; for

neoprene, 46:38; with PT industrial plywood, 27:42; vs. sealants, 60:104; for secondary bonding, 20:32, 42:5; Sealtack 750 universal adhesive, 126:8; two-part/VOC-free/Chemique Adhesives, 119:6; use for vs. self-tapping screws, 145:48, 147:6. *See also* acrylic adhesives; adhesives, structural; aircraft adhesives; bedding compounds/putties; core bonding; epoxy adhesives; fabric adhesives; methacrylate adhesive; neoprene adhesive; putties, bedding/bonding; resorcinol; secondary bonding; spray adhesives; urethane caulk; urea-formaldehyde adhesives

adhesives, five-minute: Gougeon Brothers G/5, 27:60

adhesives, removal: Un-Hesive water soluble spray, 126:8

adhesives, structural: dispensing pumps/systems for, 31:68; Flexbond 5000, one-component hybrid polymer, 115:18; for hull-to-deck joint/FRP shoebox construction, 60:104; Gluzilla polyurethane adhesive/MAS Epoxies, 115:18; Plexus methacrylates, 26:56, 27:70, 29:8, 42:5, 52:81, 60:11, 60:104, 75:58; Pliogrip 7700, 29:8, 30:60; Pliogrip 1000, 111:12; plural-component polyurethane, 29:8, 30:60; Poly-Bond, 42:5; polyurethane adhesive for marine glass, 81:42; vs. sealants, 60:104; Sikaflex, 29:8, 37:48; 3M 5200 polyurethane adhesive/sealant, 28:27, 29:4, 37:48; types/selection/applications, 41:44, 41:48. *See also* acrylic adhesives; adhesives; anaerobic adhesives; cyanoacrylate adhesives; epoxy adhesives; methacrylate adhesives;

polyester structural adhesives;  
 polyurethane adhesive/sealants;  
 urethane adhesives  
 adhesives, syntactic. See putties, syntactic  
 adhesive/sealants, polyurethane. See  
   polyurethane adhesive/sealants  
 Adirondack Guideboat: Hornbeck 10/Lost  
   Pond Boat, 97:60; Kevlar version, 69:13  
 Adler, Michael: on marine refrigeration/R-  
   12 phaseout, 26:8; on retrofitting  
   ColdMachine, 31:4  
 Adler/Barbour-Crosby: ColdMachine, 26:8,  
   31:4; refrigerant  
   phaseouts/conversions/retrofitting, 26:8,  
   31:4  
 admeasurement/tonnage. See  
   tonnage/admeasurement laws  
 Admiral Marine Works Inc.: carbon fiber  
   components for Boeing, 51:11;  
   computer lofting/outsourcing, 38:14;  
   megayacht builder, 3:5, 59:10;  
   motoryacht *PlumDuff* refit, 68:44; 154'  
   FRP yacht *Roxana*, 54:18; 161' FRP  
   yacht *Evviva*, 32:18, 32:21;  
   profile/reorganization, 59:10  
 Adriance, Robert (Bob), Jr.: on bilge pump  
   wiring/reversed polarity, 44:26  
 Adriance, Robert (Bob), Jr., author:  
   "Mooring Design and Construction,"  
   30:8  
 Ad-Tech Plastic Systems Corp.: 800-series  
   marine epoxy resins, 46:65  
 Advance Control Technologies: Electro-  
   Sync synchronizers, 7:64  
 Advanced Cable Electronics Corp.: Strap-  
   Loc cable ties, 6:52, 47:66  
 advanced composites. See laminates,  
   marine, advanced-composite  
 Advanced Composites Training Center:  
   composite training program, 110:12

Advanced Composite Riverine Craft  
   (ACRC), 146:24  
 Advanced Energy Services: Keystone  
   marine battery, 35:58  
 Advanced Materials Inc. (AMI): Prestovac  
   process/molding small parts, 32:28  
 Advanced Structures & Composites Center  
   (University of Maine, Orono), 148:26;  
   Marine Composites Testing in the Shop  
   and the Lab seminar/IBEX 2008, 149:58  
 Advanced Technology and Research: and  
   Dick Lazarra, 169:44; pre-pref materials  
   and processes, 169:44  
 Advanced Textiles Inc.: heavyweight  
   fiberglass reinforcements, 18:54, 31:68;  
   Kevlar reinforcements, 28:18  
 Advanced Wing Systems: Semi-Rigid Sail  
   for K8 sportboat/Johnston brothers,  
   163:14  
 Advance Process Technology: fabric  
   impregnators, 5:34; 81:110  
 Advance USA: Advance Composite  
   Process (ACP), 11:20; thermoplastic  
   construction, 10:34, 11:20  
 advertising: for boat shows, 36:60, 117:54;  
   and editorial coverage/integrity, 18:2,  
   18:40, 39:112; in market downturn,  
   11:34, 117:54; mission statement,  
   31:80; product identity/trade dress,  
   43:13; product liability/truth in  
   advertising, 9:2, 38:11, 38:12;  
   strategy/customer data, 26:64, 117:54;  
   working with an agency, 6:42, 117:54  
 advertorial material and freelance writers,  
   156:4  
 aerodynamics: hydroplane development,  
   56:40, 59:10; performance  
   prediction/sailboats, 60:66; Wolfson  
   Unit's Power Prediction Program, 61:10

Aerodyne Industries Group (Cape Town, South Africa): 38' racer/cruiser design, 65:11

Aerodyne 38 racer/cruiser: 65:11, 83:50

Aerodyne 43 racer/cruiser: New Wave Yachts collaboration, 83:50

Aerodyne 47 racer/cruiser: 65:11, 83:50

Aerodyne Yachts. See Aerodyne Industries Group (Cape Town, South Africa)

AeroHydro, Inc.: AutoCAD data-exchange file/NC cutting, 24:26; Fairline design/fairing software, 7:18, 8:35, 12:60, 17:58, 24:26, 24:32, 78:3; MultiSurf design/fairing software, 40:42, 40:53

Aeromarine 50: light displacement racer/cruiser/Jay Paris design, 88:62

aerospace/aircraft technology, cross-over to marine industry; 62:3, 72:10, 88:62, 163:106; adhesive/sealants, 28:27; adhesive paint films, 57:88; adhesives/glued joints (aluminum-fiberglass hybrids), 17:19; advanced composites/reinforcements, 57:88; advanced-composite single-skin laminates/safety factors/repair techniques, 43:54, 47:57; aluminum welding, 43:17, 53:31; black box/disaster data recorder, 52:43; carbon fiber/impact tolerance/laminate repairs, 43:54; carbon fiber/pre-pregs, 18:8, 26:4, 28:18, 28:19, 39:3, 39:30, 41:28, 41:30, 57:88, 58:36, 58:52; carbon fiber/stealth technology/minehunters, 53:40; carbon fiber components, 51:11; composite racing shells/kayaks, 41:28, 41:30; downsizing, 25:64, 45:5; drag-reduction films, 57:88; dry fiber preforms vs. sticky prepreg materials, 163:106; FlexSys morphing wings, 163:106; FRP

composite construction, 38:30, 57:88; heat-cured composites, 39:3, 39:30, 57:88; honeycomb cores, 22:20, 56:40, 57:88; hydroplanes, 56:40, 59:10; inventory control/management tools (Genmar/Hatteras), 17:34; Kevlar, 57:88; linear polyurethane paints/aluminum boats, 19:12, 37:36, 37:42, 53:31; memory modules, 57:88; Micro Grid metal mesh for exterior composites, 163:106; performance prediction/sailboats, 60:66; plastic media blasting (paint removal), 7:8; pre-pregs, 18:8; pre-stitched laminate stack, 57:88; Quickstep process for advanced laminate parts, 72:10; resources/information, 57:88; SCRIMP/resin infusion, 58:13; "smart" composites, 46:45, 48:4; "smart" windows/heat-gain management/air conditioning, 57:88; ultrasonic inspection, 35:42; vacuum valves (frogs), 45:5. See also laminates, marine, advanced-composite

Aerospace Industries Association (AIA): worker safety/health manual, 36:78

AFI Inc.: boat wiper motors, 33:75, 116:10

A.F. Theriault & Son Boatyard (Nova Scotia): profile of, 101:92; *Mongoose* coastal patrol boat, 101:92

African Cats: Green eMotion catamaran with retractable pod drives, 127:30

AIM Plastics, Inc.: sourcebook/catalog, 25:59

air-assisted boats: Air Cavity Ship/planing trimaran with aerodynamic lift/Multi-step planing hulls, 116:40; Power-Augmented Ram Vehicle (PARV)/Konstantin Matveev, 116:40; QUADRAPOD Air Assist Catamaran Hull/Andrew Deze, 116:40

airbags, flotation: and sinkability, 23:24, 23:26; Yachtsaver II emergency flotation system, 13:70, 23:24

airboats: composite/thermoplastic, 44:30; Husky Airboat, 53:12. *See also* hydroplanes

Airbrasive Sales and Development Co.: VSP-30 and VSP-55 Vacuum Sanding Systems, 20:56

air conditioners, marine: Breathe Easy air purifier/Dometic, 132:6. 141:6: Cruisair M2 closed-loop, 32:52; FB Condair, 134:36, 141:6; hatch-mounted, 2:70; hose/polypropylene, 45:105; with HFC-134a refrigerant, 21:12, 26:8; intelligent, 57:88; phaseout proposal for virgin R-22 refrigerant, 154:28; mechanical manual, 43:83; systems technician training/certification, 57:99

air conditioning: analyzing cost of, 120:52

air coolers: for compressed-air (pneumatic) system, 33:58

aircraft adhesives: for aluminum-fiberglass hybrids, 17:19

air dryers: refrigerated, 33:58; types/selection/applications, 33:46, 33:58; Van Air, 33:58; Zeks, 33:58

Airex (linear/thermoplastic, non-cross-linked PVC) foam, FRP cored/sandwich construction: blackened, 31:34, 34:5; contour-cut, 9:47, 33:4, 34:5, 34:42, 51:22, 55:5; core bonding/installation, 9:36, 30:18, 91:178; vs. Core-Cell, 35:58, 51:6, 51:22, 52:30, 53:4; for bottom panels/strength/stiffness, 51:22, 54:62, 55:5, 56:5, 91:178; vs. cross-linked foam/Klegecell, 3:34, 52:30, 56:5; for cruiser replica, 18:20; damage assessment/repairs, 25:18, 25:25; for megayachts, 2:42, 3:5, 32:18, 32:21; for one-off bow redesign, 45:86; for plug construction, 3:34; *Questar* airex-cored boat/Jay Paris, 88:62; for structural cores, 52:30, 54:62, 88:62; for tooling/one-offs, 10:42; and vinyl ester resin (DSM) infusion data, 103:142

Airex AG: Herex cross-linked foam, 23:54

air-filtration/air-makeup systems: dry, 28:48, 45:47; for paint booth, 42:20, 42:24, 45:47; Northern Air Corporation stand-alone units/Goetz plant, 73:54; wet, 28:48; yacht containment systems/Mallorca, Spain, 144:48. *See also* paint shop/spray booth; ventilation systems

airfoil section: RTM production of, 27:39

Air Handling Systems: dust and fume extraction system, 87:10

Air Handling Systems: dust and fume extraction systems, 87:10

air guns: Blovac 484, 8:54; 13:11; static-dissipating, 13:18; surface contamination/core bonding, 9:36; surface contamination/gelcoat/mold release, 13:18

AirLite: PVC foam core, 51:22

Airosol Co., Inc.: Chargette Freon recycler, 18:54

Airpax: circuit breakers, 16:52; E-Plex networking system, 105:78; engine information "message" interfaces/Volvo Penta/NMEA 2000 bus, 106:42

air pollution. *See* air filtration systems; Clean Air Act/Amendments; Environmental Protection Agency (EPA), regulations/guidelines/compliance; NAAQS (National Ambient Air Quality Standard); Rule 1162, compliance; ventilation systems; VOC emissions, reduction/compliance

air purifier: Breathe Easy/Dometic, 132:6

- AirScan Inc.: hunting for boats by air service, 70:21
- Air Strip: plastic-media blasting system, 7:8
- Air Support Vessels (ASV): Alnmaritec workboats/Effect Ships International/collaboration, 145:12
- Airtech Advanced Materials Group: machined-aluminum vacuum valves (frogs), 45:5
- air tools. *See* compressed-air (pneumatic) tools/systems
- Ajeman, Bob: on AC systems/corrosion test meter, 31:4; on AC systems/galvanic isolators, 41:21; on side and rolling forces on high-speed V-bottomed boats powering through a turn, 88:4
- Ajootian, Fred: on propeller-shaft removal, 6:5; on need for professional engineer licensure, 108:6; on the need for a two-bearing rudder design, 118:4
- Akers, Richard: on model testing vs. full-scale testing/laminar and turbulent flow, 58:6
- Akers, Richard, author: "Dancing A Fine Line," 85:76 "HYSWAS: A Waterborne Unicycle," 49:45; "Model Testing," 55:32, 56:26; "Motion Control," 61:82; "Redefining the Ride," 49:42; "SLICE," 65:102; "Waterjet Technology," 67:70; "Wave Piercers and Fast Cats," 74:54
- Akilaria RC3, 155:58. *See also* Class 40
- Akzo Coatings, Ltd.: Cetol Marine, 20:56
- Alaska Diesel Electric: auxiliary diesel engine, 2:70; Lugger marine diesel, 11:52; Soot Trap and Regeneration system for gensets, 29:58
- Alaskan fisheries: 659 Wheel House observation boats for service monitoring fisheries, 139:18
- Albacore Research Ltd.: ShipCAM, 17:58, 38:47
- Albatross Marine Design: kitted aluminum powerboats, 131:12; Alcan Baltek Corporation: wet-core problems study, 96:16; Picnic 550 Classic, 122:24; Sea Gypsy pocket cruiser, 135:36
- Alden, John, designer: *Summerwind* (1929 build) schooner/rig conversion/GMT Composites, 146:40
- Alden Yachts: hullweight reduction/ 54' semi-custom sloop, 77:10; Interkeel interchangeable keel, 37:66, 38:20
- Aldrich, Bob: jetsprint boats/Double Barrel Marine, 57:15
- Alerion line, 147:38. *See also* USWatercraft, Tillotson-Pearson.
- Alfab: aluminum seine skiffs, 58:66
- Alfresco Composites: carbon fiber yachts and composites, 173:18; and Vinnie Pard/Newport Shipyard, 173:18
- Aliboats (Botswana): aluminum landing craft for British Red Cross, 100:4
- Alicat Workboats, Ltd. (UK): collaboration with Tampa Yacht Manufacturing, 161:20
- Alice's Mirror* (trimaran): 62:46
- alignment: engine to the shaft, 159:36; shaft to its bearings, 159:36; optical vs. laser alignment, 159:36. *See also* Straight Line Marine
- Allblom, Kenneth: on Fresh, Clean, and Clear and using household pipe alternative AluPex, 154:4, 155:4; on owning component failure, 142:4
- Allen, Scott F.: on Uncertain About Certification and compliment to ABYC, 171:4
- Allen, Tim: profile/custom cabinetry/CAD, 13:43, 40:3, 40:42, 40:52



allergies/allergic reactions: epoxy resins, 3:19, 42:62, 45:105; Multiple Chemical Sensitivities (MCS), 36:88, 38:6; sensitization, 48:104; teak wood, 75:72; vinyl ester resins, 42:62. *See also* worker safety/occupational health

Allied Fibers/Allied Signal Company: Spectra polyethylene fibers, 16:52

Alling, Douglas: on *Desperately Seeking Apprenticeships*, 168:4

Allison Boats (Louisville, TN): profile of, 94:18; tunnel-hull raceboats, 94:18

Allison, Paul: raceboats, 94:18

All Points Boats (Fort Lauderdale, FL): profile of, 93:40, 157:102; custom valve testing apparatus, 157:102

alloys, marine-grade: galvanic/stray-current corrosion, 32:36, 32:39, 32:41, 33:28. *See also specific alloys*

Alls, Dennis (designer): Aleutian Yachts/*Miss Lisa*, steel motoryacht/Joe Artese, 117:8

Allweather Boats: efficient design, 17:4; fuel-efficient power cruiser, 79:10

Almar Boat Company: builder profile/Souder sportfishermen/welded aluminum construction, 21:26; haulout/publicity, 20:8

Alnmaritec: aluminum workboats/challenging service requirements, 145:12; Air Support Vessels (ASV), 145:12

alodyne chrome: conversion coating/painting aluminum boats, 37:36;

Alpenglow Marine Lights: 87:80, 115:74

Alpex Wheel Company: Diamond Discs, 20:56

Alpha Inc.: Pemco 3011 fabric adhesive, 10:52

Alsberg Boat Works, Inc.: Alsberg Junior speedster, 60:11

Alston, G. Kevin: on R-12 phaseout/HFC-134a refrigerant, 17:4, 26:8

Alter, Hobart Laidlaw: inventor/designer Hobie Cat boats/profile and obit, 149:10

alternating current. *See* AC/shore-power electrical systems

alternative energy systems: wind generators, 80:22; Aquair 100 wind and water generator, 80:22

Alternatives Energies (Alt.En): electric ferries/La Rochelle, France, 122:12; hydrogen fuel cell system with hydrolizer, 144:10; range extender system, 144:10; real-time monitoring system, 144:10; solar-powered CREA 2000, 144:10; zero-emission craft/electric ferry, 144:10

alternator, high-output: alternator and wiring (over) loading, 170:32; alternator efficiency and peak fuel efficiency, 148:58; Arc3, 155:46; backup for inverter, 25:30; Balmar alternators, 155:45; cables/connections/DC systems, 20:50, 21:4, 39:56; Electromaax, 155:46; Genasun, 155:46; large-case alternator/"reverse mount"/and belt tension, 172:4; Mastervolt, 155:46; "real world experiment" using two alternators/charge acceptance rate decrease/kWh cost increase, 148:58; selection/performance, 19:50, 19:55 sources, 19:50, 19:59

Alubat Shipyard (France): Cigale 18, 64:64

Aleutian Yachts: Dennis Alls design motoryacht *Miss Lisa*/Joe Artese interior design, 117:8

AlumaCraft: 69:52

Alumaprep: contaminant removal/painting aluminum, 37:36

Alumaweld Boats: builder  
 profile/production methods/welded  
 aluminum construction, 21:26, 26:20;  
 models/product line, 21:26, 26:20;  
 Offshore sportfishermen, 21:26, 26:20;  
 outsourcing, 37:16; painting, 37:16,  
 37:36, 37:42

aluminum: alloys/development, 53:31,  
 166:31; aluminum anodes vs.  
 zinc/navalloy, 136:10, 138:18; casting,  
 42:46; custom NC cutting, 42:74;  
 coefficients for isotropic materials,  
 166:31; 5000-series, 53:31; deposition  
 corrosion/dynamics/University of Milan  
 Study, 130:66; exfoliation corrosion,  
 147:24; galvanic blistering/fittings for  
 carbon fiber laminates, 57:30; galvanic  
 blistering/honeycomb cores, 59:5;  
 galvanic corrosion, 32:36, 32:39, 34:72,  
 53:31, 96:65, 105:96; galvanic  
 corrosion/carbon fiber, 43:64, 45:54,  
 57:30, 59:5, 60:5; galvanic  
 corrosion/engine beds, 46:16; galvanic  
 corrosion/prevention/Tef-Gel paste  
 between fasteners, 60:104; galvanic  
 corrosion/tanks, 52:18, 130:66; *Gesar of  
 Ling* expedition sailboat, 85:10; grades  
 and tempers/selection, 147:24;  
 honeycomb cores, 22:20, 45:54, 56:40,  
 59:5; laminating table, 39:30; marine  
 grade aluminum boat skis/seaski.com,  
 159:10; NAB (nickel-aluminum-bronze)  
 alloy/C95500, 54:18; Quintrex  
 Boats/stretch-form process for shaping  
 aluminum, 90:13; soundproofing, 5:42;  
 sailboats, 148:46; structural  
 characteristics, 147:24; tooling, 27:34;  
 vs. welded aluminum, 72:22; yield and  
 stress properties of, 72:22

aluminum anodes: vs. Zinc and  
 magnesium adoes, 157:94

Aluminum Boat Solutions Team: aluminum  
 corrosion problems and Alcoa, 96:65

Aluminum Boats, Inc.: worker training,  
 13:54

aluminum construction: Alcan/defective  
 aluminum plate, 129:40, 152:6; all  
 aluminum Hunt/Gladding-Hearn pilot  
 boats, 150:34, 151:52; AlumaCraft,  
 69:52; aluminum-fiberglass hybrids,  
 17:19, 54:112; aluminum  
 workboats/Armstrong Marine, 152:36;  
 Bestevaer aluminum cruising  
 boats/K&M Yachtbuilders, 141:50; bilge  
 pump float switches, 46:5; boat kits,  
 40:24, 42:74, 43:83, 63:145, 131:22;  
 boatbuilding courses/South Seattle  
 Community College, 113:10; bonding  
 systems for, 33:28; CAD/CAM  
 applications, 7:18; CAL/NCC  
 applications, 38:14, 43:83, 69:52; Coast  
 Guard ice rescue boat/Midwest Rescue  
 Airboats, 121:78; commuter boat/*Abely  
 Wheeler*, 91:20; Danish sailboat, 90:13;  
*Design and Construction of the USCG  
 47-ft. Self-Righting, Heavy-Weather  
 Rescue Craft*, 117:44;  
 distortion/buckling, and residual  
 stresses, 151:82; DuraCraft, 69:52;  
 failure in, 137:56, 139:5, 147:24; fast  
 ferries, 43:36, 57:15; Ecotroll/kite-flying  
 motor cruiser, 134:6; fatigue limits/steel  
 vs. aluminum, 137:56, 139:5; fire/rescue  
 boats, 2:12, 2:40; vs.  
 fiberglass/composites/ strength, 4:22,  
 4:64; 17' flats boat, 2:12; fracture  
 mechanics/short cycle fatigue, 139:5;  
 frames/framing systems/structure,  
 24:34, 24:39, 26:4, 36:22, 48:9, 50:5,  
 52:4, 151:82; galvanic/stray-current  
 corrosion, 32:36, 33:28, 52:18;  
 "gentleman's tugboat," *Benjamin*

*Bates*/Tim Gaul, 110:68; glued together “workingman’s yacht”/catamaran/camper hybrid boat, 137:12, 139:5; history of, 53:31; Homeland Security Response Boat, 87:4; hull-to-deck repair, 65:66; ice-navigation boat, 34:55; interlocked, 4:42; jon boats/efficiency, 16:4, 69:52; lofting/liability, 38:14; material-specific quality assurance/avoidance of common errors, 137:56; 147:24; megayacht/Royal Huisman, 45:47; *Nauti-Cat 1* aluminum catamaran fishing boat, 101:92; noise/vibration control, 5:42, 21:26, 24:34, 45:47, 97:10; O-temper alloys, 137:56; painting, 21:26, 53:31; recycling programs, 54:43; riveted, 4:42, 53:31, 69:52; Reynolds Aluminum Company, 69:52, 129:40; Roamer motoryachts, 4:30; scantlings/framing systems, 24:34, 24:39, 26:4, 36:22; scantling technique/Strongall, 134:6; and scribing tools, 137:56; sequencing build of hull, 151:82; service catamaran/WindCat3/A.F. Theriault & Son Boatyard, 101:92; for singlehanded round-the-world race, 55:44; stringer runs, 151:82; Subchapter T boats, 36:22, 152:36; testing/Carderock, 42:39; tour boat/Recherches et Travaux Maritimes Construction, 86:14; unsinkable observation boats/Stabicraft, 139:18; vocational training programs, 20:21. *See also* computer software, lofting/parts generation; kits, boat (NC lofting/cutting); Metal Boat Society, The; metal construction; metal construction, CAL/CNN applications aluminum construction, welded: boat kits, 40:24, 42:74, 43:83, 63:145; CAD/CAM

technology, 58:66, 63:145; CAL/NCC (computer-assisted lofting/numerically controlled cutting) applications, 38:14, 38:38, 40:52, 42:74, 43:83, 58:66, 59:71; composite ocean yachts, 51:11; cracking, 137:56; custom megayachts/Palmer Johnson, 53:28; Defender-class RB-5/SAFE Boats International, 85:64; extrusions, 26:20; Falcon convex-curved plating, 24:39; fast ferries, 65:84; fuel/water tanks, 52:18, 54:5; gunwales/polishing, 37:16; high-speed landing craft/Bullnose, 57:15; history of, 53:31; Liquid Metal Marine aluminum boats fabrication, 164:12; *Little Cloud*, single radiused chine cutter, 102:14; lofting/liability, 38:14; market/mainstreaming, 21:26, 26:20; Navy MK V, 52:43; outsourcing, 37:16, 40:52; painting, 21:26, 37:16, 37:36, 37:42; paints/coatings, 52:54, 52:55, 53:31, 116:52; patrol craft, 85:64; plasma-arc cutting (PAC), 24:34, 42:74; press brake/bending, 37:16, 69:52, 137:56; production methods/Alumaweld, 26:20; pros and cons of kits, 63:145; quick-and-dirty boatbuilding contest, 68:11; scantlings/framing systems, 24:34, 24:39, 26:4, 48:9, 151:82; scantlings/offshore racing yachts, 48:8, 48:9, 50:5; semi-custom modular boats, 58:66, 116:52; seminar/training, 43:17; technology/Crestliner, 4:42; transition/commercial to yacht market, 40:24, 40:36; Tri-Link aluminum decks, 70:21; white-water and river boats/Wooldridge Boats, Inc., 116:52; wood interior joinerwork/CAD/CAM, 40:52; workboats/Armstrong Marine, 164:12. *See also* metal construction;

metal construction, CAL/CNN applications

aluminum-fiberglass hybrid construction: applications/construction, 17:19, 19:4

aluminum fireboats: Armstrong, Marine, 152:36; MetalCraft Marine Group, 145:86

aluminum foil: as mold-release agent/one-offs, 10:42

aluminum hull: fabrication of hull and deckhouse/Aluminum Marine Consultants, 168:68; Hunt Associates/builder-pilot Don Church/pilot boat, 150:34

aluminum-hull junk: Colin Mudie design, 76:10

Aluminum Marine Consultants: commercial hovercraft boats, 168:68; fabricating work boats, 168:68; *Trearddur* Bay/Voith Linear Jets propulsion, 168:68; wind farm support vessels, 168:68

aluminum masts: vs. carbon fiber masts, 47:44, 55:58, 57:7; vs. composite wing masts, 14:8, 55:44, 57:7; corrosion/quality control, 34:72; design/technology, 3:42, 55:58; loads/failure, 55:112, 57:7; painting, 55:58

aluminum powder: post-curing epoxy/print-through prevention, 34:18, 34:21

aluminum spars: ultrasonic testing for disbonds and delaminations, 150:60

Alustar: aluminum magnesium alloy, 89:50, 141:50; *Windrose*, schooner, hull, 89:50; *Athena* schooner Yacht, 101:32

Alvarez, Mike: on gelcoat restoration, 15:44

Ambassador Marine Ltd.: SealMaster shaft seal, 29:14, 29:21

Amber Composites: Biotox flax fibers/alternative to glass fiber composites, 139:18

Amel, Henri: affordable fiberglass boats, 144:48; Maramu cruising sailboat/Jean-Jacques Carteau, 144:48; profile of yacht builder Chantiers Amel (France), 144:48; Super Mistral Sport design, 144:48; worldwide service centers, 144:48

American Arbitration Association: binding arbitration, 12:40

American Blimp Corporation: Lightships/airships, 58:13

American Boat and Yacht Council (ABYC): AC & DC Electrical Systems on Boats amendment, 121:9; boating/boating-safety library, 38:51; EC (EU) certification standards Secretariat, 41:41, 41:42; Convenience Learning program, 69:184; continuing education classes/The Boat school (Eastport, ME), 137:12; crashworthiness/occupant protection study, 34:13; E-11 technical standard/recent revisions, 118:64; electrical certification program, 48:4, 54:32, 57:99, 57:100; Electrical Standard, E-11, 121:9; Equipment Leakage Circuit Interrupter (ELCI) assessment, 121:9; Fiberglass Certified Composites Technician certification, 85:10; "Find A Test Center" program, 85:10; information exchange, 33:88, 66:38; International Marine Standards Summit/hosting of, 104:96; Marine Law Symposium, 164:12; marine systems certification program, 120:34; marine technician training/certification, 48:4, 57:98, 57:99, 57:100, 69:184; on NFPA fire-protection standard, 44:22; on-site workshops, 35:25;

programs/efforts/membership, 4:10, 4:20, 36:48, 37:4, 48:4; 85:10; propeller nut installation protocol, 121:9; 149:10 ; report T-24/owners' manuals, 27:46, steering standards, 115:36; *Technical Information Report T30, Electric Propulsion*, 118:64; wiring standards/need for revision, 115:74. See also ABYC safety standards

American Boat Builders and Repairers Association (ABBRA): ABBRAGARD insurance program, 29:54; address, 4:20, 46:10; boatyard/marina operators' manual, 42:16; composite construction workshops, 38:51; continuing education classes/The Boat School (Eastport, ME), 137:12; environmental workshops, 35:52; fire protection, 44:25; FRP certification program, 55:16; health/safety manuals, 4:10; in-house training/education programs, 36:74; mediation/arbitration (Dispute Response Committee), 12:40; programs/efforts/membership, 4:10, 42:16

American Bureau of Shipping (ABS): accelerations//bottom slams calculations, 141:36; *ABS Guide for Building and Classing High-Speed Craft*, 53:4, 53:20, 54:62, 72:22, 106:4, 141:36; *ABS Guide for Building and Classing High Speed Naval Craft* (2007), 141:36; *ABS Guide to Building and Classing Motor Pleasure Yachts*, 64:52; ABS standards design software, 8:35, 55:5; classification/certification/aluminum construction, 24:34, 24:39, 48:8, 48:9, 50:5, 52:4; classification/high-speed craft, 39:80; classification/yachts and offshore raceboats, 39:80, 48:8, 48:9,

50:5, 52:30, 69:156, 96:72; classification notations, 39:86; *Guide for Building and Classing Yachts* (December 2014) revision, 156:4; *Guide to Building and Classing Offshore Racing Yachts*, 69:156, 79:48, 96:72, 106:4; *High Speed Naval Code*, 149:56; implicit safety factors in scantling calculations, 72:22; railing height, 69:92; scantling rules/FRP composite construction, 36:22, 37:4, 38:4, 48:8, 53:20, 55:5; scantling rules/FRP cored panel construction, 51:26, 52:30, 53:4, 53:20, 55:5; scantling rules/metal construction, 36:22, 40:4, 48:9; scantling rules/offshore racing yachts, 60:66; scantling rules/US units, 55:5; on standardized composites testing program, 34:48, 62:78, 158:54; validating laminate structure, 158:54

American Challenge Technology: fighter-jet style boat, 77:10

American Clamping Corporation: Bessey Auxiliary Angle Clamp, 24:62; Bessey ES Irregular Angle, 18:54; Bessey KP framing system, 5:58; Bessey three-way C-clamp, 24:62; Blovac 484, 8:54

American Colors: shrink-wrapping tips, 18:33

American Composite Manufacturers Association: continuing education classes/The Boat School (Eastport, ME), 137:12

American Custom Yachts: building over rigid steel jigs, 61:10; custom steel jig for extending hulls, 66:11; profile/sportfishermen, 54:18, 101:38

American Eagle Manufacturing: builder profile/welded aluminum construction, 21:26; Munson Manufacturing acquisition, 38:38, 43:83, 58:66

American Expedition Yachts: start-up, 106:92; target boats for U.S. Navy, 106:92. *See also* Bayview Edison Industries.

American Gator Tool: Push—pull Tapper, 84:18

American Identification Products: warning labels, 21:12

American International Industries, Inc.: Marine Shaver, 27:70; Power-Plus respirator, 16:52

American Marine Ltd. (Grand Banks): builder profile/mid-'70s financial crisis, 19:28, 19:32; 151:96; Chanteyman boat/Angelman & Davies design, 151:96; hard-chine hull/*Spray*/Ken Smith design, 151:96; Laguna series express cruiser, 151:96; production boatbuilding, 151:96; timber to fiberglass construction, 151:96; *Wanderer*/Bill Garden design, 151:96;

American Marc: production recreational boats, 91:116; and Carl Moesly, 91:116

American Plywood Association (APA): industrial panel selection guide, 31:68; moisture threshold of wet-wood mechanical properties, 98:4

American Sail Advancement Program (ASAP): sailing industry revival, 30:48

American Society for Testing and Materials (ASTM): FRP laminates burn-out test, 125:62; parameters for fasteners/hex bolts, 118:52; recommended biodiesel blend amounts for engines, 116:28; stability standards/testing, 42:26, 54:98, 100:80; standardized testing of composites/metals, 4:22, 32:3, 34:42, 35:4, 48:16, 48:17; 100:80; wet-core problems study for structural cores, 96:16

American Society of Civil Engineers (ASCE): concrete-canoe contest, 31:68

American Society of Interior Designers: address, 7:5

Americans with Disabilities Act: impact on employers, 23:3, 23:13

American Tool Companies: Large-Jaw Vise-Grips, 35:58; Quick-Grip bar clamps, 1:68, 49:79; PowerPress pipe clamp, 49:79

American Trailer: custom tilt trailers, 135:58

American Water Ski Association (AWSA): boat-noise control/proactive approach, 43:75

American Waterways Operators (AWO): address, 4:20; programs/efforts/membership, 4:9

American Waterways Shipyard Conference (AWSC): efforts/membership, 4:9

American Welding Society (AWS): aluminum welding seminar, 43:17

*America's* Cup contenders: aluminum construction/history, 53:31; composite one-offs/New Zealand, 55:58, 55:61; designs/CAD applications, 7:18; engineering/strength vs. speed, 35:3, 51:36, 53:50, 86:44; foiling cats, 145:4; Meter boats/Olin Stephens, 60:66, 86:44; model testing/performance prediction, 56:26, 60:66, 97:10; PACT 95/sailing education, 31:62; spar design/technology, 3:42; 12-Meters/Sparkman & Stephens, 59:44, 60:66

Ames, Jon: Design Challenge/WWBD 26 sharpie, 135:36. *See also* de Souza, Paulo Alves.

*Amistad*: near replica tops'l schooner, 64:11

AMJO: UV "A" curing system, 18:17

- amphibious assault craft: combat boat 90 (CB-90), 167:28
- amphibious vehicles: add-on wheels for boats/Sealegs, 156:12; DUKWs, 56:10, 57:13 ; Neoteric Hovercraft, 66:11
- Amphistar U.S.A. Ltd.: Xtreme Xplorer, 57:15
- Ample Power Company/Technology: DC systems, 19:50, 19:55, 22:4; Eliminator series regulator, 20:50, 39:56; stepped voltage regulators, 20:50, 39:56
- A.M. Services: Cushman 20 sportfisherman/welded aluminum construction, 21:26
- Anacostia Marina: closing of, 68:11
- anaerobic adhesives:
  - description/applications, 41:44
- Anaglyph Ltd.: PlyMatch computer-aided lay-up software in realtime, 124:12; 127:8
- analog gauges: on *White Tornado*/vintage Bertram Nautec boat, 162:76
- Anbar Foundry: work for Edson International, 158:18
- Anchorage, The: builder profile/Dyer 29, 28:72
- Anchorage Marina: pearl finish, 20:56
- Anchorage Marine Service, Inc.:
  - services/facilities, 23:50
- anchor cable. See cable, anchor
- anchor light: MkIII FirstStar, 87:80; MultiStar tri-color, 87:80
- Anchor Reinforcements Inc.: Ancaref reinforcement fabrics, 1:68
- anchor rode: bungee/Hazelett Corp./hurricane preparedness, 30:8, 64:36, 113:4; bungee/Seaflex elastomeric rope, 53:64; cleat horns and chafing, 93:76; working load limits for, 93:76
- anchors: stowage systems, 22:28, 22:29; 93:76
- anchors, mooring:
  - design/installation/performance (hurricanes), 30:8, 38:4; Dor-Mor, 30:8; Helix/helical, 30:8, 38:4, 53:64; load estimations, 64:36, 93:76; sources, 30:16
- anchors, storm: aftermarket niche, 14:26, 14:32
- anchors, types and weights, 93:76; load limits, 93:76
- ancillary equipment. See components/ancillary equipment/accessories
- Ancor Marine: Prova model CM-01 multimeter, 50:73
- Anderosov, Steve, author: "One Man's Modification to the Manufacturer's Suggested Repair," 103:26
- Anderson, Art, Associates: Stolkraft hullform, 49:42
- Anderson, Dick: naval architect, 62:63
- Anderson, John: designer/motoryacht, 57:15
- Anderson, Steve: on effects to marine mammals of ultrasonic anti-fouling systems, 164:4
- Andersons, The: Grit-O'Cobs, 36:78
- Andoe, Graham: copper/nickel sheathing, 7:42, 9:5; on spraying epoxy, 43:5
- Andrews, Alan: yacht designer/profile, 154:36; development of semi-submersible reef viewer, 154:36; turbocharging, canting-keel maxi racer/*Magnitude 80*, 154:36; ultralight displacement boat (ULDB), 154:36
- Andrews, Phil, co-developer of The Clam, folding-rigid inflatable boat (FRIB): 71:6
- angle, irregular: Bessey ES, 18:54

- Anmarkrud, Thomas: on repairing single-skin laminates, 68:5
- Anspach, Ken: on photo-curing resins, 18:8
- Anstey Yachts: racing sloop, 2:12
- Ansul Fire Protection: Halon replacement inergen, 21:12
- antennas, radio: lightning protection systems, 43:64
- Anthony, James, Powerboat Company: 21' runabout, 3:11
- anti-Coanda effect system, 91:10. *See also* Hanes, H.W.
- antifouling coatings, environmentally friendly: Epaint, 105:105; Max-Pro-Coat (vinyl ester), 19:59; water-based/performance/Rule 1106.1 amendment, 60:11
- antifouling coatings/cleaners, biodegradable: Boatyard Boss, 29:58; Omni-Gel, 10:52; Zebra products, 8:54
- antifouling paints/coatings: roughness patterns/drag reduction, 59:5
- antifouling paints/coatings, ablative: applications, 31:10; Awlgrip AwlStar, 31:10; Interlux Micron CSC, 31:10, 47:66; monitoring system, 31:10
- antifouling paints/coatings, copper-based (non-tributyltin): Copper Coat, 1:68; Crystic CopperClad (Ferro), 2:12, 7:42, 7:48, 17:58; Copperlok, 8:4; Epco-Teck 2000, 9:56; moisture meter readings, 60:48; Pettit Paint ACP-50 (ablative), 16:52; Pettit's Trinidad, 161:64; phasing out of/on recreational boats, 161:64; POX-E-COP, 7:42, 7:48; removal, 7:8; resistance to water permeation, 15:13; ultrasonic anti-fouling technology/transducers, 161:64
- antifouling paints/coatings, graphite-filled: and moisture meter readings, 60:48
- antifouling paints/coatings, removal/disposal: DeFoul paint stripper for anti-fouling paint, 165:56; environmental regulations/compliance, 31:10, 31:16, 31:18, 33:75, 34:59; magnetic hazmat containment curtain/Armstrong Marine, 152:36; water-based chemical strippers, 18:54, 31:10, 33:75. *See also* boatyard waste disposal/reduction/compliance; paint removal
- antifouling paints/coatings, silicone: Intersleek silicone coating/International Paint Co., 165:56
- antifouling paints/coatings, tributyltin-based: disposal, 31:10; restriction/replacement of, 7:8, 7:42, 31:10, 105:106
- antifouling system, electronic: Barnaclean, 46:50
- antifreeze-delivery method, 131:54
- anti-noise systems: electronic/MTU, 46:50. *See also* noise/vibration control
- anti-pitch and roll: Puget Sound pilot boats, 67:90
- anti-sabotage lacquer: Organic Products/torque seal, 113:10
- anti-seize lubricants/compounds: Bostik Never-Seez, 1:68; graphite, 38:20, 39:4; for keel fasteners/galling/corrosion, 38:20, 39:4; nickel-based, 38:20; and motor mount threads/propeller nuts, 124:6, 126:6; thread-locking compounds, 126:6
- Antonisa* (sloop): 51:36, 51:52, 63:70, 70:58; Crest foam cushions, 82:8
- Antrim, Jim, author: "A New Open 50," 65:24; "The Trickle-down Theory," 76:73
- Antrim, Jim: designer of Open 50, 65:24; *Duffy Voyager*, 61:52; electric



speedboat design, 50:11; profile of, 76:60; swing-wing multihull, 76:60

Antrim 30: whipstaff tiller, 76:60

APA-The Engineered Wood Association: custom industrial plywood/information, 42:5

appliances, electrical. *See* electrical appliances

appliances, fuel-burning. *See* heaters, cabin; stove, galley

Applied Electronic Controls Corp.: Auto-Sync engine synchronizer, 2:70

Applied Marine Technologies (AMT): EFI (electronic fuel injection) training, 27:61

Applied Poleramic: HT-1 SC high-temp epoxy resin, 59:76

appraiser, profession of: damage claims, 44:72, 50:80; qualifications/ethics/conflicts of interest, 59:89; 85:30

apprenticeships. *See* boatbuilding apprenticeship programs; training, of employees; training, vocational

*Apricot* (60' trimaran): 63:86

Aquachelle International: ceramic gel barrier coat, 17:11, 17:17

Aquadrive Systems, Inc.: anti-vibration system/isolators, 35:4, 38:55; Constant Velocity Torsional damping unit, 38:55; Fluidlastic engine mounts, 38:55

*Aqua Mania G3*, turbine-powered speedboat/Mystic Powerboats, 119:6

Aquasport: and Walt Walters, 132:36; 17' center-console, 3:27

*Aqua Quorum* (monohull): 62:46

aramid honeycomb: Nomex, 22:20, 32:21, 39:30, 45:54, 45:62, 56:40, 56:61, 65:120, 72:38, 91:154, 133:96, 156:40; Nomex Decore, 51:114, 52:4, 111:82, 115:162. *See also* honeycomb cores

aramid reinforcing fibers. *See* Kevlar

arbitration: binding, 12:40, 12:47; resolving builder-owner conflicts, 12:40, 37:60. *See also* negotiation

*Arcadia*, Alden 44: installation of WhisperGen generator/Burr Brothers Boats, Inc., 115:136

Archer, Stuart (designer): passagemaker for American Expedition Yachts, 106:92; Northwest 42 Fast Trawler, 106:92

arctic life rafts: and immersion suits/Viking Life Saving Equipment, 169:6

Ardic: cabin heaters/carbon monoxide protection, 45:32

Ardox Corporation: Scot vacuum breaker, 43:44

Arenberg, Jason A.: on engine accessibility, 107:4

Arevalos, Jeffrey: on honoring those who build and repair boats, 83:4

Arey's Pond Boat Yard: Beetle Cat look-alike, 23:41; electric catboat, 137:6

*Arion*: first fiberglass auxiliary sailboat built, 157:16

Aristech Chemical Corp.: Acrysteel M acrylic sheeting, 11:20; Altair Plus, 11:20; thermoplastic construction, 10:34, 11:20

Ariston Technologies: optimization of laminates/Outerlimits Offshore Powerboats, 133:46, 60

Arjay Industries: environmental compliance/VOC emissions reduction, 20:40, 21:18, 24:4; FRP waste-reduction program, 55:26, 55:27; laminating for Island Packet Yachts, 11:34; compliance (emissions), 11:34; SOFA (solvent-free pressure-fed resin roller), 16:52, 21:18

Arkansas Traveler Boats: and Jack Riggelman, 128:8

- Arm & Hammer: Armex baking-soda blasting media, 7:13, 12:60, 16:42, 31:10, 47:66
- Armbruster Products: Blue Blower, 6:52
- Armorcote IMC (In-Mold Coating): applications/performance/spraying technique, 1:68, 13:70
- Armor Systems, Inc.: bookkeeping/payroll systems, 27:70; Excalibur accounting software, 18:54
- Armstrong, James F.: on OEM mergers, 1:5
- Armstrong Marine Inc.: fold-down landing-craft type bow/water taxis, 152:36; and Liquid Metal Marine/refits, 164:12; magnetic hazmat containment curtain, 152:36; maintenance barges, 152:36; profile, 152:36; Storm interceptor design, 152:36
- Arneson, Howard: "Skater" offshore racing boat, 64:11
- Aronie Concepts, Inc.: Drill-Mate caulking gun, 13:70
- Aronow, Don: Donzi models, 3:27, 132:36; Formula 233, 3:27, 132:36
- Around Alone Race (formerly BOC Challenge): 1998–99/contenders, 50:11, 55:44, 60:96; shore team experience, 65:120
- Artese, Joe: *see also* interior designers, independent.
- Artisan Boatworks: high-performance spars for Pedrick 65 yawl, 168:44; spar building expertise, 168:44; Watch Hill 15 daysailer with pod drive auxiliary power, 137:6
- Artisans School/College, The: vocational training program, 20:26
- ASAP (American Sail Advancement Program): expanding sailboat market, 6:20; on lead tax, 30:54; sailing industry revival, 30:48
- asbestos: exposure/law, 35:52
- Ashcroft System, 51:3. *See also* cold-molded construction.
- Ashland Chemical Company: AME 4000 mold-release, 13:11; AME 4000 photo-initiated resin system, 18:8, 18:17; AME 5000 low-VOC resin, 21:60; ENVIREZ, bio-based resin/Campion Boats, 116:10, 143:52; FRP Supply health/safety/environmental manual, 20:8; greener polyester and epoxy formula developments, 125:8; Parabeam bidirectional woven fiberglass fabric, 19:59; Pliogrip 7700 structural adhesives, 29:8, 30:60; Rule 1162 development, 26:34
- Ashland Specialty Chemical Company (Dublin, OH): co-sponsor of Solar Splash competition, 97:10
- Associated Chemists Inc.: Templex 853-NB Resin Cleaner, 33:20
- Astratec: battery capacity tester, 39:98; high-load battery testers, 39:98
- ATC Chemical Co.: Baltek-Bond, 33:46; Core-Bond, 33:46; Core-Cell SAN foam core, 35:58, 45:86, 51:6, 51:22, 52:30, 53:4; Core-Cell Bead & Cove Planking System, 35:58; Poly-Bond, 42:5; putties/hot weather, 33:46
- Athena: A Classic Schooner of Modern Times* (book), 101:32
- Atkins, David, designer of recreational hovercraft: 66:11. *See also* amphibious vehicles, hovercraft.
- Atkins, Fred: on surveyors and boatyards, conflict of interest, 70:5
- Atkinson, Tim: on epoxy air inhibition/secondary bonding, 20:4

Atlantic Veneer Corporation: marine-grade/custom-fabricated panels, 16:21

Atomic Four gasoline engine: replacement for, 2:70

Attwood Corp.: Ballistic high-performance propellers, 48:86; in-line fuel-surge protector, 44:54; Turbo 3000/4000 bilge blowers, 31:68

Aukerman & Associates: moisture meters, 19:8

Austal USA: Austal Ships (Australia) and Bender Shipbuilding & Repair (Alabama), 90:13; Australia: 49er racing skiff, 49:74, 51:6; jetsprint boats, 57:15; model basin/tank-testing, 54:43; Stolkraft hullform, 49:42. *See also* Duckworth, Arnie; Tasmania

Australian Maritime College: model basin/tank-testing, 54:43

AutoCAD: AutoCAD to SolidWorks/Willard Marine Inc., 153:58; AutoCAD 2000, 69:52; for boottop pattern, 45:86; compatibility with SolidWorks, 66:90; for control station design, 48:66; data-exchange file (lofting/NC cutting), 24:26, 66:90; inventory applications, 28:32; lofting/parts generation software, 7:18, 38:47, 63:106; Mechanical Desktop, 66:90; ShipConstructor 108/3D product-modeling/production-planning software, 110:12; users' group, 52:12

autoclaves. *See* ovens/autoclaves

AutoDesk: AutoCAD, 52:12, 61:102, 66:90

Auto-docking system: at NQEA, 63:106

AutoHydro: hydrostatics software, 17:58

AutoKon: lofting/parts generation software, 7:18, 17:58

Automark Marking Systems: reverse-label maker/affixing HINs, 60:5

Automatic Equipment Mfg. Co.: PowerMover 7000 motorized dolly, 15:70

automotive industry products/equipment, marine industry applications/cross-over: acrylic urethane paint (Deltron), 19:12; Chris-Craft wooden boats, 115:142; at Harmony Yachts/Poncin Yacht Group, 115:142; FRP construction/Glasspar, 41:58, 60:116, 60:120; FRP recycling programs/U.S. and Europe, 60:82; polyurethane gelcoat, 43:5; RIM (reaction injection molding), 38:55; 3-D CAD models, 38:38

Autonnic Research Ltd.: Link Instruments, 21:60

autopilot: installation/Hunter Marine, 53:50; remote-controlled trimaran/circumnavigation, 54:18, 55:16; systems technician training/certification, 57:99

Autoplate: lofting/parts generation software, 17:58

Autopower for Windows: hull design software, 36:78; propulsion-analysis software, 36:78

Autoship Systems Corp.: Autopower for Windows hull design software, 36:78; Autopower for Windows propulsion-analysis software, 36:78; AutoShip design software, 8:35, 17:58, 63:106

Auto-Sync: engine synchronizer, 2:70

AutoYacht: design software, 8:35, 17:58

Avonite: countertop sheet material, 7:68; formstone Lite Preform panels, 34:28, 34:32

Avard Fuller, designer: yacht *Jim Hawkins*, 81:52

AvScope: illuminating periscope, 24:62

Awesome Yachts: power multihull/circumnavigation, 50:11

Awlbrite Quik-Fil: wood sealer, 98:12  
 AwlCoat TPC: spray-on lift-off protection film, 104:12  
 Awlgrip: applications, 60:27, 63:106, 170:20; Awlfair, sandable epoxy, 126:18; Awlcraft 2000 finish, 170:20; Awlgrip High-Build Epoxy Primer, 170:20; Awlmix color matching service, 150:72; AwlStar ablative bottom paint, 31:10; for gelcoat restoration, 15:44; for print-through prevention (SCRIMP), 31:42; on Rybovich sportfishermen, 25:42, 170:20; spraying tips, 19:12, 19:20; use on Waterline Yachts steel hulls, 83:72. *See also* linear polyurethane (LP) paints  
 Axel Plastics Research: internal mold-release agents, 13:11  
 Axson Technologies: extrudable paste and sprayable silicone/rotary-head air gun, 128:8. *See also* Hexel Corp.  
 Azimut-Bennetti Yard (Italy), 108:62  
 Azko Chemicals: Trigonox 239A catalyst, 44:30  
 Aztec Inc.: Z-pinning reinforcement for mechanical fasteners, 92:6;

---

**A B C D E F G H I J K L M N**  
**O P Q R S T U V W X Y Z**

---

Baar, Lisa: on interior design/mock-ups, 9:28  
 Babcock, Dick: on boatyard management/education/training, 35:25, 35:30; on business/management education, 22:51  
 backing plates: and cure-hard catalyzed putty, 127:84; for keelbolts, 38:20, 39:4, 40:4, 127:84, 130:38, 139:96; plywood, 40:54, 41:5; proper installation of,

127:84, 139:96; backing plates for rod-holders, 127:84; 139:96  
 BACT. *See* best available control technology (BACT)  
 bad behaviour prediction software for powerboats: dynamic stability calculator/Donald L. Blount and Associates, 126:80  
 Bad Dust Containment Systems, 129:8  
 Baekelans, L.H.: development of laminated plastics, 38:30  
*Bagatelle*, wood epoxy sailboat: power to weight ratio, 79:48. 159:10  
 bagged-laminate infusion process (BLIP): bags/films for, 30:25, 32:28, 32:34; with knitted/woven fabrics, 29:38; production vacuum-bagging applications, 30:18, 30:25, 32:28, 69:132. *See also* vacuum-bagging equipment/systems/setup; vacuum-bagging, applications/techniques  
 Bailey, Dylan, author: "Reading the Rust: A Surveyor's Notes on Chainplate Inspection," 159:50  
 Bailey Marine Hardware: watertight deck hatch latches, 150:72  
 Baja Marine Corporation: strain-testing program/Outlaw line, 79:102  
 baking soda: blasting media/equipment for, 7:13, 12:60, 16:42, 31:10, 47:66  
 Bakker, Peter: on electrical panel installation errors, 68:5  
 Bales, Bill: on interior design, 6:34, 6:39  
 Balfe, Mike: on megayacht market, 12:50  
 Ballenger Spar Systems, 94:8  
 Ballard Power Systems: PEM (proton-exchange membrane) fuel cell, 69:38  
 ballast, water: bulb design, 70:21, 126:56; Child series/offshore racing sailboat, 53:50, 53:61; limitations to, 64:64; and multihull heel angle, 62:46; vs. swinging

hull, 64:64; use in re-righting overturned hull/Open-Class 50, 76:60  
 ballast keel. *See* keel, ballast  
 Balmar: DC systems supplier, 19:50, 19:55  
 Balogh Sail Designs: sailing kayaks (kaimaraks), 22:64  
 balsa core (end-grain), in cored/sandwich construction: Armor/balsa coated with proprietary polymer/I-Core Composites, 110:12; bucket-and-roller lamination, 45:76; bulkheads, 46:16; core bonding/bedding, 9:36, 45:76, 70:92, 138:48; for cored bottoms, 51:22, 51:26; cored custom cabinetry (DecoLite), 13:43, 40:42, 40:52, 47:17; decks, 45:54, 98:28, 91:178, 115:100; development of, 38:30, 115:100, 172:12; DuFLEX panels/epoxy-bonded laminates, 59:10; flat-panel construction, 45:54; for hulls/Luffe Yachts, 126:8; hot-coating, 9:44; for hulls/*Red Jacket*, racing sailboat/Cuthbertson & Cassein, 115:100, 135:6, 147:38; *Inferno*, damage to core, 115:100; for interior framing, 32:21, 67:110; *Katrinka* deck damage, 138:48; Open 50/*Convergence*/Jim Betts, 129:40; PBY Catalina flying boats, 115:100; pocket cruiser, 2:12; precoated/sealed, 9:44, 45:54; pre-skinned, 45:54, 59:10; resin-infusion/SCRIMP applications, 31:34, 31:42, 44:30; skin delamination/repairs, 13:36, 30:72, 94:48; in special edition architectural projects, 81:90; sportfishermen, 1:22, 1:28, 2:12; standardized strength testing, 4:22, 8:4; stiffness/strength, 51:22, 51:26, 52:30, 54:5, 71:38, 91:178, 126:8; storage, 15:13; Tecno 40 RIB raceboat, 46:38; vacuum-bagging/solid vs. scored, 30:18, 30:22, 52:30; vs. polypropylene

structural honeycomb core/Sabre Yachts, 115:18; weight and density variations, 142:40; wet rot/deterioration, 52:30, 54:5, 55:5, 57:7, 96:3, 96:16, 97:4, 97:8, 97:130, 98:4, 138:48; workmanship defects in, 70:92. *See also* Baltek Corp.; DuraKore end-grained balsa, strips  
 Balsa Ecuador Lumber: *See also* Baltek Corp.  
 BaltekBond syntactic foam bonding putty: applications/performance, 31:34, 33:46  
 Baltek Corp.: AirLite PVC foam core, 51:22; AL 600 and 600/10 balsa core (presealed), 9:44, 17:58, 31:34, 52:30; BaltekBond, 31:34, 33:46; BaltekMat, 7:50, 7:62; on cored bottoms, 51:22, 51:26; DecoLite panels, 8:54, 13:43, 40:42, 40:52, 47:17; D-100 (resin-sealed), 13:43; development of Belcobalsa Countourkore, 115:100; DuraKore end-grained balsa core, 1:20, 9:36, 59:10; DuraKore strips, 15:34; pre-skinned balsa-core panels, 45:54; vinyl ester resin and crushed walnut shells/Baltek's AL-600, 169:44. *See also* balsa core, in cored/sandwich construction  
 BaltekMat: print blocker, 7:50, 7:62  
 Baltic Yachts (Finland): *Hetairos* ketch, 141:50; profile of, 85:46  
 Bamboo laminated panels: Elektra Six-2 electric launch/Lambo Technologies/Symphony Boat Co., 159:10  
 Bandy, Art: on raw-water strainer and marelon "Anti-Venturi" through-hull, 130:66, 132:4  
 Bandy Boats: refit of two Rybovich 36 sport fisherman boats/*Timid Tuna* and *Butterball*, 170:20;

Barbaric, Zoran: on 24-volt regulators, 77:5  
 bar code system: for labor/payroll, 33:36;  
   for parts/inventory, 33:36  
 Barcol hardness tester (durometer): barrier  
   coats/repair laminates, 17:11; cross-  
   linking/secondary bonding, 13:67; for  
   testing catalyst ratios, 74:30; guide to  
   testing laminate/gelcoat hardness, 5:12,  
   10:64, 50:46, 87:62; for monitoring  
   differential exotherms, 45:68, 50:46,  
   74:30, 125:54; source, 1:18, 2:6; for  
   survey testing, 30:26; for testing catalyst  
   ratios, 1:6, 2:6, 50:46  
 Barcos Deportivos, ship builders,  
   Tarragona, Spain, 77:10  
 Barer, Brian: on core bonding, 9:36; on  
   woven vs. stitched  
   reinforcements/heavyweights, 29:38; X-  
   weave trusswork patch, 36:34  
 Barka utility boat: Kazulin Boats, 141:6  
 Barker Boatworks: best quality fishing  
   boats, 169:116; Calibogue Bay fishboat,  
   169:116; and Michael Peters/Stepped-  
   Vee Ventilated (SVVT) hull, 169:116;  
   profile of, 169:116  
 Barnaby's Formula, 169:62. *See also*  
   Lorne Campbell  
 Barnaby, Kenneth C.: author of book *Basic*  
   *Naval Architecture*, 169:62; Barnaby's  
   Formula and Crouch's Formula, 169:62  
 barnacles: and effects of fuel consumption,  
   124:54  
 Barracuda Technologies. *See* Divilette  
   bonding compound; Divinycell foam  
 Barracuda Yacht Design: two-crew sailing  
   yacht, 70:21  
 Barrer, Malcolm: on heated storage for  
   resins/coatings, 55:5  
 Barrie, Craig: Dragon powerboats, 92:6  
 Barrie, Richard: Western Boatworks, 58:13

barrier-avoidance test: ISO certification  
   standards, 27:3  
 barrier coats: for blister prevention/repairs,  
   15:13, 17:11, 20:32, 48:86;  
   formulations/systems, 17:11; Pettit  
   Glass Flake epoxy, 23:54;  
   testing/evaluating, 17:11. *See also*  
   blister repairs/prevention,  
   resins/coatings/techniques  
 barrier creams: Dermashield, 21:60;  
   laminate quality/blister prevention,  
   15:13; review/sources, 3:19  
 Barry, Christopher D.: AutoCAD users'  
   group, 52:12, 54:18; AutoDesk Users  
   Group International (AUGI) SIG, 59:10;  
   CAD/CAM systems  
   implementation/study, 58:13; on  
   calculating flooded flotation limits, 142:3;  
   on certification testing/passenger  
   vessels, 39:4; on definition of  
   professional engineering licence and  
   impact on yacht design, 90:4' on  
   Engineers Without Borders  
   Humanitarian Engineers Corp database,  
   94:4; on fatigue/free-standing masts,  
   57:7; on licensure, 51:6, 72:5, 76:4; on  
   model testing, 58:6; time-share/large  
   yacht market/First Chesapeake  
   Powerboat Symposium, 116:40  
 Barry, Christopher D., author: "CAD/CAM  
   and Fiberglass Tooling," 61:102; "How  
   *Not* to Sell Components," 47:80;  
   "Implementing and Integrating  
   CAD/CAM: Joinerwork," 40:42;  
   "Implementing and Integrating  
   CAD/CAM: Metal Construction," 38:38;  
   "The Lesson of Lincoln Electric," 41:72;  
   "Loftsmen's Liability," 38:14; "Propeller  
   Matching," 46:52; "Roll Control," 93:22  
 Barry, Frederick, author: "Quick Docking  
   System," 152:6

Bartee, Robert J.: draft measuring tool, 44:5; on measuring weight/stability, 44:5

Bartels, Konny: on *Nicola IV* sailing yacht/deDood built boats, information request, 117:5

Bartkowski, Lee: on raw-water system/cooling-water supply indicators/flow detectors, 45:5; on through-hull installation, 10:4

Barton, Greg: on boat storage and additional suggestions, 124:6

basalt fiber, 91:20

Baseline (Baseline II): design/fairing software, 7:18, 17:58, 38:47

Baseline Technology: Baseline design/fairing software, 7:18, 17:58, 38:47

BASF Corporation/BASF Structural Materials: 5218 pre-preg, 20:56; Luran S, 34:59; resin photo-initiators, 18:8; Zone3 flotation foam, 34:59

*Basic Naval Architecture*, by Kenneth C. Barnaby. See also Kenneth C. Barnaby

bass boats: Allison XB-21 ProSport Sport Utility Boat, 94:18; pad V-bottom for, 94:18

New England—style/Lyman-Morse, 97:82

Bates Technical College: boatbuilding vocational training program, 20:21

bateau (skipjack): aluminum charter boat/high form stability hull, 139:54

Bateau Bleu Award, 101:12

batteries, marine: AGM (absorbed glass mat) batteries, 134:54, 155:46, 170:32; AGM (absorbed glass mat) batteries and TPPL batteries/energy buffering role, 148:58, 172:4; Altairnano lithium-ion battery, 111:82; alternator/generator selection/wiring/installation, 18:44, 19:50, 21:4, 22:4, 23:4, 37:26, 39:56, 62:7, 172:4; ; Arc Lite battery and cell-

balancing charger/hybrid diesel electric boat, 118:40, 164:58; automatic paralleling device, 31:68, 39:56; basics, 18:53, 62:7; battery bank capacity/accommodation/wiring. 133:24, 137:34; 148:58; battery boxes/shelving/ventilation/throughput cost, 133:24, 149:34; calculating costs/lithium ion vs. lead-acid batteries, 118:40, 120:52, 122:6; capacities of, 149:34; carbon foam plate grid for lead-acid batteries, 170:32; cell-balanced lithium-ion battery/Mastervolt, 119:6, 122:6; charging systems, 18:44, 19:50, 19:55, 20:50, 25:30, 31:68, 39:56, 62:7, 134:54, 135:6, 155:46; connections/DC systems, 20:50, 22:4, 62:7, 89:28, 135:6; conversion from AGM to lithium batteries, 155:46, 157:6; cost of power battery charging at anchor, 148:58; cracked battery case. 152:58; cranking, 18:44, 20:50, 133:24, 134:54, 148:58; deep-cycle/discharge, 18:44, 18:53, 19:50, 19:55, 20:50, 25:30, 41:5, 120:52, 148:58; with DC-to-AC inverter installation, 25:30, 39:56, 57:100, 82:80; destructive current flow, 154:4; differences between lithium-ion and NiCad batteries, 121:9, 144:10; discharge/capacity/efficiency/cycle life, 18:44, 18:53, 19:50, 19:55, 20:50, 25:30, 39:56, 41:5, 62:7, 111:82, 133:24. 149:34, 170:32; dual/single/parallel banks, 20:50, 21:4, 23:4, 31:68, 37:26, 39:56, 41:5, 136:80; Dynasty (gel), 10:52; engine-cranking, 39:56, 89:28, 148:58; failure in lithium technology, 157:6, 170:32; firefighting agents for lithium-ion batteries, 172:4; Firefly battery, 170:32; fire prevention/dry storage, 44:18, 122:52,

133:24; gel-cell, 10:52, 18:44, 19:50, 27:26, 41:5; high charge acceptance rate batteries, 111:82; house ("cycling"), 20:50, 39:56, 41:5; hydrogen gas/venting for/solar-powered vents, 110:104, 133:24, 152:58; isolation switch, 20:50, 31:68, 36:41, 36:45, 39:56, 41:5, 89:28; lithium ferrophosphate vs. NiCad cell batteries/solar ferry/Alternatives Energies (Alt.En), 144:10; lithium-ion batteries/hazards of, 136:80, 149:34; lithium-ion batteries/cost/service life, 155:46; lithium-ion batteries/exothermic state/thermal runaway, 170:32; lithium-ion battery/safety measures, 149:34; lithium-ion batteries/voltage imbalance/battery management system for, 136:80, 149:34; lithium-ion/Coulombic vs. energy efficiency, 149:34, 172:4; lithium-ion battery/efficiency/sustained charging current, 155:46, 164:58; lithium-ion battery/efficiency, 170:32; lithium-ion batteries/safety/battery management system (BMS), 170:32; lithium-ion vendors, 155:46; Keystone (sealed), 35:58; location/engine room, 37:26; location/nav station, 11:9; long-term storage, 122:52; Mastervolt lithium batteries, 155:46; monitoring capacity, 41:5, 148:58; Odyssey battery test/Victron Energy, 113:56; Odyssey TPPL battery, 120:52, 148:58; overcurrent protection (OCP), 36:41, 57:48, 133:24, 154:4; photovoltaic panels/full charge cycle, 148:58; prevention of spikes in unit/Yanmar Technical Bulletin, 170:32; protective boots, 152:58; relay/solenoid (battery paralleling), 20:50, 39:56, 41:5, 154:5;

reduction of generator and genset runtime, 155:46; safety of lithium-ion vs. lead acid batteries, 149:34; sealed, 35:58; sulfation/undercharging, 19:50, 20:4, 148:58, 170:32; switches, 8:12, 20:50; temperature sensors, 134:54; terminals/connections, 8:12, 20:50, 22:4, 26:4, 36:41, 62:7, 133:24, 152:58; thermal runaway, 134:54, 149:34; TPPL (thin plate, pure lead) batteries, 109:140, 111:82, 119:38, 120:52, 142:26; types/selection/installation, 8:12, 18:44; voltage monitor, 21:60, 79:21; wet-cell, 18:44, 19:50, 20:50, 27:26, 134:54; wing nuts and heavy grease, 152:58; diagrams, 134:54; Z-bar, 89:28. See *also* alternator, high-output; battery chargers, marine; DC systems/equipment; generators/gensets; voltage regulator, stepped/smart; wiring, terminal connections

battery cables: charging cable ratings, 170:32; de-rating and upsizing, 170:32; shore power cords/friction-type connectors and bolted connections, 170:32; sizes/types/DC systems, 19:50, 22:4, 89:28; SmartPlug, 134:80; terminal connections, 8:12, 13:4, 14:4, 19:50, 22:4; separate cabling for engine start/paralleling, 133:24; tinned, 19:50, 22:4; welding cable, 19:50, 22:4; wiring, 18:44, 21:4, 22:4, 23:4; wiring/overcurrent protection, 35:18, 36:41, 89:28. See *also* wire/cable, marine; wiring, marine

battery chargers, marine: Combiner, 31:68; ferro-resonant, 27:24, 29:4; fire prevention/dry storage, 44:18; high-frequency (multi-step), 27:24; IntelliMate electronic monitoring device, 28:60;



- Intelligent Marine Charger (IMC)  
programmable DC output  
charger/Charles Industries, 135:6;  
150BBI Inlet for, 33:75; Magnum  
Energy's Smart Battery combiner,  
145:20; output, 27:24; SCR, 27:24;  
sizing, 27:26, 82:80; stray-current  
corrosion, 33:28; types/basics, 27:24.  
See also batteries, marine; DC  
systems/equipment, charging systems
- battery testers: capacity/Astratec, 39:98;  
digital frequency response (DFRA),  
79:21; fault current/safety margin,  
133:24; high-load/Astratec, 39:98;  
hydrometers, 79:21; Intelligent charging  
system battery/Guest, 114:10; Midtronics  
Micro 500 L1-T1, 79:21; OTC SPX  
tester, 79:21, 133:24; ProNautec P-  
Series, 129:8; sealed-valve regulated  
(SVR) batteries, 79:21; Snap-on Micro  
Vat, 79:21
- Baudhuin, George: profile/Marine Travelift  
engineering, 59:133
- Baumann, Hans V.: on blackened PVC  
foam core, 34:5; on cross-linked vs.  
linear PVC foam core, 56:5
- Bavaria Yachtbau: insolvency, 173:3;  
profile of, 94:70
- Baxter, Michael R.: on surveyors in the  
boatyard, 69:5
- Bayer Corporation: Baytec RTM-081D  
RTM polyurethane resin system, 38:55
- Bayless, Sandy: on acetone replacements,  
33:26
- Bayley, Greg: on analyzing accelerations,  
Part I, 141:4
- Bayliner Marine Corporation: boat  
shows/marketing, 36:60, 36:64;  
Buccaneer Sailboat, 119:3; Classic  
express cruiser, 39:67; safety  
inspections/performance testing, 15:50;  
worker training, 13:54
- Bay Ship & Yacht Company: builder profile,  
20:8, 21:38, 31:68;  
redocking/restoration/*Balclutha*, 56:10;  
refit and maintenance, 53:28
- Bayview Edison Industries: start-up,  
106:92; Bayview Auxiliary Tug (BAT)  
drive mechanism, 106:92. See also  
American Expedition Yachts.
- BCAM: Mannequin Professional animation  
software, 40:48
- BC Research: hydrodynamic testing of  
*Puget Sound* scale model, 87:104
- Beach cat: Nacra Formula 18/20, 127:94
- Beach, David D.: on builders' liability, 16:4;  
on professional licensure, 47:24
- beams: PRISMA stringer preforms, 41:62
- Beaney, Jim: on lack of mention of  
Aquadrive in thrust-bearing systems  
article/"Refine the Ride," 122:6
- bearing, Cutless: tool for removing, 48:86
- Becker, Chris, author: "Down Maybe. But  
Not Out." 123:72
- Beckmann Ltd.: steam launch replicas,  
18:20
- Beckson Marine, Inc.: Vent-O-Mate air  
vent, 48:86
- bedding compounds/putties: for bedding  
contour-cut foams, 31:34, 33:4, 34:42;  
Dolfinite, 28:27; K-Lite/foam cores, 9:36;  
oil-based vs. polyurethanes, 28:27;  
Sikaflex 241, 28:27, 33:75; 3M  
5200/secondary bonding, 20:32, 28:27
- Beekman, Philip: on question of corrosion  
of zinc-plated valve cover bolt, 123:6
- Beeldsnijder, Pieter, superyachts designer:  
and Flevo Jachtbouw, 132:18
- Beetle Cat: builder profile/production  
methods, 23:32, 23:41

- Begnaud, Donald J.: on fiberglass itch, 66:5
- Belgium. See ETAP Yachting
- Belina Interiors: off-site finishwork, 94:32, 97:108; program for at-risk teenagers/Tacoma Community Boat Builders/Paul Birkey, 166:18
- Bell-Davis, Judy: *Mary P* sportfisherman/Trinity Yachts, 114:10; on videos/interior design, 40:62; on weight reduction/interiors, 29:8
- Bell-Davis, Judy, author: "Lightweight Yacht Interiors," 34:28
- Bell Design Group. See Bell-Davis, Judy
- Bellingham Marine Industries: Unistack dry-storage buildings, 7:64
- Belongia, Roger: Northport/MirroCraft aluminum-fiberglass fishing boats, 17:31
- belts: PowerTwist V-belt, 5:58
- Benchmark Boats: power catamarans, 47:16, 45:120
- Bench cookies, 123:10
- Bénéteau Inc.: electronic marketing, 38:51; *Figaro Beneteau 3* sloop with port and starboard foils, 172:12; molded integral grid/liner, 46:28; profile of, 93:46; retractable transom/swim platform, 171:10; sailboat market, 30:48, 38:51, 64:64
- Beneteau USA (Marion, SC): Trawler, 42, 93; delivery of 6,000<sup>th</sup> boat, 104:12; Oceanis 50 sailboat, 125:8; Sense 50/Dock & Go bow and stern thrusters, 130:10; Swift 44 Trawler, 130:10
- Benford, Jay R.: on licensure as naval architect, 49:4
- Bennetti Yard (Italy). See also Azimut-Bennatti Yard (Italy).
- Benton, Tom: on gate valves/seacocks, 38:4
- benzoyl peroxide (BPO): paste catalyst, 33:46
- Bergstrom, Lars: B&R rig, 53:50; *Hunter's Child*, 62:48; *Route 66/Tuesday's Child*, 53:50
- Berckmans, Bruce: on Hinckley sailboat feature/ flaw/pulling engine to extract shaft, 150:4
- Berkshire Electric Cable Company, 55:99
- Bernardi, Tom, Sr.: North End Composites/SCRIMP, 44:30
- Bernstein, Robert G. (Bob): on power catamarans, 47:5
- Bernstein, Robert G. (Bob), author: "Electronic Management," 14:34
- Berry, Arthur: on tooling for production, 3:34
- Berta, Joe, author: "Surveying and Common Sense," 120:80
- Berta, Capt. Joseph G.: on custom sea chest filtering screen, 139:5; on engine accessibility, 108:4; on image of Capi2 system node, 108:50, 110:4; on standards that spark in the night/tinned wire, 138:3, 139:5
- Bertelsen, William D. (Bill): Hydromat composite-panel test fixture, 34:42, 35:4, 149:56; on epoxy vs. vinyl ester/carbon laminates, 55:5
- Berthod, Cedric: on pricing/Nomex honeycomb core, 22:20
- Bertram, Dick: Bertram 31, 3:27; founder/Bertram Yacht, 39:70
- Bertram Yacht: aging fiberglass boats (laminates), 4:64; aluminum-fiberglass hybrid construction (58Cs), 17:19; Bertram 25 leaking fiberglass tank and newspaper in laminate, 132:36; Bertram 31 sportfisherman/deep-V hullform, 3:27, 39:70, 50:32; 132:36, 134:62; Bertram 31/effect of ethanol on

- fiberglass tanks, 109:6; Bertram 35 sportfisherman/Michael Peters design, 171:18; Bertram 60/mock-up, 171:18; brief history of, 171:18; carbon-fiber reinforcements, 28:18; early days/FRP development, 38:30, 103:183; interior design, 6:34; marketing used boats, 10:2, 39:70; motoryachts, 39:70; polysulfide sealants, 28:27; profile/Lee Dana, 39:70, 43:5; raceboats, 39:70; specialty plywood panels, 16:21; *White Tornado*/restoration of racing powerboat, 162:76. *See also* Lazarra Yachts
- best available control technology (BACT): for reducing VOC emissions, 10:8, 60:39. *See also* maximum available control technology (MACT)
- Best, James R.: on Leon Slikkers of Tiara Yachts, 73:5; on reinforcements for closed molding, 92:4
- best management practice (BMP): for waste management, 27:8, 27:17, 31:10, 55:26, 55:27
- Beta Marine: niche-market for diesel marine engines, 122:64; 127:30
- Bethwaite, Julian: 49er racing skiff, 49:74
- Betts, Jim: aluminum production boatbuilding, 129:40; and Alcan/defective aluminum/*Jade* aluminum sloop, 152:6; build of Paul Bieker Riptide boats, 152:6; Robert Perry design/carbon Bristol Channel Cutter boats, 167:6
- Biddick, Ken, author: "Structural Repairs," 97:174
- Bieker, Paul (Rip Tide Design): conversion of *USA 76 America's* Cup boat/Keefe Kaplan Marine, 140:22; *Eagle* racing catamaran/hydrofoil and hybrid wing, 170:48; and Fast Forward Composites, 170:48; *Rocket Science*/composite flat-panel construction, 45:54, 45:62; infused carbon 53' performance catamaran/*Fujin*/Gold Coast Yachts, 155:10; integral water and fuel tanks in cored composite boats, 74:20; 3-D CAD modeling, 41:5; profile of, 74:68; redesign of Ultimate 30, 61:10, 116:40; Riptide 35 and 41 builds/Jim Betts, 152:6; Shearwater pocket-cruiser, 115:162, 116:40
- bilge, oily/flooded, pumping:  
pumps/systems/techniques, 31:59, 57:48, 66:11; valves, 37:26, 38:4. *See also* bilge pumps
- bilge blowers: Turbo 3000/4000, 31:68
- bilge compartments: unsealed/design flaw of, 93:98, 115:88
- bilge pumps: adhesive bonded mounts for/vs. /self-tappers, 145:48; backflow and pump cycling, 57:48, 59:5; centrifugal, 24:44, 24:45, 26:4, 29:58, 31:59, 40:66, 57:48, 59:5; 147:48; check valves, 59:5, 147:48; discharge rates/nipples/hose/anti-siphon loop, 44:26, 46:5, 57:48, 59:5, 147:48; engine as emergency bilge pump, 147:48; Ericson Safety Pump, 40:66, 60:5; float switches, 32:52, 44:29, 46:5, 57:48, 59:5, 107:30, 143:22, 147:48; formula for flooding/incidental and catastrophic water removal, 147:48; head pressure, 57:48; high-water bilge alarm system, 93:98, 147:48, 149:04; holes/flow rates, 60:5, 147:48; Intelligent control sensor pumps/Whale Water Systems, 137:12; light vs. buzzer alarm for bilge pump failure, 149:04; low profile lower volume centrifugal drying pump, 147:48; manual/Gusher 30, 5:26; manual vs. electric, 57:60, 59:5;

- mounting/plumbing, 44:26, 82:40.  
147:48; overcurrent protection/locked rotors, 57:48; *Palawan* refit, 82:40; positive-displacement, 57:48; selecting/priming, 31:59; simple bilge counter switch, 147:48; static/dynamic head, 57:48, 147:48; switches, 32:52, 44:29, 57:48, 57:60, 57:73, 147:48; systems/engine room layout, 37:26, 73:102, 93:98; systems/requirements/installations, 24:44, 44:26, 57:48, 57:99, 59:5, 60:5, 147:48; T-fittings, 149:04; variable-volume impeller, 57:48; Whale Supersub 650 pump, 137:14; wire-to-wire electrical connections, 143:22, 147:6; wiring/electrical faults/tinned copper, 147:48, 44:26, 57:48, 59:5, 60:5; wiring/color-coding/connections, 44:29; wiring/stray-current corrosion, 32:36, 44:29; wiring/tinned copper, 60:5.  
*See also* pumps
- Bill Lee Yachts: CFC-free marine refrigeration, 16:35
- billing/billable work: boatyard/marina management, 35:25; financial planning for small businesses, 1:38, 32:64; mission statements/quoting, 127:128.  
*See also* accounting;  
boatyards/marinas, management;  
payroll/wages; production boatbuilding, financial management/planning
- Billings, Jono: on moisture meters, 23:42; on mooring anchor chain/swivel, 30:8; on osmotic-blistering repairs/vacuum-drying, 9:50, 9:53, 16:42
- Billings, Jono, author: "Repair (1990s Retrospective)," 60:27
- Billings Diesel & Marine: boatyard fires/insurance, 1:50; wooden boat storage, 18:28
- Bilodeau, Andre: foam-planked one-offs, 35:58
- Biminis: custom-made/Dowco Marine, 116:10
- Bingham, Bruce: Pacific Seacraft designs, 10:20, 10:31
- Binks Poly-Craft (Binks Manufacturing Co.): Binks DX70 air-operated diaphragm pumps, 161:8; Clean Air Award, 26:34; early spray equipment, 38:30; fabric impregnators, 5:34; high-solids epoxy spray systems, 43:5; HVLP equipment, 26:34, 34:35, 161:8; Low Emission Laminator, and High Efficient spray booth Air Filters, 107:14; Mach 1 HVLP spray gun, 34:35; Model 7 spray gun, 38:30; Model 18 spray gun, 38:30, 45:76; Model 2100 spray gun, 122:12; plural-component systems, 38:30; Super Slave resin gun, 1:68; Thermal Spray paint-heating system, 34:35; Unison catalyst-metering system, 23:54
- binoculars: Steiner-Optik Commander Global's no-fogging with digital compass, 154:12
- Bio-Concepts, Inc.: Boatyard Boss biodegradable cleaner, 29:58
- biocomposites, 125:8
- biodiesel (soy-based diesel fuel): ASTM (American Society for Testing and Materials) standard for, 77:21; ASTM D675 standard, 158:64; advantages and disadvantages of, 158:64; algae formulation, 116:28; drawbacks to, 77:21, 116:28; E-Diesel vs. biodiesel, 116:18; effect on FRP resins, 116:28; efficiency reduction, 158:64; engine manufacturer's suggested blends, 116:28, 118:4, 158:64; high-cloud and pour points of, 116:28; production/applications, 34:55; 116:28;

National Biodiesel Board seal of approval, 116:28; Sea Ranger II research vessel, 77:21, 22; vs. petroleum diesel, 77:21, 22, 158:64  
 bioresin boats: at Champion Marine, 143:52  
 Birchwood of Los Angeles, Inc.: marine-grade/custom-fabricated panels, 16:21  
 bird nest extractor, 111:12  
 Bird Boat-class: sloop *Kookaburra*, 140:18  
 Birkey, Paul: Belina Interiors, 97:108, 166:20; founder of Tacoma Community Boat Builders for at-risk teens, 166:18  
 Bish Marine International: 62:12  
 Bishoprick, Stan: Legendary Yachts, Inc., 58:13  
 Black, Paul: marine engineer/Pantawee Marine, 128:62  
 Black, Richard: designer/Sparhawk 36 and 42/free-standing masts, 55:46  
 Black & Decker: Bullet drill bits, 2:70; Industrial 12-gauge shears, 21:60; palm-grip sander, 3:60; Scorpion Anti-Slip bits, 15:70  
 black box: IST disaster data sensor-recorder, 52:43  
 Black Dog Propellers: Prop Scan, 42:74  
 Black Duck Boat Works: electric launches/canoes/kayaks, 43:17  
 Bladerunner raceboat: tunnel-hull design, 72:10  
 Blailock, William C.: on Hooked on Networks and tinned, stranded conductors/ISO standards, 158:4  
 Blair, Noel, Jr.: on powerboat builder Forest Johnson's Prowler hulls, 134:4  
 Blanchard, Bredt: on vocational training Vancouver Island-style, 8style, 81:6  
 Blasco, Francisco: on bug in metric formula for minimum airflow calculations, 115:6  
 Blasingame: vane-restraint technology, 57:88

blasting, applications/techniques: blister repairs, 16:42; pressure cleaning with recycled bottle glass/Dustless Blasting, 148:10; paint removal, 7:8, 12:60, 148:10  
 blasting system: Blast N'Vac, 15:70  
 blast media, for paint/gelcoat removal: abrasive-grit, 16:42; baking soda, 154:12; baking soda/Armex, 7:13, 12:60, 16:42, 31:10, 47:66; "black beauty," 31:10; corn/Grit-O'Cobs, 36:78; plastic, 7:8, 12:60, 16:42; EnviroStrip wheat starch/Biobased Abrasive Products, 154:12; reclaimer for/LAB 1 System, 12:60; steel/aluminum, 12:60  
 bleeder/breather material: for vacuum-bagging, 1:58, 1:64, 9:50, 30:18, 43:24, 45:68. *See also* vacuum-bagging equipment/systems/setup  
 Blevins, Thomas: on dimpled bottoms, 57:15  
 blimps: American Blimp Corporation/Lightships/airships, 58:13  
 "Bling My Boat" Contest: Donzi Hornet makeover/Shipwreck Boats, 110:12  
 BLIP. *See* bagged-laminate infusion process (BLIP)  
 Bliss, Jay: on In The Buffer Zone and lithium battery packs/wrecked automobiles, 150:4; on Pedal Boat Improved and NuVinci three-speed transmission/Fallbrook Technology, 154:4  
 blistering, carbon fiber/galvanic: causes/symptoms/caveats, 57:30, 60:5; diagnosing, 57:30, 57:32  
 blistering, gelcoat/osmotic, causes/symptoms/caveats: blistered-boat database, 53:4; blister juice/solvated additives, 19:8, 57:30, 67:49; bottom paint removal, 7:8;

catalyzation, 2:4, 15:13, 64:22, 67:49;  
 disc cracking, 15:63; fiber whiting,  
 16:42; gelcoat/in-mold/mechanical  
 bonds, 49:59, 51:6; gelcoat application,  
 11:42, 15:13, 19:44, 84:52; glycol  
 compounds, 16:42; moisture/coupling  
 agents, 15:60; moisture/mat binders,  
 3:54, 4:5, 15:13, 15:60; mold  
 contaminants (dust), 13:18, 15:13;  
 paint/primer application, 52:54, 52:55;  
 regressed blisters, 51:108; resin  
 formulations, 51:108, 64:22; skincoat/X-  
 layer, 19:44, 50:46; oil crisis, 51:108;  
 steam-cleaning, 2:38, 4:5, 7:8;  
 temperature/humidity, 4:22, 4:27, 15:13;  
 vinyl ester/ortho and isopolyester resin  
 test procedures and results, 83:22;  
 water permeation vs. osmosis, 15:60,  
 15:63; water pollution/pH, 17:17; water-  
 soluble molecules (WSMs), 15:13,  
 15:60, 16:42. *See also* blister  
 repairs/prevention,  
 resins/coatings/techniques

blistering, gelcoat/osmotic,  
 testing/diagnosis: blister potential,  
 15:60, 30:26, 64:22; database, 53:4;  
 infrared imaging of, 85:22; laboratory,  
 23:42, 23:47, 30:26; laminate's  
 resistance to osmotic blistering, 83:22,  
 87:62; moisture meters, 15:60, 23:43,  
 30:26, 102:46; 104:128; regressed  
 blisters, 51:108, 96:16, 102:46; survey  
 haulouts, 30:72; for survey reports,  
 30:26; testing of blisters, 87:62; when to  
 inspect, 51:108. *See also* blisters,  
 paint/coatings

blister insurance: Gelshield/Boat Care,  
 19:59

blister repairs: Gougeon manual/video,  
 21:60; InterProtect system, 19:59;

protective gear (goggles), 19:8;  
 warranties/liability, 16:42

blister repairs, drying techniques: catalytic  
 heaters, 8:54; caveats/melted boat,  
 29:8; dehumidifiers, 16:42; drying tents,  
 16:42; HotVAC drying, 69:13; Hotvac  
 Hull Cure system, 76:10; regressed  
 blisters, 51:108, 96:16; removal of  
 glycols/WSMs (water-soluble  
 molecules), 16:42; vacuum-drying, 9:50,  
 9:53, 16:42, 69:13

blister repairs, gelcoat/laminate removal:  
 blasting, 16:42; Gelcoat Peeler, 3:60;  
 Gel-Pac planing system, 10:52;  
 grinding, 16:42;  
 peelers/planers/shavers, 3:60, 10:52,  
 12:4, 13:4, 16:42, 16:52, 22:51, 27:70,  
 31:10; pros and cons of, 17:11;  
 regressed blisters, 51:108, 96:16;  
 stripping machine/services, 22:51. *See  
 also* blast media, for paint/gelcoat  
 removal; gelcoat  
 peelers/planers/shavers

blister repairs/prevention,  
 resins/coatings/techniques:  
 barrier/skincoats, 15:13, 17:11, 20:32,  
 23:4, 48:86, 50:46, 51:108; CopperClad,  
 7:42; Copperlok, 8:4; dissolving  
 glycols/water-soluble molecules  
 (WSMs), 15:13, 15:60, 16:42;  
 Dynel/epoxy, 11:5; Epco-Tek 2000,  
 9:56; epoxy coatings, 15:13, 17:11,  
 19:59, 23:54, 42:59; InterProtect, 19:59;  
 isophthalic resins, 8:28, 15:60, 91:136;  
 material/equipment sources, 17:16;  
 microspheres, 15:13; NPG (iso  
 neopentyl glycol) formulations, 7:50,  
 15:60; Pettit Glass Flake epoxy, 23:54;  
 POL-E-BOND, 2:72; post-curing, 17:11;  
 POX-E-COP, 7:42;  
 reinforcements/relamination, 17:11;

- repair filler, 48:86; VC Tar, 19:59; vinyl esters, 6:10, 12:4, 15:13, 15:60, 17:11, 20:32, 51:108, 52:43
- blisters, paint/coatings: diagnosing/loupe, chisel, and tape, 52:55
- blocking: guidelines/placement, 50:38, 58:79, 142:18, 144:4. *See also* boat stands/jackstands; boat storage
- blocks: carbon reinforcements/bearings, 45:105; Harken Black Magic Air Blocks, 45:105; Harken Ratchamatic, 45:105; Lewmar's Sumcjr B;pcl. 78:12
- blood clots: cautions/treatment/phlebitis, 41:55
- Blount-Barker Shipbuilding: conversion of auto/passenger ferry *Freedom* to passenger-only ferry, 81:10;
- Blount, Donald & Douglas: on powerboat performance tests and Series 62 hull resistance data, 81:10, 128:18
- Blount, Donald L.: designer/Defiant 64, 57:123; designer/Rybovich sportfishermen, 25:42; on *Destriero's* development program, 109:100; on *Destriero's* sea trials, 110:50, 111:4; dynamic stability calculator software program, 126:80; on extension of technology for advancing vessel speeds, 115:6140:34; his book *Performance by Design: Hydrodynamics for High-Speed Vessels*, review by Dudley Dawson, 153:46; foreign-language versions of Juan Baader book, *Cruceros y Lanchas Veloces* and *Motokreuzer und Schnelle Spoortboote*, 111:4; powerboats going faster than hull speed/Series 62 (interview), 128:18, 130:6; profile, 45:3; propeller research, 46:52, 46:62; prototype Outrider 27, bow-ski boat, 78:12; Series 62/PBB interview, 128:18; on tuning twin-screw rudders/floating differential system, 47:5; on professional licensure, 47:24; on weight control, 29:8; on developing a small craft design book, 100:4
- Blount, Donald L., and Associates: acquisition by Gibbs & Cox, 160:8; Express 42 (Rybovich Spencer), walkaround sportfisherman, 87:16; hundred knot yacht, 101:82; hydrodynamics testing/Carderock, 42:39; startup of tooling business, 66:110
- Blount, Donald L., author: "Correcting Dynamic Roll Instability," 84:26; "Original Speed," 113:32; "Powerboat Performance Tests," 79:68; "Rudder Design for High-Performance Boats," 78:72; "Tuning a Twin-Screw Rudder Installation," 45:96; "Trim Control," 75:140
- Blount, Luther: aluminum-fiberglass hybrid construction, 17:19
- Blount Marine: Hitech aluminum-fiberglass hybrids, 17:19; 192' excursion vessel, 3:11
- blower: Blue Blower, 6:52
- blowgun: applications, 33:64
- blow-molding: Prijon kayaks, 29:33
- Blue Boat: French Nautical Industries Federation's (FIN) LePrix du Bateau Bleu (Blue Boat Prize), 94:8
- Blue Peter Marine: Hullform design/fairing software, 17:58
- Blue Sea Systems: equipment leakage circuit interceptor (ELCI) Field Test Kit, 164:12; high-capacity DC systems/components, 38:55
- Bluffton Millworks: CAD/CAM for interior joinerwork, 40:42
- BluWav Systems: electric propulsion motors, 142:26, 144:4

Blyth, Andrew: on studied lac of depth and necessity of hydrostatic stability calculation for open ocean boat sailing, 140:4

Blyth, Andrew, author: "Why Standards Matter," 129:72

BMP. See best management practice (BMP)

BMW Oracle: rigid wing sails, 133:70; tooling rudder mold and foil components/Turn Point Design, 137:12

boarding ladder: Garelick Manufacturing, 81:10; double-hooked ladder, 81:10

boat, leaving unattended: bilge pumping systems/installations, 57:48, 57:73

boatbuilders: Joe Kitchell, traveling boatbuilder, 153:8; traveling boatbuilder crews, 153:8

boatbuilders' association: Composites Industry Network, 21:12, 28:52

boatbuilding. See boatshops, small; custom/semi-custom/one-off construction; metal construction; production boatbuilding *entries*; wooden shipbuilding/restoration

boatbuilding apprenticeship programs: ABBRA, 36:74; The Apprentice Shop, 144:10; desperate need for boating industry, 166:80; in New Zealand, 20:25, 54:43, 54:52, 100:24; Marine Service Technician(MST) program/Canada, 162:12; 169:136; multi-year programs/Australia, 166:80; and Nova Scotia Boatbuilders Association, 100:24; whole-boat training/Quadrant Marine Institute, 162:12; Winter Yacht Basin, 35:25

*Boatbuilding with Aluminum*, by Stephen F. Pollard, 167:6

boat cable. See battery cables; wire/cable, marine

Boat Care Policies (USA) Inc.: blister insurance, 19:59

boat certification. See certification

boat covers: cost/performance comparison, 18:36; Griffolyn TX-1200 polyethylene plastic sheeting, 38:55; shrink-wrapping, 18:28, 18:36, 21:12, 33:69; Transpac II, 26:54

Boatest CD Rom: repair estimate software for recreational marine industry, 81:10

boating activity: dollar value of, 111:120; keeping boating fun and vital, 135:72; Marina Economics website, 111:120; Recreational Marine Research Center/Michigan State University, 111:120

Boating Corporation of America: Stolkraft 4500, 49:42

boating laws: environmental vs. marine trade issues (manatees), 4:18, 5:7

*Boating Magazine*: powerboat performance testing, 87:4

boating safety: in advertising/marketing, 38:11, 38:12; boat fires, 137:12; boat noise and, 43:75; library, 38:51; lightning protection, 43:64; manual, 32:48; PFDs, 40:62; need for bash-proof keels, 101:128; standardized warning labels, 157:6. See *also* accidents, boat/marine; collisions; product liability; safety standards, for boats

boat covers: Stamoid Light/tearing and mold resistant covers, hoods, and biminis, 117:8

boat driving school: Tres Martin's Performance Boat Driving School, 133:60

boat kits. See kits, boat

BoatLIFE: Hot Knife caulk-stripping tool, 10:52; Life-Seal polyurethane/silicone



sealant, 28:27; polyurethane adhesive/sealant, 28:27

boat lifts/hoists: chain hoist/electric, 26:54; chain hoists/pneumatic, 33:64, 41:62; Feebe deck cranes/transforms to other functions, 172:12; Galva Foam houseboat lift, 16:52; Gardner-Denver pneumatic chain hoist, 41:62; hydraulic hoist/River Boat Works, 36:20; hydraulic hoist/Roodberg, 72:10; hydraulic trailers, 22:32, 57:133. 63:54; Kevlar-reinforced lifting lines/slings, 52:43; lifting hook latch kit, 12:60; lift-point labels, 50:38; mammoth 600C model, 110:12; mobile boat hoist/self-powered slipway/Wise Handling, 60:11; mobile crane/Shuttlelift, 57:133; monster 16-sling rig, 68:11; Roodberg (the Netherlands) equipment manufacturer, 72:10; rotating unit/West Marine Products and Services, 60:11; safety standards/procedures, 50:3, 50:38, 53:4, 142:18; Sea Lift self-propelled hydraulic lift, 99:20; self-powered launch and recovery vehicle, 72:10; sidepost hydraulic car lift, 71:6; Sikorsky S-64 sky crane, 66:64; slipway sling lift/Roodberg, 72:10; straddle-lifts/mobile straddle hoists, 57:133, 84:52; three-legged hoist/Essex Island Marina, 36:20; tracked crane/Hood Ocean Systems, 36:20; Travelifts, 27:8, 50:38, 53:4, 57:133; U-shaped trailer, 72:10; WaterLift/Nyman Marine, 23:50; wheeled crane/Fred's Boat Shop, 36:20. *See also* boat transport; hull lifting/rolling/turning systems; Travelift

boat motion analyzation, 61:88

boat noise. *See* noise pollution; noise/vibration control

boat owners/customers: builder's contract/yacht finish standards, 40:24,

40:36; complaints/Consumer Protection Bureau (BOAT/U.S.), 12:47; cost of boating vs. other leisure activities, 107:112; customer service/satisfaction, 2:80, 3:5, 8:64, 12:40, 19:72, 20:8, 27:46, 29:54, 31:80, 122:80; customer surveys, 35:25; design input/feedback, 6:34, 6:42, 9:28, 46:16; design ratios booklet for, 51:11; do-it-yourself repairs/maintenance, 31:18, 31:80, 44:18; environmental education/workshops/newsletters, 20:8, 24:58, 31:16, 35:25, 35:52; fire prevention/education, 44:18; hurricane preparations/contact with, 27:18, 27:21; market database/ad strategy, 26:64; responsibilities/documentation/operating , 27:46; responsibilities/outfitting, 27:46, 37:60. 119:84; subcontractor arrangements, 52:88, 54:5; yard liability/jackstands, 52:4. *See also* builder's contracts; merchant's contracts; owners' manuals; owners' representatives

*Boatowner's Mechanical and Electrical Manual*: review, 44:83, 138:6

boat parts: database/BOAT/U.S., 30:54. *See also* inventory/parts, computer tracking; inventory/parts, purchasing/control

boat plans. *See* designs/plans

Boat Plans International: source for boat plans, 28:6

Boat Protection Act of 1996: design splashing/legislation, 45:21

boat recycling, 50:82, 160:3, 160:40; cost effectiveness of, 163:44; derelict vessels/cost study/Florida Fish and Wildlife, 163:44; and Geocycle and use for old boats processing, 167:6; liquid heat transfer process, 163:44; market

build-up solution for, 163:44; Port of Port Angeles, WA Composite Recycling Technology Center, 163:44; recycled fiberglass "concept " boat/Ryds Batindustre AB (Sweden), 60:82; Rhode Island Sea Grant and composite waste recycling, 167:6; of Team Oracle's USA-71 hull, 163:44; using fiberglass waste for fuel/German cement factory, 163:44. 167:6. *See also* recycling programs, SMC (Sheet molding Composite), recycling programs

boat repair. *See* repairs/maintenance

boats: new vs. used, 110:118, 135:72; keeping vital interest in boating, 135:72

boat safety. *See* safety standards, for boats

Boat Safety Act (1971), 128:8

boat salvage: Bootdump/Bram van der Pijll, 160:40; Salvage Direct, 102:14

Boat School, The (Eastport, ME), 112:10

boat sheds/shelters:Dura-Skrim fibert reinforced polyethylene covers, 155:4; heatable tent, 19:25, 21:12; heaters for, 36:4; heaters for/post-curing, 34:21; at Newcastle Marine, 130:28; polyethylene-roofed/condensation, 35:15, 36:4; PVC/Poly-Steel Shelters, 5:58, 21:12; sources, 35:17. *See also*

boat storage; boat storage, dry; buildings, steel, pre-engineered; tents

boatshops. *See* boat sheds/shelters; production boatbuilding, plant/facilities; work space

boatshops, small: accounting/financial planning, 1:38, 32:64, 50:59, 57:74, 57:80, 69:114; advanced composites, 39:30; CAD/CAM implementation study, 58:13; CAL/NCC applications/welded aluminum skiffs, 59:71; computer-assisted design/lofting, 13:43, 71:106;

cross-training and subcontracting, 57:76; DuraKore construction, 15:34; electrical service, 48:56; FRP repairs/retrofits/remanufacturing, 57:74, 57:76, 57:80, 139:74; quality laminates/bucket-and-roller, 45:76

survival strategies/staying small, 46:72, 47:5, 59:71

boatshop safety. *See* worker safety/occupational health

boat shows: American vs. European marketing at shows, 113:12, 115:6; booth setup/staffing/boothmanship, 36:60, 36:64; Dusseldorf Boat Show, 113:112; Fort Lauderdale, 55:16; marine trade association involvement, 4:9, 113:112; marketing/sales at, 23:37, 36:60, 36:64; marketing trends/reader questionnaire analysis, 3:16; megayachts/Superyacht Northwest, 26:51, 34:55; Miami Boat Show/1950s, 57:152; sailboats/Sail Expo, 30:48

Boatside Services: steam-cleaning and contaminant removal, 66:11

*Boats In My Blood*: autobiography of Barrie Farrell, boatbuilder/British Columbia, 164:12

boat slings: polyester (Poly-Gripper), 14:57

boat speed. *See* speed

boat stands/jackstands: BL3 Hydraulic Boat Lifting System/Brownell, 154:12; Brownell, 16:52, 22:32, 60:27, 63:54, 142:18, 154:12; chines/loading, 58:79, 60:5; folding, 54:18; proper placement, 50:38, 52:4, 58:79; securing with chain, 52:4, 142:18

boat storage: blocking/moving boats, 50:38, 51:6, 52:4, 53:4, 58:79, 142:18, 144:4; Brownell equipment, 22:32; heatable work space/tent, 19:25, 21:12; keel-bulb support system, 106:80; long-

term storage checklist/log, 122:52;  
shrink-wrapping, 18:28, 18:36, 21:12,  
33:69, 63:54; triple support (conformal)  
cradle at New England Boatworks,  
106:80; wooden boats, 18:28. *See also*  
boat sheds/shelters; boat storage, dry;  
boatyards/marinas, facilities/equipment;  
boatyards/marinas, management  
boat storage, dry: car-storage Pal-It, 6:52;  
conditions on wood, 65:38; fire  
preparedness/prevention, 39:4, 44:18,  
44:22; Unistack expandable buildings,  
7:64

Boat Track: marine software company/in  
the Cloud, 167:6

boat transport: custom tilt trailers, 135:58;  
equipment/Brownell, 22:32, 60:27,  
63:54, 63:70;  
equipment/procedures/guidelines,  
50:38; hydraulic trailers/haulers, 57:133,  
63:54, 135:58, 136:4; keel basket trailer,  
63:54; large yacht custom built road  
trailer/Nautor's Yard, 84:52; shrink-  
wrapping, 18:28, 63:54; screw pad  
trailers, 63:54;  
superloads/overland/Perkins Trucking,  
36:33; trailers/point loading/strakes,  
steps, and chines, 58:79, 60:5. *See also*  
boat lifts/hoists

BoatU.S. (Boat Owners Association of the  
United States): complaint support  
services (Consumer Protection Bureau),  
12:47; damage assessment, 25:18,  
66:64; independent surveyors, 71:5;  
parts/plans/tooling database, 30:54

boatyard waste

disposal/reduction/compliance: acetone  
replacements, 33:20, 3:69;  
benchmarking/environmental audits,  
20:3, 20:40, 27:8, 27:61; catalyst  
neutralizer, 7:64; certification program,

28:54; checklist/resources, 27:8, 27:17;  
cleaner disposal guide, 31:68; compliant  
finishing guide, 15:70; epoxy, 45:105;  
gelcoat/laminate removal (blister  
repairs), 16:42; information/customer  
education, 31:16, 35:52; management  
strategies/systems/programs, 27:8,  
37:66, 55:26, 55:27, 61:10, 140:18,  
144:48; manuals/guides, 15:70, 27:8,  
27:17, 20:8, 27:17, 28:48, 28:52, 34:59;  
paint removal/wastewater runoff, 7:8,  
12:60, 29:4, 31:10, 33:75, 44:54,  
144:48; paint separator, 8:54; photo-  
curing resins, 18:8; pressure-wash  
systems, 31:10, 31:68, 33:75, 44:54;  
runoff collection systems/tanks, 6:8, 7:8,  
7:13, 7:28, 21:60, 27:8, 31:10, 44:54;  
TCLP (toxicity characteristics leaching  
properties) tests, 33:20; Ultramat, 21:60;  
with vacuum-molding/resin-  
infusion/SCRIMP processes, 31:42,  
31:68, 32:28, 44:30. *See also* acetone,  
replacements; air pollution; antifouling  
paint, removal; environmental  
concerns/protection measures; spills,  
fuel/chemical, cleanup/containment kits;  
VOC emissions, reduction/compliance;  
water pollution

boatyards/marinas, facilities/equipment:

blocking/jackstands/cradles, 50:38,  
52:4, 53:4, 54:18, 63:54, 130:28; Cut's  
Edge Harbor Marina, 161:8; docks,  
39:44; docks/bungee-mooring, 53:64;  
docks/floating/wave attenuator, 53:64;  
electrical service/GFI outlets, 44:18;  
hauling and storage, 63:70, 130:28;  
layout/fire preparedness/prevention,  
1:50, 7:28, 17:34, 26:18, 39:44; rack-  
and-stack storage systems, 161:8;  
safety/liability, 52:4, 53:4; shore-power  
wiring/fire prevention, 44:18; yard boats,

42:34. *See also* boat lifts/hoists; boat sheds/shelters; fires, boatyard; insurance, property/fire; production boatbuilding, plant/facilities

boatyards/marinas, management:

- accounting/cash flow, 35:25;
- berthing/fire prevention, 44:18; customer service, 2:80, 3:5, 8:64, 12:40, 19:72, 20:8, 27:46, 29:54, 31:80, 35:25, 70:120;
- dockside marinas with charging facilities powered by renewable energy, 173:34;
- do-it-yourselfers/repairs/maintenance, 31:18, 31:80, 44:18, 52:4, 70:120;
- electrical systems training/certification, 54:32; e-mail address directory, 38:51;
- environmental compliance/pollution control, 27:61, 33:75, 140:18;
- environmental education/workshops, 20:8, 24:58, 31:16, 35:52, 38:51;
- estimates/work orders/contracts/billable hours, 35:25, 37:60, 37:61, 57:74, 127:8, 70:120; fire
- preparedness/training/education/prevention/compliance, 1:50, 7:28, 17:34, 26:18, 39:44, 44:18, 44:22;
- hauling and storage/boat lifting and blocking, 50:3, 50:38, 52:4, 53:4, 57:133;
- hauling and storage/contracts, 37:61;
- hauling and storage/decommissioning inspections, 44:49, 50:38; hauling and storage/fire protection, 44:18; hurricane preparations, 27:18, 27:21; industry profile, 44:3; launching
- precautions/inspections, 50:38;
- management manual, 42:16;
- management skills/strategies, 35:25;
- management training/education programs, 22:51, 35:25, 35:30, 35:31, 35:52, 64:11; PierVantage web-based management system, 127:8; pumpout

grant program, 35:52;

purchasing/inventory, 35:25; scheduling, 35:25; subcontractors, 52:88, 54:5, 57:76; survival strategies/staying small, 46:72, 47:5; watch service, 44:18, 44:22. *See also* antifouling paints/coatings; antifouling paints/coatings, removal/disposal; boat owners/customers; boat storage; boat transport; boatyard waste disposal/reduction/compliance; production boatbuilding, business of; production boatbuilding, financial planning/management; fires, boatyard; painting techniques; paint removal; production boatbuilding, management; production boatbuilding, plant/facilities; repairs/maintenance; repair techniques; Travelift; water pollution

Boehmer, Richard: Base Speed Concept in comparison to S number, 133:8; obit, 136:10

BOC Challenge: 1993/scantlings standards, 48:9, 50:5; shore team experience, 65:120. *See also* Around Alone Race

Boggs, Richard: on Praise for Big Props and effects of large slow-turning propeller vs. smaller, faster-turning propeller, 151:6

Boksa Marine: Carolina-style express sportfishermen/Calyber 35, 115:18

Bolger, Philip C.: comments on DownEast hullforms/Frost 34, 74:5; Fisherman's Launch *Sometime or Never*, 120:3; *Gadabout*/patrol boat in a box, 158:8; on overpowered power boats, 80:4

Bolt Fast fatigue analysis software, 104:22

bolts. *See* fastenings

Bonar & Flotex, Inc.: Lobosport carpet, 21:26

- Bona Sport: Rocket flaps, 34:59
- Bonal Technologies: Meta-Lax, 2:12
- Bond, John: on VOC regulations/compliance, 10:8
- bond, mechanical: fibrous flock/in-mold coatings/epoxy laminates, 49:59, 51:6
- bondcoat: for epoxy laminates, 49:59, 49:60, 51:6; for in-mold finish coatings, 49:59. *See also* See *also* gelcoat, application/shop practices/troubleshooting; gelcoat, formulations/applications/performance; paints/coatings, exterior; skincoat
- bonding, plastic. *See* plastics, bonding
- bonding, secondary. *See* secondary bonding
- bonding hardware. *See* deck hardware/fittings, installation/bonding
- bonding putty. *See* putties, bonding/bedding
- bonding systems, and galvanic corrosion: AC/shore-power systems, 32:36, 41:21, 138:18; DC wiring/engines, 23:4; function/installation, 33:28; impressed-current systems, 33:28; for metal boats, 33:28; pros and cons of, 65:38; tanks, 52:18; testing circuits, 33:28, 33:34, 41:25; through-hulls/underwater hardware, 8:44, 32:36, 65:38, 138:18. *See also* corrosion, galvanic; corrosion, stray-current
- Bond Yachts (Poland): Motorcat 30/Jerzy Kostanski, designer, 86:14
- Bonner, Jim: profile/Bonner Aero Marine, 60:10; seeking expansion for production shop, 61:10
- Bonner Aero Marine: 28' sport diesel, 60:11
- Bontrager, John W.: on Rod Stephens' affiliation with Sea Education Association (SEA), 121,9
- Boolean operations: vs. feature-based modeling operations, 66:90
- Boomeranger Boats Oy: practical impact-exposure testing, 142:52, 150:10
- Boomsma: Flushline deck hatches, 34:59
- Bootdump: disposal of and recycling boat parts, 160:40
- boottop/covestripe: AutoCAD/waterline, 45:86
- Bootz, Jeff: on honeycomb cores/applications, 21:4, 22:20
- borates solution: for decaying wet cores, 96:16
- borescope. *See* fiberoptic borescope
- Borges, Phyllis: on custom castings/patternmaking, 42:46
- Borrink, Andreas: on bedding contoured cores, 33:4; on polyester gelcoat/epoxy laminate compatibility, 44:5
- Borror, Jim: on Rybovich accessories/hardware production, 14:26, 14:32
- Bors, Kim: and Chris-Craft turnaround, 80:48
- Bosch Power Tool Corp.: high-speed sanders, 1:68; high-volume dust extractor, 28:38
- Boscoprene: 2402 neoprene adhesive, 46:38
- Bosna, Alexander: on Copperlok, 8:4
- Bostik Corp.: Never-Seez lubricant, 1:68; 920 polyurethane adhesive/sealant, 28:27
- Boston BoatWorks: *Cepheus IX*/Carl Schumacher daysailer, 139:18; custom one-offs to series production, 99:66, 157:50; and Doug Zurn-designed motoryacht MJM34z, 99:52; through-panel penetration repairs, 97:130; tooling and hull/*Reindeer V*, 57:110;

- wet-preg epoxy composite construction, 157:50; robust safety program, 157:50
- Boston Whaler: and Brunswick Corporation, 102:96; fire/rescue and commercial boats, 2:40; founder/obituary, 38:3; hull concept/construction, 2:38; Impact RIB/foam collar, 40:66; largest model/370 Justice, 130:10; marketing/advertising, 2:34, 2:37, 6:42, 37:48; owners' manuals, 27:42; RAMCAP process, 102:96; state-of-the-art impregnator, 157:50; yard boat, 42:34
- bottom paint. *See* antifouling paints/coatings; antifouling paints, removal
- Botved Boats: Coronet 24/Walt Walters design, 132:36
- Bouguere, Pierre: early hydrodynamicist/performance prediction, 60:66
- Boulant, Gerard: on Kevlar laminate failure/coefficient of thermal expansion, 59:5
- boulevardier's boat: 64:11
- Bouma, Sjoerd: Design Challenge/Vrimbo 39 outboard cruiser/Rob Tander, 127:20
- Bounty: aging fiberglass boats (laminates), 4:64
- bow configurations: built-on redesign/improved performance/nose-diving, 45:86; bulb and non-bulb advantages; bulbous/Northern Marine, 75:123; nabla-style bow, 114:20; and performance, 25:55, 27:4, 45:86, 114:20; plumb, 126:38; stem design, 25:55, 27:4; tank-testing hulls with and without bulb, 167:40
- bow platform: refit/redesigned bow, 45:86; design for two anchors, 93:76
- bow railings: design considerations, 42:88; 114:30
- bow rollers: anchor-stowage systems, 22:28; 93:76
- bow ski: Outrider 27 prototype/Klem Flying Boats, 78:12
- bowsprit, articulating: on custom-built Class40/Maine Yacht Center, 155:58. *See also* Class 40
- bow thruster: Dock & Go sideways maneuverability/Beneteau's Sense 50, 130:10; gear-drive and gearless bow thrusters/Vetus, 163:56; Jet Thrusters with nozzles/Holland Marine Parts, 149:10; low-level short circuit in, 152:58; noise/vibration control, 5:42; on Proa 2000 motoryacht, 67:13; Quick Docking System (QDS) for sailing yachts, 152:6; in surface-effect ship, 65:84
- Bower, Jim: on structural standards for recreational boats, 64:5
- Bowers, Albert, author: "When Twin Engines Are One Too Many," 79:128
- Bowler, Russ: "The Large Green Sailing Yacht, Defined," 116:46
- Bowles, Jeffrey: response on definition of a totally green hybrid, 154:4
- Bowles, Jeffrey B., author: "Weight Watcher," 93:62; "What's The Rush?" 152:80; "Two-Speed Gears," 80:76
- Braatz, Ernest F. (Ernie): on boat plans/parts/tooling database, 30:54; on damage assessment, 25:18; NFPA fire protection standard, 44:18; obit., 44:18
- Bradfield, Sam: sail-driven hydrofoil, 139:108
- Bradford Marine: painting, 52:54
- Bradford, Sam: NF2 (*Neither Fish Nor Fowl*) hydrofoil-equipped trimaran, 75:14
- Bradley, Dick: first chopper gun, 38:30

- Bradley, Michael A. (author): "A Penny Gained," 63:29
- braiding machine for multi-strand carbon fiber rigging/Future Fibres, 164:12
- Brainerd, Alec: Artisan Boatworks/pod drive auxiliary power/Watch Hill 15 daysailer, 137:6
- Bramhall, Dan: Cobalt Boats/builder profile, 28:32, 60:104; on cored construction/knitted reinforcements, 29:38; on tooling/fasteners for hull-to-deck joints, 60:104; on robotics for laminating, 20:8; stick-built deck plug, 28:8; on Xycon skincoat, 28:60
- Brand, Christopher and Karen: on gelcoat peelers, 13:4
- Brandis, Steven: causes of resin volatilization and preventative controls, 132:50
- Brandon, Bob: on usefulness of technology offered in *Professional BoatBuilder* magazine, 28:6
- Branford Landing: Peel Away stripper, 33:75
- Brangan, Adam: on g limits for hull design, 70:5; on structural design for high-speed craft, 72:5
- brass: galvanic corrosion, 32:36, 32:39, 33:28; inline plumbing check valves, 120:80
- Bray, Patrick, author: "Long Rangers," 118:22
- Bray, Patrick: reducing powering requirements of long-range motoryachts, 118:22
- Brazil: Sterling Atlantic 43 motoryacht (SA42)/Greg Siewert, designer, 103:14; Amyr Klink, Brazilian sailor-explorer/Antarctic circumnavigation, 60:11
- Brazilian boatbuilding manual: 67:13
- breakwater: floating wave attenuator, 53:64;
- Breathe Easy air purifier, 132:6
- Brer Technical Inc.: Turbo Shear face planer, 27:70
- Bresnahan, Glen: on omission of Hutchings Manufacturing from dust control article, 85:4
- Brewer, Ted: and George Cuthbertson, 92:48; on sailboat market/design, 7:5; on stern/stern configurations, 27:4; on the ideal blue-water cruiser/Jay Paris rendition, 75:5
- Brewer Yacht Yard: boat moving/storage, 52:4; hurricane salvage, 20:6
- Brierley, Ernest M.: Brierley 30, 44:49; DuraKore boat design, 1:20; *Mandalay*, 53:28; on manual lofting, 24:30; obituary, 41:3, 41:5
- brightwork: materials/costs/time-saving tips for production boat models, 154:22
- British Columbia: kayak builder/Current Designs, 49:36; model basin/BC Research Inc., 56:26, 56:38; RIB builders/Zodiac-Hurricane Technologies, 48:50
- British Columbia Research Inc.: Ocean Engineering Centre/model testing, 56:26, 56:38
- British Red Cross: aluminum landing craft for/Specialty Marine Contractors, 100:12
- British Seagull motor handbook, 141:30
- brittle material: vs. ductile/cored bottoms, 51:22, 53:4, 53:40, 55:5, 56:5, 59:104; vs. ductile/metals, 51:56, 53:4
- Brodie, John: response on China Sail Factory safety issues, 146:4
- Brogdon, Capt. Bill: on concrete/moorings, 31:4
- Bronstein, Jim, author: "The Price Is Right," 70:120

- Bronstein, Jim: on boatyard management, 35:25
- bronze: keel fasteners, 38:20, 39:4;  
galvanic corrosion, 32:36, 32:39, 33:28
- bronze, manganese: casting, 42:46;  
galvanic corrosion, 32:39, 33:28
- bronze, red: casting, 42:46
- Brooke, John: on emerging third-world economies and free-trade disadvantages for U.S. workers, 103:6;  
on hybrid marine power, 111:4, 143:6;  
on tuning twin-screw rudders, 47:5
- Brookes, Doug, designer-builder: sailing catamarans/St. Kitts, 119:28
- Brooklin Boat Yard: air tools, 33:58;  
alternators/battery banks, 21:4; bow-roof shed, 35:15; custom 50' fast cruiser, 84:36; *Katrinka* cruiser/racer refit, 138:48; portable plywood box heater, 136:22; profile of, 84:36; twin wheels/*Isobel* sailing yacht, 136:44;  
workmanship/composite construction, 17:64, 136:44
- Brooks, Al: on DuraKore, 15:34
- Brooks, John, author: "Back-up Engineering," 138:64; "Dragon Flyer 3.2," 148:18; "One Jig to Build Them All," 162:66
- Brooks Marine Group: recruiting firm for marine industry, 149:84. *See also* Harrell, Neal, author
- Broward Marine, Inc.: aluminum construction, 24:34; megayachts, 55:16
- Brown, Allan: profile of, 104:100
- Brown, Darrell: on interior design, 6:34
- Brown, David G., author: "Priced Out," 107:112
- Brown, Jay: toolmaker/Bay Ship & Yacht, 21:36, 21:42
- Brown, Jim: folksy podcasts on outrig [media.com](http://media.com), 168:14; on International Executive Service Corps (IESC), 23:4; Searunner Catamaran/charter vessel, 36:74; WindRider/rotomolded trimaran, 52:12
- Brown, Jim, author: "The 'Cattlemaran' and the 'Kaimarak,'" 22:64; "First Encounter," 170:48; "Foil Train Coming," 156:88; "Takeoff Window," 139:108; "Tri and Tri Again," 135:46
- Brown, Peter: on preparing for future, 1:5
- Brown, Russell: on review of his book, *Epoxy Basics*, 152:4
- Brown, Russell, designer: Design Challenge, 122:24; Eppler foil, 74:82; wood/epoxy power and sail boats, 130:52; plywood epoxy kit boats, 150:72; *Epoxy Basics* book, 150:72; podcat and outrigger powerboats, 130:52
- Brown, Russell: Design Challenge, 122:24, 130:52
- Brown, Susan, author: "The (Highly) Engineered Composite," 106:112
- Brownell, Fred: building profile/Brownell Boat Works, 22:32, 63:54
- Brownell, Tom: Brownell Boat Works/boat-handling equipment, 22:32, 22:36
- Brownell Boat Stands, Inc.: BL3 Hydraulic Boat Lifting System, 154:12; boat stands/trailers, 16:52, 22:32, 60:27, 66:64, 100:120, 136:4, 142:18; builder profile, 22:32, 22:36; keel stands, 125:8; safety chains for stands, 142:18; staging ladders, 24:62
- Brownell Boat Works: builder profile, 22:32, 22:36
- Brownell Systems Inc.: submersible hydraulic trailers, 22:32, 63:54, 63:70
- Bruce, Jan: Bruce 22 electric boat, 165:10; recreational craft pioneer and industrial designer, 165:10



Bruckman Yachts: Abaco 40/Mark Ellis, 138:32, 139:74, 147:10; Buckmann daysailer, 139:74; diverse projects in time of 2008 recession, 139:74; Erich Bruckmann obit, 135:6; *Nepenthe*, Alan Gurney design, 152:4; Pilot 39/Mark Ellis, 138:32; and Ventana Motor Yacht, 138:32

Brunswick Corporation: Controller Area Network/"SmartCraft," 97:148, 99:82; MotoTron, 97:148, 98:50, 99:82; purchase of Boston Whaler Co., 102:96; and Sealine power boatbuilders (U.K.), 99:82

Brunswick Technologies Inc. (BTI): 2415 binderless mat, 18:54; 3205 biaxial (0-90, 45/45), 18:54; 4815 (0-90), 18:54; 5608 quadraxial cloth, 44:30; CO-FIL Z-axis-stitched binderless mat, 17:11, 36:34, 37:48, 42:62

brush, tip-off: making/using, 8:52

brushes: for varnishing, 19:36

Bryan, Harry: on Halon-based fire extinguishers/environmental concerns, 17:4

Bruynzeel plywood: consistent quality in sailing catamaran/*Falcon*, 119:28; history of, 119:6. *See also* Van de Stadt Timber.

BTM Corp.: plastic clamp, 24:62

Buchanan, Guy: on stacking sequence/laminate strength, 53:4

Buddingh, David S.: on marine and RV use/smoke alarms/CO detectors, 91:10

Buehler, George: on moorage fees, 24:4; on survey disclaimers, 38:4

Buehler, George, designer: custom aluminum trawler, 111:12

buffer/polisher: Polishmaster 2000, 20:56

buffing compound: Finesse-It, 19:36

buffing pads: for gelcoat, 15:44

bulb: bulb on bows/longitudinal center of buoyancy (LCB), 78:46

builder's (product) liability. *See* insurance, liability, product/builder; product liability

builder's contracts/estimates/bidding: arbitration clause, 12:40; change orders, 12:72, 37:60, 37:61, 40:24, 40:36; change orders/weight, 44:5; and collections/deadbeats, 27:61, 29:54, 37:60; computer database/wooden ship reconstruction, 21:38; for custom/semi-custom construction, 12:72, 25:42, 44:30; finish standards, 40:24, 40:36; fixed-price, 12:72, 37:60, 40:24; for hauling/storage, 37:61; large vs. small builder, 58:66; litigation, 37:60; for moldmaking, 37:60; for new construction, 37:60, 37:51, 49:96; for product specs, 49:96; repair work, 27:61, 29:54, 37:60, 37:61, 97:174; resin-infusion/predictability, 4:30; SCRIMP/time-and-materials predictability, 44:30; small-business financial planning, 1:38, 32:64, 58:66; standardizing product specifications/PILOT system, 49:96, 60:136; time-and-materials, 37:60, 40:24, 44:30, 87:46, 152:36; writing/negotiating, 37:60. *See also* production boatbuilding, business of building boats for foreign markets, 154:56

buildings, dry-storage: Unistack, 7:64. *See also* boat storage, dry

buildings, metal/steel, pre-engineered: A&S Building Systems, Inc., 17:34, 26:18; R. Colin Construction, 42:24; coatings/Kynar, 26:18; design/construction, 26:18, 42:20, 42:24; fire/hurricane damage/preparedness, 26:18; for paint

booth, 42:20, 42:24; relocatable steel buildings/Kelly Klosure Systems, 84:18

Buitelaar, Hans, author: "Fund My Boat (Please)," 163:98; "Sun Drive," 161:48; "Tab A Into Slot B," 148:46

bulkheads/compartments: Airex sandwich built, 88:62; balsa-cored integrated, 46:16; cold-molded structural, 51:36; cored bulkheads/*Isobel* sailing yacht/Stephens, Waring & White, 136:44; DecoLite-cored, 13:43, 47:17, 57:110; encapsulated plywood vs. fiberglass, 40:54, 41:5, 46:28, 46:35; foam-filled/water-saturated, 37:48, 37:58, 88:62; molded-in grid/liner, 46:28, 46:35, 46:37, 48:4, 58:54; refinishing bulkhead on 1965-vintage Chris-Craft Commander 27, 156:54; stitched tabbing strips, 57:88; stringer preforms, 41:62, 57:88; structural taping/impregnator, 55:58; surveying/fiberoptic borescope, 35:42; watertight/stability (Subchapter T rules), 36:22, 39:4

bulletproof: Kevlar vs. fiberglass, 62:5

Buls, Bruce, author: "Aluminum Boat Assembly," 4:42; "Building Fiberglass Megayachts," 2:42; "Management Makes the Difference," 8:64

bungee cords: Seaflex elastomeric rope, 53:64

bungs (plugs): for filling old fastening holes, 23:20, 125:20; plug cutter, 23:20; teak, 51:114

Burchard, Hal: on Lewmar primary winches, 133:8

Burchill, Ross: on ease-of-use of metric system vs. imperial system, 93:4

Burg, Don: Air Ride Craft/SES, 48:6

Burger Boat Company: Hargrave designs, 43:36; megayacht market, 12:50, 13:4;

new ownership of, 72:10; sale/reopening, 45:21

Burgess, John: on marine systems education/market research, 57:88

Burgess, Keith: experimental trimaran/crab-claw rig, 57:15; Freedom Yachts/carbon fiber masts, 57:7

Burkett, Jerry: Design Challenge, 122:24; fuel-efficient hullform, 115:18; on powerboat performance tests, 79:72, 83:4, 115:18; on wave-piercers and fast-cats, 75:5; catamaran dinghy, 75:14

Burlington Precision Fabrics: peel plies/secondary bonding, 19:48

Burnham, Francis: hydraulic hoist, 36:20

Burns, Benjamin, author: "It's A Changed Workplace. And Work Force," 75:160

burns: medical supplies for, 8:54

Bury, Paul, designer: Unity 24 motorcruiser/Seakeeper gyroscope stabilizer unit, 120:4

Bush Boake Allen: BBA Solvent F302, 33:20

business. *See* accounting; boatshops, small; boatyards and marinas, management; production boatbuilding, financial management/planning; production boatbuilding, business of

Butler, William L. III (Bill): on bilge pump systems/installations, 59:5; on galvanic isolators/capacitor vs. non-capacitor, 43:5; on marine hose installations, 51:6; on wet-exhaust systems, 46:5

Buzzards Bay 14 sloop: and Northwest School of Wooden Boatbuilding, 137:44

Buzzards Bay 30 sloops: restoration of three sloops by French & Webb, 115:184; whereabouts of additional original Buzzards Bay sloops, 115:184

Buzzi, Fabio: and High-Speed Research Facility, 93:10, 133:84; KeraKoll

raceboat, 141:6; production of two-speed gearboxes for raceboats, 71:123, 141:6; Tecno 40 RIB raceboat, 46:38, 46:43, 85:3, 133:84, 134:36; 33,000 btu Condair air conditioners, 141:6; sacrificial pin/safety rudder, 141:6; search and rescue (SAR 60) boat, 164:34; Trimax surface drive, 71:123, 134:36, 141:6; U.S. Coast Guard semi-RIBs design, 66:11; world speed records, 133:84, 134:36; XSR48 stepped hull “superboat,” 110:12  
 Buzzi, Fabio, author: “SAR 60,” 164:34  
 Byington, Tracy: CAD/CAM systems implementation/study, 58:13;  
 Byk Chemie: 740 additive (styrene suppressant), 8:28  
 Bynes, Graham: Design Challenge, 122:24  
 Byrnes, Carla: on product quality/building standards, 5:7  
 Byrnes, Graham: Design Challenge, 122:24

---

**A B C D E F G H I J K L M N**  
**O P Q R S T U V W X Y Z**

---

cabinetry, interior. *See* interior joinerwork/cabinetry  
 cabinet shop. *See* work space  
 cabin interiors: saloon vs. salon, 57:15.  
     *See also* interiors, arrangements/decoration  
 cabin soles: shop-made teak/holly (balsa core), 13:43  
 cable, anchor: Duckbill/for boat shelter, 36:4; locker design for, 93:76;  
     scope/hurricane preparedness, 30:8  
 cable connectors: cable support, 134:54;  
     insulation-displacement connectors/vulnerability of, 156:24;  
     temporary electrical and electronic

through-deck connectors/RDE  
 Connectors & Cables, 92:6  
*Cable and Wireless Adventurer*: Nigel Irens monohull, 55:16, 62:96, 63:86;  
     renaming of/*Brigitte Bardot*, 145:100  
 cable cutter: Klein, 12:60  
 Cable Marine: recession business strategies, 121:62  
 cable ties: ball-lock cable ties/Thomas & Betts Corp., 170:10; Cobra Cable Ties, 76:10; stainless steel cable ties with self-locking heads, 170:10. *See* wire/cable, marine  
 cables, battery. *See* battery cables  
 cables, electrical. *See* electrical cables; wire/cable, marine  
 cables, engine-control: chases/dragging tools, 28:14, 30:4; hydraulic, 28:60; push/pull, 28:14, 28:60, 29:58  
 cables, routing: 3-D CAD modeling, 40:50  
 cable sheathing: anti-torsion cable fitted to Karver drum, 154:48; Panduit spiral wrapping, 13:70  
 cable ties: Cobra Cable Tie, 74:9; nylon/Strap-Loc, 6:52, 47:66  
 Cabo Marine/Cabo Yachts: cored bottoms, 51:22; Coremat applications, 7:50; profile of, 91:96  
 Cab-O-Sil: controlling resin drainout, 33:46, 42:62; for core closeouts, 97:130;  
     Commuter 36/*Magic*/hull bottom, 130:20  
 Cabot Safety Corporation: sound-absorption composites, 12:60  
 CAD/CAM (computer-aided design/computer-aided manufacture):  
     computer hardware/selection/sources/costs, 8:35, 9:5, 40:52, 40:53, 66:90, 71:106;  
     computer integrated manufacturing (CCIM), 67:110; computer software/applications/sources/costs,

7:18, 8:35, 17:58, 40:42, 40:52, 40:53, 57:88, 61:106, 66:90, 71:106, 90:13, 159:60; control station/ergonomic analysis, 48:66; design mock-ups, 40:42, 40:48, 65:97; 137:12; for DuraKore strip construction, 15:34; for fabric cutting/stitching/tailoring, 57:88; Faro Arm measurement data device for modifying existing boat dimensions, 78:94; for fiberglass tooling, 61:102, 71:106; FiberSIM software, 85:10; Finite Element Analysis/panels/loading, 45:62; implementation study, 58:13; initial graphics exchange specification (IGES), 159:60; laminate kits, 35:58, 85:10; laser-scanning technology, 159:60; Macintosh vs. MS-DOS operating systems, 8:35, 9:5; MaxSurf, 159:60; for metal construction, 38:38, 63:145; modifying designs of existing boats/Owen Clarke Design (U.K.), 159:60; for outfitting (harnesses/railing/piping), 40:50; Naval Designer integrated hull-design workshop, 90:13; parametric design, 40:42; planar sheer, 27:4; problems/divergence/interiors, 40:24, 97:10; for small boatyards/builders, 13:43, 58:3, 58:66; 3-D Modeler, 7:64; 3-D modeling/cabinetry, 13:43; 3-D modeling/metal construction, 38:38; 3-D modeling/right-of-way/outfitting, 40:24, 40:50, 71:106; Solidworks software/use of at Owen Clarke Design, 159:60; theodolites, 159:60; tooling, 66:110, 137:12; training/resources, 7:25, 38:14, 38:47; at Turn Point Design, 137:12; use at Southampton Institute, 61:26; for stability analysis, 150:88; for waterline/stripping patterns, 45:86; WinDesign velocity performance wind

prediction program, 159:60; for wood interior joinerwork/cabinetry, 13:43, 40:42, 40:52, 40:53. See also computer hardware, for CAD/CAM; computer software, hull design/fairing; computer software, lofting/parts generation; lofting; metal construction, CAL/NCC (computer-aided lofting/numerically controlled cutting); numerically controlled (NC) lofting/cutting

CADKEY: design software/interiors/cabinetry, 13:43, 40:52

Cadwalader, Dick, author: "Gelcoat Peeler," 3:60; "Head Arrangements," 5:50; "A Jacking Carriage Simplifies Keel Repair," 4:6; "Marine Wiring," 8:12; "Quality and the Market," 3:72; *"Powerboat Reports and Practical Sailor,"* 8:9; "Securing the Future of Sail," 6:20; "A Simple System for Handling Boatyard Runoff," 6:8; "Syntactic Tooling Foam," 6:52; "Teak Decking," 5:26; "Thermoplastics," 10:34, 11:20

Cady, Blake: Freedom 36/38 bow redesign, 45:86

Cain, Jerry: on drivetrain fundamentals/aligning couplings, 73:5

Calcutta Marine: Calcutta powercat and Calcutta 480, 162:12

CAL/NCC (computer-aided lofting/numerically controlled cutting): CAD/CAM systems/software/hardware/applications, 7:18, 13:48, 17:58, 24:26, 24:32, 24:34, 40:42, 40:52, 40:53, 57:88, 63:145, 65:97, 69:13, 69:52, 71:106; for composite flat-panel construction, 45:54; cost savings, 25:4, 59:71, 69:52; design control/liability/errors, 7:18, 8:4, 8:35,

25:4, 27:4, 38:14, 38:47, 39:4, 71:106, 137:12; fabric cutting/stitching/tailoring, 57:88, 65:97, 69:13; frames/lofting errors, 38:14; vs. foundry castings (parts/hardware/fittings), 42:46; for interior joinerwork/cabinetry, 13:43, 40:42, 40:52; Liba Max 3, 69:13; loft floor, 38:14; for outfitting (harnesses/railing/piping), 40:50; outsourcing/kits, 37:16, 37:18, 38:14, 38:38, 38:47; parts fit/trial and error/limitations, 59:71, 65:97; parts nesting, 38:38, 45:54, 45:62; for plugs, 46:16; problems/divergence/interiors, 40:24; for small boatyards/builders, 13:43, 59:71; vs. traditional (manual) lofting, 7:18, 8:35, 24:26, 24:30, 25:4, 25:42, 38:14, 39:4, 53:28; VectorLam laminate design program, 69:13; vocational training, 38:14, 38:47. See *also* CAD/CAM; computer software, lofting/parts generation; lofting; metal construction, CAL/NCC (computer-aided lofting/numerically controlled cutting) applications; numerically controlled (NC) lofting/cutting equipment

Calder, Nigel: on advertorial material from freelance writers, 156:4; on battery paralleling/charging/cycling, 41:5; *Boatowner's Mechanical and Electrical Manual*/review, 43:83, 138:6; on boatbuilding in advanced economies vs. economically undeveloped nations, 102:120, 103:6; Cape Dory 28 refit/Paul Calder, 138:6; on controllable pitch propeller/diesel-electric efficiency, 111:4; response on connecting lithium cells, 124:6; response on cost of existing lithium battery packs and Battery Management System (BMS), 122:6; on DC wiring/cable selection,

22:4; on differences between lithium-ion and NiCad batteries, 121:9; on double-clamping/marine hose installation, 51:6; on galvanic isolators, 33:4, 43:5; response on effects to marine mammals using ultrasonic anti-fouling system, 164:4; response on hybrid conundrum and permanent magnet DC motors, 144:4; response hybrid propulsion, 143:6, 144:4; on isolation transformers and whole boat ground fault protection, 105:4; on the NMEA 2000 power systems, 99:4; response on Praise for Big Props and mismatch between propeller curves and engine fuel maps, 158:4; response on "Pushing Batteries to the Limit" and ABYC's work on abuse tests standards for lithium-ion-batteries, 172:4; response on safely run over-propped engine/wide open throttle limitations, 151:6; response on requirement to use turned cables in either ABYC or ISO standards, 158:4; on specificity of heat from various liquid substances for marine refrigeration, 92:4; on "Systems Audit at Pacific Seacraft," 61:5; profile, 43:83; on refrigerant phaseout/retrofitting, 18:4, 28:6, 30:54, 31:4; response on using lithium battery packs from wrecked automobiles for boat use, 150:4; on salvaging drowned engine, 47:5; on sizing electrical cables, 37:4; on testing ground wire circuits, 102:4

Calder, Nigel, author: "ABYC Goes CD ROM," 49:79; "After Apartheid," 83:50; "The Airbag of Boating," 40:66; "Alternators & Regulators," 19:50; "Another Take on Trip Thresholds," 104:30; "Backfire," 102:120; "Battery Chargers," 27:24; "Beyond Efficiency

Criteria Alone," 109:140; "Bilge Pump Installations," 57:48; "Boat Cable," 51:69; "Boatbuilding to a Single Standard," 104:96; "Breakthrough," 111:82; "Bringing a New Product to the Marine Marketplace," 56:18; "Bungee-Mooring a Marina," 53:64; "Calculating the Load," 64:36; "Carbon Fiber Spars," 47:44; "Changing the System," 106:42; "The Checklist," 73:102; "A Chill Wind," 26:8; "Clean Diesel in the Wake of Deception," 158:88; "The 'Combiner' Solves Battery-Charging Problems," 31:68; "Corrosion," 32:36, 33:28; "The Dawn of Drop-in Propulsion," 115:32; "DC to AC Inverters," 25:30; "Diesel-Electric," 92:12; "Diesel Fuel In Flux," 158:64; "Don't Forget the Float Switch," 44:29; "Dripless Shaft Seals," 29:14; "Duly Noted at Dusseldorf," 115:128; "Economies of Sail," 145:66; "Electric Lights," 87:80; "Engineers by the Hour," 40:66; "Fire-Resistant Boat Cable," 55:99; "Frequencies of Fouling," 161:64; "Getting on The Bus," 108:34; "The Great Galvanic Isolator Debate," 41:21; "Ground Fault, Interrupted," 100:56; "Ground Tackle," 93:76; "The Fiber Rigging Phenomenon," 110:86; "Finding Faults," 134:54; "Genset Shootout," 113:56; "Halon Is Dead; Long Live FE 241," 30:60; "Hitting the Ethanol Blend Wall," 160:54; "Hooked on Networks," 156:24; "The Hybrid Conundrum," 142:26; "Hybrid Marine Power, Part I: Efficiency Theory," 107:82; "Hybrid Marine Power, Part 2," 108:82; "Hybrid Power System for J-Class Yachts," 143:46; "iFloat," 133:12; "Industrial Sails," 109:156; "In the Buffer Zone," 149:34; "The IntelliMate," 28:60; "Kiwi Magic," 71:70;

"Lightning Protection," 86:26; "Long-Lasting Impellers, Easily Replaced," 53:89; "Losing (Quality) Control," 34:72; "Managing High-Current DC Circuits," 89:28; "Making the Right Connections," 20:50, 22:4; "Marine Batteries," 18:44, 18:53, 20:4; "Marine Hose," 49:16; "Marine Hybrids Come of Age," 127:30; "Marine Refrigeration, Part One," 90:64; "Marine Refrigeration, Part Two," 91:34; "Minimizing the Risk of Boat Fire: Overcurrent Protection," 36:41, 38:4; "Minimizing the Risk of Boat Fire: Sizing Electrical Cables," 35:18; "Moving Up to a 24-Volt DC System," 76:21; "A Much-Needed Course (Marine Systems Technician)," 57:100; "A Multiple Malo," 119:38; "Networking Part 1: The Three-Cable Boat," 97:148; "Networking, Part 2," 98:50; "A New Multimeter with DC Amps Capability," 50:73; "Niche Diesels," 122:64; "Onboard AC Power Options," 77:28; "Orust," 82:48; "Postcard from Orust," 117:54; "Praise for Big Props," 150:50; "Preventing Carbon Monoxide Poisoning," 45:32; "Proper Grounding Practices," 30:44; "A Proper Marine Isolation Transformer," 45:105; "A Propulsion-Efficiency Experiment," 124:54; "Pushing Batteries to the Limit," 170:32; "Raising the Bar," 54:32; "The Real McCoy," 118:40; "The Refrigeration Dilemma," 16:35; "Refrigeration Roulette," 154:28; "Reliable Float Switch, Hold the Mercury," 107:30; "Rethinking Battery Banks," 39:56; "Running the Numbers," 120:52; "Salvaging a Drowned Engine," 43:52; "Shakeout," 99:82; "The Shock of the New," 131:46; "Some New Components for High-Capacity DC Systems," 38:5; "The Synchronizing Inverter," 112:74; "Systems

Audit at Pacific Seacraft," 59:21; "Taking Charge," 148:58; "Taking the Measure of Emissions," 157:40; "Tank Choices," 52:18; "Testing Batteries," 39:98; "The Maturation," 115:74; "Total Immersion," 105:78; "Trucking a Boat," 63:54; "Twin Tools for Testing AC and DC Circuits," 34:59; "The Ultimate Multimeter," 44:54; "We Can Have Hybrid," 164:58; "Wet Exhausts," 43:44; "What Grows in the Darkness," 172:36; "Where Are The Americans?" 113:112

Calibogue Bay fishboat: Barker Boat Works, 169:116

California: low-polluting engines, 27:61; mergers/buyouts, 25:8; Rule 1106.1 amendment, 60:11; Rule 1162/compliance/impact on boatbuilding industry, 1:30, 2:4, 8:28, 10:8, 10:20, 18:8, 20:32, 25:8, 26:34, 31:3, 140:18; SCAQMD, 25:8, 26:34, 60:11; workers' comp, 23:13, 23:14, 25:8

Callahan, Steven, author: "An Education in Small-Craft Design," 61:26; "Bieker's Boats," 74:68, "Dick Newick, Multihull Pioneer Passes," 146:10; "Easy Pieces," 152:24; "The Foils Factory," 74:82; "Intuitive Dynamics," 122:40; "Groupe Finot," 64:64; "Keeping It All Interesting," 76:60; "Master of Surprise," 62:46; "M&M," 72:84; "Native Son," 75:38; "Nigel Irens," 63:86; "A Rodger Martin Retrospective," 113:82; "Their Phone Is Ringing," 124:42

Callahan, Steven, co-developer of The Clam, folding rigid inflatable boat (FRIB): 71:6; 130:6; revamped Tencara 43 cat, 127:56

Callan Marine: Callan 55, high-speed boat, 66:11; Tencara 43 catamaran raceboat, 119:6

Calpyso Inflatables: trademark conflict, 14:2

CAM (computer-aided manufacturing). See CAD/CAM (computer-aided design, computer-aided manufacture); CAL/NCC (computer-aided lofting/numerically controlled cutting); metal construction, CAL/NCC (computer-aided lofting/numerically controlled cutting) applications; numerically controlled (NC) lofting/cutting equipment

Camarc Design (Scotland): composite fast patrol boat for African navy, 147:10

Cambridge, Wayne: on water leaks, engine exhaust, and waterlock mufflers, 91:10

Cambridge Wire Cloth Company: Poly-Gripper boat slings, 14:57

Cameron, Murdo: advanced composites replica P-51 fighter, 128:8; composite program at North Idaho College, 148:10; composite vintage outboard replicas, 144:10; *Miss Spokane* Unlimited-class hydroplane replica, 128:8

Camille Data Acquisition system: styrene emissions testing, 40:17, 40:18

Camp, Robert C.: *Benchmarking*, 20:40

Campbell, John: on lightning protection systems/dissipators/impulse suppressors, 43:64, 46:5

Campbell, Lorne F.: applying Crouch's Formula/modification, 169:62; Barnaby's Formula, 169:62; Bladerunner, tunnel-hull design, 72:10; on Crouch's formula/estimating speed, 53:4, 169:62; on dynamic instability, 34:5; on Misbehavioral Analysis and instability, 166:3; on stepped hulls, 65:5; 93:4. See also Barnaby, Kenneth C., Barnaby's Formula

- Campion Marine: bioresin/biodiesel boats, 143:52; fibertoon pontoon boats, 143:52; green technology/materials/market trends, 143:52
- Canada: model basins, 56:26, 56:38. *See a/so* British Columbia; Newfoundland; Ontario
- Canada Metal Pacific (CMP): cadmium-free aluminum and magnesium anodes, 157:94
- Canadian Electric Boat Co.: three electric launch models/Bruce and Luc St.-Onge designs, 165:10
- CAN (Controller Area Network): CANbus wiring system/three-cable boat, 98:50; vs. Victron's V.E. Net, 98:50; EmpirBus, 98:50
- Cancro, Nick: on LED interior lights/Sensibulb with thermal control circuit, 117:5
- candela: vs. lumens, 87:80
- Canfield, Susan, author: "The Pre-purchase Survey Report," 55:71
- Cannella, Anthony: on transmission thrust bearings, 121:9
- Canning, Wayne: bucket-and-roller laminating/lobsterboat hulls, 45:76
- canoes: *Canoe & Kayak Industry News*, 40:62, 43:17; Carolina canoe/Reid Bandy/Bandy Boats, 170:20; cold-weather boating, 34:55; concrete, 31:62; composite/We-no-nah, 49:36, 49:40; Crosslink 3/Discovery, 4:34, 4:40, 10:34, 11:20; with fiberglass and burlap plies, 83:84; Hornbeck Boats, 97:60; marketing/dealerships, 42:16, 49:36, 49:40; marketing/women, 42:16; market revival/update, 4:34, 21:72; performance, 49:3; polyethylene, 10:34, 11:20; Placid Boatworks, 97:60; resin infusion applications, 32:18; roto-molding/vacu-forming technology, 4:40, 10:34, 11:20; Royalex, 11:20, 49:36
- canvaswork: design/airflow/carbon-monoxide back-drafting, 45:32; patterning for dodger, 29:54
- Caouette, Pierre: response on Ned Farhinhold letter/Efusion electric outboard/test boat, 145:4.
- capacitor starting system: Micron PowerPak, 153:8. *See a/so* Micron Corporation
- capacity: jet boats, 36:50, 38:12; safety standards, 36:50, 38:11
- Cape Dory 40: underwater exhaust for, 90:34
- Cape Dory Yachts, Inc.: auctioning of, 13:70; and Carl Alberg, designer, 77:104
- Cape Fear Community College: boatbuilding vocational training program, 20:18; catalyst measuring system, 29:51
- Cape Horn 65, steel trawler yacht: Nova Scotia Boatbuilders Association, 77:10
- CapeLine, fully automatic convertible canvas top for flybridge, 108:16
- Capi1 distributed power systems, 131:46
- Capi2 distributed power systems, 119:38
- Capolupo, Frank: Rule 1162 development, 26:34
- Capri Sailboats: purchased by Catalina Yachts, 61:10
- Caprio, Dennis, author: "Lyman-Morse," 97:82
- capsize: capsize waterline, 139:54; Didi 38 (*Black Cat*) capsize/Dudley Dix, 149:20, 153:52; durability of hybrid wing sail on Bieker racing catamaran, 170:48; E4 motoryacht/capable of 360° rollover/Elling Yachts, 158:54;



knockdowns and inversions, 140:4, 149:20; loss of ballast and, 23:24, 23:26; righting moment/stability, 23:24, 23:26, 139:54, 140:4, 149:20, 153:52; survival at sea, 23:24. *See also* stability, dynamic

Cape to Rio Race (2014): capsize of Didi 38 (*Black Cat*)/Dudley Dix, 149:20

Carbide Corp: drill bits for sample cutouts/plugs, 49:25

Carbodur strip: pre-cured beam material, 61:34

Carbon Conversions: composite recycling, 163:44

carbon and Corecell P and M foam hull/*Inoui*, 162:14

carbon fiber: all-carbon prepreg construction preparations/Hodgdon Yachts, 153:20; all carbon 39.4' G4 foiling catamaran/Gunboats International, 156:40; all carbon 50' sailing yacht/single person maneuvers/AP Yacht conception, 151:12; aluminum jaws for handling, 47:34; applications, 58:36, 58:52, 63:151, 85:46, 156:40; auto-racing applications, 30:4; block reinforcement/bearings, 45:105, 156:40; braided tubing/structural members, 41:28, 41:30, 47:44; carbon fiber furniture/Vincent E. Pard, Jr., 173:18; composites handbook, 58:36; costs/economy/availability, 24:18, 24:21, 26:4, 28:18, 45:54, 47:44, 53:40, 55:79, 57:30, 57:88, 58:36, 58:52, 123:3; curing of pre-pregs without conventional custom-built ovens, 131:28; cutting/blades/laminate repairs, 43:54, 156:40; D Carbon 36 all carbon constructed sailboat/Dutch Carbon Yachts, 104:12; decks/Nautor, 84:52;

driveshaft for fast ferry, 75:78; filament winder/Entec, 58:36; galvanic corrosion/blistering with aluminum, 43:64, 45:54, 47:44, 54:70, 57:30, 59:5; galvanic corrosion with stainless steel, 54:70; grinding/conductivity, 28:18, 102:46; helm pedestals/pilothouse/*Isobel* sailing yacht, 136:44; monocoque grid lines/Outerimits Offshore Powerboats, 133:60; prefabricated carbon fiber grid system for hull inner skin/Baltic Yachts, 85:46; pre-pregs, 20:56, 24:18, 24:21, 39:30, 41:28, 41:30, 43:54, 57:88, 58:36, 59:5, 63:151, 64:82, 70:44, 73:79, 85:46, 125:54, 131:28; quasi-isotropic (QI) carbon fiber, 167:6; reconfiguration of shop/Hodgdon Yachts/*Commanche* maxi ocean racer, 153:20; recycling of/Carbon Conversions, 163:44; recycling/University of Nottingham (UK), 163:44; reinforcement; applications/techniques, 12:18, 28:18, 41:28, 41:30, 45:54, 45:62, 58:36, 61:34, 63:151, 64:52, 64:64, 85:46; retractable sprit for asymmetrical spinnakers, 98:28; rig/GMT Composites, 141:6; SMARTweave resin-flow grid, 46:45, 57:88; GMT Composites spars/Brooklin Boat Yard/Artisan Boatworks/French and Webb, 141:6; for structure/box-section stringers, 40:28, 41:30; suppliers/manufacturing of, 58:36, 58:52; supply/production of, 28:19, 45:54, 58:36; taped joints/flat-panel construction, 45:62; types/properties/modulus bands, 58:36; unidirectional reinforcements (unis), 28:18, 61:34, 75:78, 85:46, 96:36, 144:58; vs. wood/veneers, 55:79; use in

trimaran *Sebago*, 62:46; vs. wood/epoxy, 130:52; wood-epoxy keel, *Bagatelle*, 96:72; X-Brace Structure/Mystic Powerboats/Express Yacht, 119:6. See *also* blistering, Carbon Conversions, carbon fiber/galvanic; carbon fiber laminates (CFRP); carbon fiber spars; laminates, marine, advanced-composite carbon fiber, strength/loading/stiffness/impact tolerance: *America's* Cup contenders, 35:3; fatigue limit/unstayed masts, 57:7; laminate repairs, 43:54, 45:5, 85:46; vs. fiberglass/composites, 4:64, 28:18, 43:54, 45:54, 58:36; fiber orientation and, 28:18, 43:54, 43:61, 45:5, 45:54; vs. Kevlar, 43:54, 45:5, 45:54, 47:57, 56:64, 58:36; stiffness, 47:44, 47:53, 47:57, 58:36, 61:34 carbon fiber laminates (CFRP): composite flat-panel construction, 39:30, 45:54, 45:62, 54:44; cored/sandwich construction, 47:40, 53:40, 55:79, 58:36, 80:40, 144:58; deck, 47:34; damage inspection using shearography/emerging technologies for, 124:26, 128:50, 139:40; detecting damage in, 123:58, 124:26, 128:50, 139:40; epoxy vs. vinyl ester resin, 55:5; fasteners/fittings for, 57:30; galvanic blistering/causes/prevention, 57:30, 59:5; inconsistent weight of, 142:40; laminate properties analysis, 47:53; laminate stacking/secondary bonding, 57:88; vs. metal construction, 48:35, 53:40; production boatbuilding applications/low-cost, 58:36, 58:52; for sportfisherman, 1:22; stealth technology/navy minehunters, 53:40, 55:5; ultrasonic testing of, 123:58,

128:50; wood-foam sandwich construction, 55:79 carbon fiber spars/masts: vs. aluminum, 47:44, 55:44, 57:7; autoclave/vacuum-bagging, 47:44; braided tubing, 41:28, 41:30, 47:44; carbon-fiber laminates, 3:42, 10:52, 28:18, 47:34, 47:44, 47:53, 57:7; continuous-filament braiding machine/Novis Composites, 92:60; as standard C&C Yachts equipment, 92:60; carbon-fiber pre-pregs, 20:56, 41:28, 41:30, 47:44, 69:125; design/engineering/technology, 3:42, 10:52, 39:3, 39:30, 41:28, 41:30, 47:34, 47:44, 47:53, 63:86, 75:98; designing the carbon rig/GMT Composites, 146:40; free-standing/AeroRigs, 60:11; free-standing/wingmasts, 55:44, 55:46, 57:7, 61:10; galvanic corrosion, 43:64, 47:44, 47:53; H13OS sprit-boomed rig/Rodger Martin, 113:82; largest single composites mast/*Zeus*/Jim Gardiner, 120:62; lightning protection, 43:64, 47:52, 128:50; mold/mandrels, 47:44, 136:56; Multiplast, 90:50; non-destructive examination techniques for lightning damage, 128:50; off-axis fibers, 47:44, 47:53; Optical Fiber Strain Sensing System (OFSSS), 68:11; rig construction for John Alden design schooner/*Summerwind*, 146:40; Team SEB carbon rig/Southern Spars, 75:98; topmast for Paper Jet 14 sailing dinghy/Dudley Dix design, 110:26; ultrasonic testing of, 150:60 carbon filament: hull construction, winding filament around a mold, 61:10 carbon footprint: in boatbuilding, 169:88. See *also* The Landing School of Boat Building and Design

carbon monoxide: AC generator exhaust, 77:28, 107:94; design and construction factors raising risks in production boats, 107:94, 114:94; engine exhaust systems, 43:44, 45:5, 45:32, 107:94, 114:94; Madur CO analyzer, 107:94; poisoning/causes/prevention, 39:90, 45:32, 60:11, 62:78, 107:94, 114:94; station-wagon effect, 39:79, 39:90, 43:44, 45:32, 114:94; ventilation tests on single engine boat, 107:94

carbon monoxide detectors/alarm systems: ABYC standards/"What to Do When the Alarm Goes Off," 117:18; Chapter 13, carbon monoxide and smoke detection rule for marine or recreational vehicle use, 170:4; as a standard on the Edge motorsailer/Hunter Marine, 116:10; Nest Protect Smoke and CO detector via smartphone app, 151:12; requirements for CO detectors, 137:22; using chemical/electrochemical sensors, 45:32; using Figaro semiconductor, 45:32; Fireboy/Xintex, 45:32; Marine Technologies, 45:32; nuisance/false alarms, 45:32; Sophia's Law/Minnesota, 168L96; types, 39:90, 45:32

carbon tapes: for structural reinforcement/flat-panel construction, 45:62

Carbospars Ltd.: AeroRigs, 60:11; survival pod, 54:18

Carderock Division, Naval Surface Warfare Center: annual boat-and-equipment show, 121:78; Combatant Craft Department, 52:42, 146:24; composites testing, 34:42, 42:39, 48:35, 50:5, 52:42, 52:51, 58:36; contracting with, 42:39, 146:24; hydrodynamics/performance tank-testing, 42:39, 49:42, 52:42, 52:51, 53:12, 56:26, 56:38, 58:6; Mark-Five

Special Operations Craft (MK V SOC), 52:42; need for nearly all-purpose riverine craft, 146:24; profile/naval research facility, 42:39, 48:35; profile/special warfare fleet, 52:42, 52:51; SCRIMP, 42:39, 58:36; retrieval system for specwar RIB, 52:42; stern flaps testing, 70: 81; VARTM (vacuum-assisted resin transfer molding), 32:28, 42:39; Web site, 42:39; on woven vs. stitched fabrics, 31:4. *See also* composites testing, panel testers/test fixtures; model basins/tank-testing facilities and programs, North America; model testing

Carey, Merritt, author: "Law of the Yard," 103:34

Cargocaire Engineering Corporation: dehumidifier/blister repairs, 16:41  
car lift, hydraulic: ClearLift for use in small-craft repair, 71:6

Carlson, Larry: on Prop Scan/propeller pitch, 42:74

Carnell, David: on propane refrigerant, 27:4; on vacuum-drying, 10:4

Carolina Skiff: two new lines/Sea Chaser Bay Runner and Tunnel Skiff Series, 149:10

Car Pal, Inc.: Car-Pal-It/car storage in boat dry-storage areas, 6:52

carpet, marine: Alpha, 6:52; Fiberton electrostatically shot carpet fibers, 77:10; installation/runners for, 32:15; Lobosport, 21:26; MBX Metal Blaster tool for, 85:10

Carrier, Steve: on affixing hull identification numbers, 59:5

Carroll, Barry: Summit 40 and Summit 35 sailboat racers, 123:10

Carroll Marine: computer tracking of production/labor, 50:59; closing of

- business, 85:10' Corel 45, 61:66; epoxy resins, 42:52, 42:59; 49er racing skiff, 49:74; vacuum-bagging cored bottoms, 51:22
- Cartwright, Bob: on Merritt's Boat and Engine Works, 63:5
- Carver, Hugo: comments on boat supports and oversized propeller and engine manufacturers, 159:4; on Show Your Work, Not Your Business Card and being a NAMS or SAMS member, 162:6
- Cascade Pacific Industries: custom industrial plywood/Boat Ply, 16:12, 27:42
- Casciani-Wood, Jeffrey N.: on sizing zinc anodes, 34:5; on question of laminate density and quality affecting meter readings, 104:4
- CASDE Corporation: VARTM fabrication, 48:35
- Cassidy, Jim, author: "Insuring the Ethanol Transition," 102:33
- Cassidy, Jim: on Sparkman & Stephens Designer's Recognition Rendezvous, 75:5
- Cassis, Frank: Rule 1162 development, 26:34
- Castro, Tony: Elan Power 35 boat, 85:10
- Castrol North America: Super Clean engine cleaner, 38:55
- Caswell, Chris: on *Windward Passage* and memory of water skiing/Rolux Big Boat Series race, 152:4
- Caswell, Chris, author: "Machined Solutions," 130:44; "Service, Size Large," 127:42; "Spreading the Word," 128:80; "We're Done Crying," 121:62
- Catalina Yachts: builder profile/product development/ancillary equipment, 35:34; interior design, 6:34; purchase of Capri Sailboats, 61:10; Rule 1162 compliance, 25:8; sailboat market, 30:48, 65:11
- catalogs, components: interface data/descriptions, 47:80, 49:4. *See also* PILOT
- catalogs, industrial safety: Tennessee Mat Co., 23:54
- catalogs, tool. *See* tool catalogs
- catalogs/product brochures, builders': for boat shows, 36:60; for canoes/We-nah, 49:40; interactive, 38:51; low-budget, 23:37; photorealistic/animated alternative, 40:48; production tips, 3:16, 4:50, 6:5; and product liability, 38:11, 38:12. *See also* product literature
- catalyst: blending/dispersal/distribution, 2:4, 15:13, 15:60, 33:46; chemical reactions with, 6:16; cumene hydroperoxide/Trigonox 239A, 33:57, 44:30; development of, 38:30; diluted/summer-grade, 2:6, 15:13, 33:46, 33:57; for epoxy, 42:62; for gelcoat, 1:6, 2:6, 7:50, 11:42, 15:13, 50:46; hot-weather formulations/alternatives, 33:46, 33:57, 42:62; inhibitors, 33:57; neutralizers, 7:64; nonfoaming/SCRIMP, 4:30; promoters/accelerators, 6:16, 33:46, 35:4, 44:30; shop practices/storage, 6:16, 6:64, 15:13, 33:57; shop vs. lab testing, 50:46; for spraying systems, 2:6, 15:13, 15:60, 33:46; tinted, 15:13, 15:60; for vinyl ester, 6:10, 6:16, 42:62. *See also* accelerators/promoters; catalyst ratios; cumene hydroperoxide; MEKP; spraying equipment, catalyst mixing/metering systems; spraying equipment/systems/techniques
- catalyst, mixing/metering: for Armorcote/tooling gelcoat, 13:70; blister causes/prevention, 15:60, 51:108;

bucket-batch method, 20:18, 29:51, 30:57, 33:46; catalyzation graph/measuring system, 20:18, 29:51, 30:57; for gelcoat, 1:6, 11:42, 33:46; Material Mixer, 21:60; metric system, 29:51; with paint rollers, 46:16; quality control kit, 29:51; sample testing, 1:6; temperature/hot weather, 33:46, 33:57; VOC emissions reduction, 20:40; by volume, 20:18, 29:51, 30:57; by weight, 30:57. *See also* spraying equipment, catalyst mixing/metering systems

catalyst, paste: benzoyl peroxide (BPO), 33:46

catalyst ratios: and blister prevention/resistance, 4:5, 15:13, 50:46, 51:108; and core bonding, 9:36, 33:46; for gelcoat, 1:6, 2:6, 11:42, 15:13, 33:46, 50:46; hardness and print-through, 2:6, 33:46, 50:46; gel times/temperatures/testing, 1:6, 2:4, 2:6, 29:51, 33:46, 33:57, 50:46; Polish Motorcat 30, 86:14; and resin shrinkage/flat-panel fabrication, 45:68; and resin shrinkage/mold release, 13:11, 50:46; and resin drainout, 33:46; with vinyl esters, 6:10, 6:16, 42:52

catamarans, power: aluminum Moose Boats, 79:10; AT800 catamaran/test platform for bottom slamming loads/Albert Nazarov, 157:80; *Cat* ferry, 53:12; CATUG tug-and-barge chemical carrier, 43:36; catamaran/camper hybrid, 137:12; deep-V monohull/offshore catamaran, 127:56; Du Toit Yacht Design/expedition catamaran, 143:10; fan-drive system ductwork for, 75:78; fast/low wave-making (wave-piercing)/displacement, 29:4, 50:11, 53:12, 54:43, 54:44, 74:54; fast/ferries, 45:120, 47:5, 53:12, 57:15,

59:10, 61:82, 75:78; foil-assisted catamaran/Kvichak, 96:52; 4:20; Jeanneau's Lagoon Power 43/cat without a stick, 86:14; *Lady Cat* ferry, 59:10; market/designs/production of, 6:25, 22:64, 45:120, 47:5, 47:16; minehunting SES catamaran, 65:84; model testing, 55:32; monohulls vs. multihulls, 78:46; narrow planing hulls/Shark cat/Bruce Harris, 78:46; *Nero* 105-knot hybrid powercat/concept project/Mannerfelt Design Team, 163:26; passenger cruise boat, 57:15, 124:42; pilot boat *Swift*, 96:52; planing/asymmetric deep-V hulls/John Kiley, 47:16, 74:54, 78:46; racing cat/world speed record/Michael Peters, 127:56; round-the-world record, 50:13, 54:5; revamped TenCara 43 cat/Callan Marine, 127:56; semi-displacement hullform for wind-farm crew boats/Jutson and Armstrong Marine, 151:12; SES hullform/hovercraft hybrid, 48:6; Skater boats/Peter Hledin/Douglas Marine, 109:80; SpecialCraft/stepped hull cat/B.S. Studios, 80:12; symetric and asymetric demi-hulls, 140:7. *See also* excursion boat market; ferries

catamarans, sailing/cruising: *Alpha* and *Canaan*/Steve Killing design, 151:110; Aqua Cat, 53:12; C-class/racing/advanced composites, 39:30, 72:84, 124:12, 128:8, 133:70; Aikane 56/Van Peteghem Lauriot-Prevost, 91:154; charter boats, 36:74; 124:42; composite wing masts, 14:8, 133:70, 133:70, 96; critical design drivers/Alex Simonis, 83:66; cruising, 30:48; custom-built tilt trailers for, 135:58; Doug Brookes, designer builder/St. Kitts, 119:28; evolution of for

Little *America's Cup*, 133:70, 139:108;  
*Eagle* hydrofoil/Paul Bieker, 170:48;  
 excursion, 3:11, 22:64, 83:50;  
*Fujin*/infused carbon catamaran/Paul  
 Bieker/Gold Coast Yachts, 155:10;  
 Gougeon G-32, 42:52, 49:59; Gougeon  
 water-ballasted, 23:4; Gunboat's G4  
 foiling catamaran, 156:40; Gunboat  
 line/Peter Johnstone/Nigel Irens, 98:28,  
 138:6, 144:58; hardware  
 bonding/Tornado, 15:21; head  
 installation, 52:4; market/designs for,  
 6:25, 22:64, 23:4, 30:48; with hybrid  
 wing sails/Fast Forward Composites,  
 170:48; mega-catamaran/*PlayStation*,  
 58:13, 59:5, 60:11, 72:84; outsourcing,  
 37:16, 37:18; production-built foiling  
 beach catamaran/Steve and Dave  
 Clark, designers, 166:22;  
 production/Gold Coast Yachts, 3:11,  
 14:8, 22:64, 37:16, 37:18, 124:42,  
 155:10; production/Gunboat  
 International, 144:58; tooling for, 39:30,  
 59:76, 144:58; Torqeedo serial hybrid  
 system for, 164:58; TS 50/XL  
 catamarans, 118:8; Turbocat, prototype  
 beach catamaran/Robert Fischer,  
 103:142; wave-piercing/unstayed  
 masts/*Goss Challenger*, 58:13  
 Caterpillar Marine Power: engine  
 supervisory system (ESS), 14:34;  
 footwear, 53:12; Web site, 43:17  
 cathode: hot and cold fluorescent lighting,  
 description of, 87:80  
 Catia software: for fabric cutting/stitching,  
 57:88  
 Cat Ketch Yachts Inc.: Sparhawk 36 and  
 42/free-standing masts, 55:46  
 Caudwell Marine Axis Drive: through-the-  
 transom drive system, 117:8  
 caul plate, 123:32

caulk. See adhesive/sealants; sealants;  
 silicone caulk  
 caulkers: job market, 21:42  
 caulking/reaming/reefing tools: BoatLIFE  
 Hot Knife stripping tool, 10:52; caulking  
 gun/Drill-Mate, 13:70; caulking  
 gun/pneumatic, 33:64; custom  
 fabricated/ship reconstruction, 21:42;  
 Mesquite Caulking Mallet/Commodore  
 Boats, 167:14; oscillating caulking  
 cutter, 45:105; panel saw/power-  
 reaming, 21:60  
 caulk remover: Sika Sealant Remover,  
 2:70  
 Cavanaugh, J.E.: on internal vs. external  
 mix equipment, 2:4  
 cavitation, propeller: noise/sound control,  
 5:42, 67:70; surface drives and, 2:52  
 CBTF (Canting Ballast Twin Foils) boats:  
 hydraulic ram, 92:6  
 C-class boats: aerodynamics and  
 geometry of wing sails, 133:70. *Canaan*  
 and *Alpha*, 133:70, 134:42, 151:110;  
*Fill Your Hands* dual daggerboard,  
 151:110; L-, J- and S-shaped  
 daggerboards, 151:110; lifting foils,  
 151:110;  
 C & C Yachts: Bruckmann, Erich, obit,  
 135:6; building boats in pits, 138:6;  
 profile of, 92:48, 115:100, 171:10;  
 carbon fiber prepreg frame/*Alpha*,  
 134:42; Fairport Marine Company  
 buyout, 92:48, 138:6; and Novis Marine,  
 115:100; purchase of brand by  
 USWatercraft, 147:38; Reunion  
 2012/Hamilton, Ontario, 138:6, 171:10;  
 scimitar-shaped rudder, 171:10; weight  
 reduction in, 134:42. See also Steve  
 Killing Yacht Design  
 C-Dory: 22' planing dory, 23:41

CE (European Certification): ABYC's seminar "Exporting to Europe," 84:18; boat export compliance standards, 63:38; compliance with electrical installations, 75:22; ignition protection, 75:22; rulefinder.net online service, 100:4

Celanese Corporation. *See* Hoechst Celanese

Center for Marine Vessel Development and Research (CMVDR): model-towing tanks, 64:11

Center for Naval Analyses: Russian internships, 35:52

Centurion 45: Berret Racoupeau Yacht Design, 77:10

*Ceramco New Zealand*: Bruce Farr design, 61:66

CeRam-Kote, Freedom, Inc.: ceramic-epoxy coating, 54:18

Cerasia, Ed: on paint booth engineering, 42:24

Cerny Island Trail 22 design: one off construction/Cerny Yacht Design/Design Challenge, 135:36

Cerritos College: vocational training program, 21:12

certification: American Boat & Yacht Council (ABYC) Convenience Learning program, 69:184, 172:76; chartering regulations, 27:80; classification/aluminum construction, 24:34, 24:39; for exporting to Europe, 27:3, 28:54, 37:66, 40:62, 41:38, 41:41, 41:42, 46:10, 54:98, 55:87, 66:11, 154:56; NMMA program, 4:9, 15:50, 16:4, 37:66, 41:38, 41:41, 43:17, 55:87, 94:4, 154:56; pertinent suggestions for needed certification updating, 170:88, 171:4, 172:76; testing/maneuverability, 27:3; testing/stability, 36:22, 36:32, 39:4.

*See also* composites testing, lab/standardized; Europe, exporting to; International Standards Organization (ISO) standards; passenger vessels; Subchapter T boats; systems. *See also* unreliability of industry self-certification.

Cetrek, Inc.: Dataline integrated navigation system, 6:52

CFCs (chlorofluorocarbons), phaseout/restrictions/replacements: flotation foam, 2:28, 2:31, 24:62; R-12 refrigerant, 16:35, 17:4, 18:4. *See also* flotation foam; R-12 refrigerant

CFRP (carbon fiber reinforced plastic). *See* carbon fiber laminates (CFRP)

Chabot, Randy: on outsourcing/quality control, 35:4; on through-hull installation, 10:4

Chadwick, John: on "Fractional Update" and helpfulness of the article, 173:4

chafing gear: hurricane preparedness, 30:8

chain, anchor: swivels for, 30:8

chain hoists, pneumatic: applications, 33:64; Gardner-Denver P2 Series, 41:62

chainplates: carbon-fiber reinforcements, 28:18; corrections for under-sized chainplates, 160:4; dye penetrant/thermal imaging testing, 159:50; failure and correction for forestay chainplate defects, 157:112; and fiberglass decks/Malo Boats, 82:58; inspecting and replacing, 159:50; polyurethane bedding compound to stop corrosion, 159:4; repair of, 82:22, 159:50; stainless steel bushings for, 157:112; stainless steel vs. titanium, 159:50

chairs, ergonomic: Aeron chair, 34:31, 34:32

Challenger Marine: Dudley Whitman obit, 133:12; early days/FRP development,

103:186, 104:100, 133:12; Crystaliner boats/Don Mucklow, 105:4; failure and correction for forestay chainplate defects, 157:112; Marco method production boat, 103:186; stainless steel bushings for, 157:112

Chamberlain, Nancy: on acetone replacements, 33:20, 33:26

Chamberlain Group, Inc., The: Polishmaster 100 buffer/polisher, 20:56

Chance, Britton, Jr.: on computer lofting/fairing, 25:4; MacSurf design software, 8:35; obit for, 141:6; 65' sloop *Amoco Procyon*, 6:20, 10:42, 37:66

Chance, Jim: on SOLAS (Safety of Life at Sea) requirements, 78:7

Chandler, Dick: on C. Raymond Hunt hulls, 112:4

Chapin, Bart: on original Hampton boat model/Dick Pulsifer/Charles Gomes, 108:6

Chapin, E. Barton III, designer: company address change, 65:11; four-way hatch hardware, 64:11; on reminisces of associations with Jay Paris, Dave MacPherson, and Paul Coble, 91:12

Chapman, Michael J.: on catalytic heaters, 8:54; on fabric impregnators, 7:5

Charger 40, electric cruiser: conversion to semi-planing hull, 77:82; propulsion battery tanks for, 77:82

charging systems; . See alternator, high-output; batteries, marine; voltage regulator, stepped/smart

Charles Industries: Intelligent Marine Charger (IMC) programmable DC output charger, 135:6

Charles Marine Products: ISO-Boose transformers, 45:105; ISO-Transformer, 45:105; SmartBoose circuitry, 45:105

chartering/charter boats: catamarans, 36:74, 45:120, 47:5; cored bottoms, 51:22; regulations, 27:80, 37:34, 59:44; sailboat market, 30:48; T-boats/Passenger Vessel Safety Act, 37:4; trimarans, 52:12. *See also* flats-boat market/flats skiffs; passenger vessels

chart tables: design considerations, 11:9, 11:19

Chase, Eric: *Cogito* construction, 39:30

C-Hawk Boats. *See* Tri-State Custom Fiberglass

*Cheers* project, 122:40

Chemco Mfg. Co.: floor protector, 14:57

Chem-Grate Corp.: anti-slip products, 23:54

Chemical Compliance Consultants Corp.: maintaining OSHA standards/VOC limits, 1:30; Responsible Marine Program, 28:54; water pollution prevention/regulations/compliance, 31:10, 31:18; worker training programs, 13:54, 13:65

chemical hazards. *See* hazardous materials; worker safety/occupational health

chemical reactions: monitor/Accucure, 52:12

chemical sensitivities/allergies: to epoxy resins, 3:19, 42:62, 45:105; to polyester resins, 36:88; Multiple Chemical Sensitivities (MCS), 36:88, 38:6; to vinyl ester resins, 42:62. *See also* worker safety/occupational health

chemical spills. *See* spills, fuel/chemical, cleanup/containment kits

chemical storage: buildings, 4:58, 27:8; drum containers (Enviropac), 9:56; plant layouts, 17:34; resins and gelcoats, 15:13; vinyl ester tanks, 6:10



- chemistry: boatbuilder as cook, 10:64, 14:2, 14:57; product quality/worker safety, 6:64; technical assistance/process control (resin manufacturers), 39:27, 42:52, 43:96. *See also* catalyst, mixing/metering; resins
- Chem-Tech: Dualite microsphere fillers, 11:52; Redimix gun, 6:52
- Chem-Trend, Inc.: Mono-Coat RPM mold release, 5:26, 12:27
- Cheoy Lee: 58' and 70' sportfishermen, 1:22; Hin Lee Shipard (Doumen, China), 128:38; *Mazu* hull No. 5,000, 128:38; steel built tug boat, 103:112; profile of, 103:112
- Cherubini Yachts: profile of, 112:28; Cherubini 44 ketch, 112:28; composite trawler yacht *Independence* 114:20; and Moloka'i Strait series motoryachts 114:20
- Chesapeake Light Craft: C.R. Onsrud CNC machine/bar codes, 152:24; custom cut kits for Dudley Dix, 152:24; John Harris/Pacific proa *Madness*, 135:36, 152:10; jigsaw joints for small boat kits, 152:10; paddle board, 152:24; profile of, 152:24; puzzle joints in lieu of scarfs/mortise-and-tenon joints, 152:24
- Chesapeake Powerboat Symposium: advertising booths, 148:10; fifth symposium/Michael Morabito, 163:4; fourth symposium, 148:10; "Performance Test Protocol for Small Power Boats"/Clifford Gowdey and Richard Akers, 160:66; previous symposia papers, 148:10; records of acceleration during sea trials/high-speed craft, 157:80; workshop on how U.S. Navy processes acceleration data, 148:10
- Chesapeake Sailing Yacht Symposium, 82:8; Hugo Myers/speed prediction of sailing yachts, 121:50
- Chiboucas, Pete: on battery recharging, 19:50
- children and boating, 118:80
- China: production boatbuilding, 103:72, 128:38; ABYC's International Standards Summit, non-participation in, 104:96; domestic boat market, 128:38; Flying Eagle Boatbuilding, 119:6; High Modulus B3 Smart Pac box kits, 121:100; sailmaking competition/technology, 145:66; XSYacht X43 Flybridge Express/Manchuria/Andrei Rochian, designer, 163:4
- China Sail Factory, 109:156; 145:66; safety/nip roller issues, 146:4; sail hardware, 145:66; sailmaker's sailmaker, 145:66;
- chines: defects in, 70:92; Didi Mini Mk3 radiused chine, 152:16; FRP construction, 58:79, 60:5, 70:92; hard/design software, 33:69; point loading/trailering, 58:79, 60:5; stepped, 46:16; 58:79
- chisel, floor: modified for laminate repair, 23:20
- chisel, impact: applications, 33:64
- Chittum, Hal: epoxy compatible resins and Chittum skiffs models, 139:30. *See also* Hell's Bay Boatworks.
- chlorine in freshwater tank, 130:66
- chlorofluorocarbons. *See* CFCs
- Choate, Dennis: profile/Dencho Marine, 126:56
- chocks: good and not-so-good designs/2017, 171:34; installation/hurricane damage, 30:8

chopper guns: calibration/controlling resin content, 59:30, 71:38, 74:30; evolution/selection/applications, 3:54, 38:30, 71:38; Gemini-VR, 10:52, 31:68; maintenance, 3:54, 15:13. *See also* fiberglass fabrics/reinforcements, chopped-strand (chop, roll mat)

Chris-Craft Mahogany Runabout Corporation: CAD/CAM applications, 7:18, 8:35, 40:42; the cachet of Chris-Craft, 80:3; Cobra model, 80:3; composite stringers/PRISMA, 41:62; FRP construction, 38:30; pressure-treated industrial plywood/lab testing, 27:42; Golden Age of, 80:48; Outboard Marine Group (OMG)/revamping, 80:48; print-through control, 7:50; restoration of 1965-vintage Commander 27/*JB*, 156:54; Roamer restoration, 4:30; 24' runabout, 2:12; 22' Tournament Fisherman model/Pacific 22/Wayne Mooers, 98:12

Christensen Yachts/Shipyards: ABS classification, 39:80; megayacht construction, 2:42, 12:50

Christian, Andy: on isolation transformers and trip thresholds, 105:4; on Whisperprop propulsion system, 99:4

Cristos, Jose: on method to display hull identification numbers, 61:5

chrome: chromate paints/aluminum boats, 37:36; residue/hazardous waste disposal, 37:36

Ciba Composites: epoxy pre-pregs, 25:59; Nomex honeycomb core, 22:20, 32:21, 39:30, 45:54, 45:62, 56:40, 56:61

Cichanowski, Mike: builder profile/*We-nah Canoe*, 49:36, 49:40

Cigale 18 (fast offshore cruiser): 64:64

Cigarette Racing Team, Inc.: honeycomb cores/applications/techniques, 22:8,

22:20; hull-to-deck joints/shoebox construction, 60:104; in-house machine shop, 48:56; Kevlar/carbor-fiber reinforcements, 28:18, 61:34; laminate bulker/print blocker applications, 7:50; profile/management, 12:10; quality/construction details, 12:10, 12:18; 38' speedboat, 1:20; supercharged gas inboards, 17:44; 20' Cigarette, 37:66; tabbing procedures using Flexi-resin, 65:84; using steps to increase speed/Michael Peters, 127:56; vinyl esters, 28:18, 42:52; workers' comp premiums, 24:11; worker training, 12:10, 13:54; woven reinforcements, 29:38. *See also* Jenkins, Valentine (Val)

CIGNA Marine Loss Control Services: damage assessment/repairs, 25:18

CIM (computer-integrated manufacturing): Perception financial planning/production software, 23:50

Cimco Marine (Sweden): turbocharged and intercooler OXE diesel, 166:64

*Cinderella II*: hull bottom repairs, 126:18

*Cinderella IV*: construction of/*Green Marine*, 123:32; circuit analyzer: Ideal Tool ST-1P, 82:80

circuit breakers: Airpax, 16:52, 105:78; current ratings, 37:4; establishing nominal rating, 85:114; ETA Survey/*The Dirty Dozen*, 85:114; labeling/documentation, 132:80; magnetic, 36:41; thermal magnetic/magnetic-hydraulic high current response, 85:114; Professional Mariner/DC, 38:55; selection, 85:114; sources, 36:45, 37:4; thermal, 36:41; types, 36:41; waterproof/*Newmar*, 45:105

circumnavigations: Antarctic, 60:11; in custom aluminum trawler/*Ben Gray*,

111:12; record under power, 50:11, 55:16; record under sail, 55:16; research vessel *Starship*, 57:123. *See also* Around Alone Race; Millennium Round the World Race; Trophée Jules Verne; Whitbread Round-the World Race

city ship. *See* floating city ship.

Clam, The: folding rigid inflatable boat (FRIB): 71:6

clamp, E-: Original English E-Clamp, 10:52

clamp, universal: Boa-Constrictor, 33:75

clamping: vs. vacuum-bagging, 1:58

clamping, vacuum (pressure). *See* vacuum (pressure) clamping

clamping jigs: for laminating frames, 13:8

clamps, aluminum: for handling carbon fiber, 47:34

clamps, angle, auxiliary: Bessey, 24:62

clamps, bar: pistol-grip/Quick-Grip, 1:68, 49:79

clamps, C-: Bessey three-way, 24:62; COX Solo 100, 24:62

clamps, custom fabricated: for wooden ship restoration, 21:42

clamps, four-way: Bessey K framing jig, 5:58; Dyna-Pressure, 12:60; Equi-Pressure Clamp (edge-gluing), 2:70

clamps, hose: ABA Sure-Seal, 9:56

clamps, irregular angle adapter for: Bessey ES, 18:54

clamps, irregular/open design: Crab Clamp, 41:62

clamps, one-hand: Clamp-It, 15:70; Solo clamp, 33:75

clamps, pipe: PowerPress, 49:79

clamps, plastic: BTM, 24:62

clamps, stainless steel: Asian-built boats using mild-steel P-clamps, 152:58

Clark, Dave, author: "The People's Foiler," 166:22

Clark, Roger H.: on boat moving/storage, 52:4

Clark, Steve: *Cogito*/C-class catamaran, 39:30

Clark, Steve and Dave: father and son design team develop the UFO (Unidentified Foiling Object), 166:22

Clarke, Damian P.: on moving up to a 24-volt DC system, 77:5

Clarke, Dean Travis, author: "Why Aren't More Manufacturers Building Power Cats?," 45:120

Class C Catamaran, *Cogito*, 61:34

Class 40, shorthanded ocean raceboat, 155:58; Akilaria RC, 155:58; articulating bowsprit, 155:58; safety record, 155:58

Class 950 raceboat, 152:10; Basic Rules, 152:10

Classic Yacht: Copper Coat antifoulant, 1:68

Classico Boats: digitally imaged, fade-proof surfaces for deck and interior decorative panels, 02:14

classification: ABS/LR codes, 39:86, 39:88; ABS superseded by ISO/small yachts, 48:8; certification/aluminum construction, 24:34, 24:39; costs, 39:80; maintaining class/survey inspections, 39:80, 48:8; standards/composites testing, 34:42, 48:8, 133:104; standards/Subchapter T scantling rules, 36:22; standards/yachts, 39:80, 39:86, 48:8

classification societies: safety-factor ratings/core materials, 59:104; working with/yacht classification, 39:80. *See also* American Bureau of Shipping (ABS); Det Norske Veritas; German Lloyd's; Lloyd's of London

Claydon-Reeves (U.K.): Aerobat dayboats, 172:12; superyacht *Delta One*/Mulder Shipyard, 172:12

Clean Air Act/Amendments (1990): allowable pollution/Title V permits, 33:69, 34:40, 34:59, 39:90, 40:17; *Compliant Finishing Guide*, 15:70; benchmarking/environmental audit, 20:40; MACT (maximum available control technology) standards, 21:18, 31:3, 34:3, 34:40, 39:90, 40:17, 60:39; marine coatings regulations/1994, 34:40; refrigerant phaseouts/replacements (CFC/HCFC-based), 16:35, 17:4, 18:4, 26:8; styrene emissions/classification, 29:54, 40:17, 53:73, 54:112; VOC emissions/1990, 10:8. *See also* Environmental Protection Agency (EPA); NAAQS (National Ambient Air Quality Standard); refrigerants, marine; Rule 1106.1; Rule 1162, compliance; VOC emissions/reduction/compliance

Clean Boating Foundation: Leadership Clean certification/magnesium anodes, 157:94

Clean Vessel Act, 158:18

cleaner, engine. *See* engine cleaner/degreaser

cleaner, fabric. *See* fabric cleaner

cleaner, metal. *See* metal cleaner

cleaners, biodegradable: Accu-Clean, 20:56; Boatyard Boss, 29:58; at Lyman-Morse Boatbuilding, 115:56; Simple Green, 15:34

cleaners, gelcoat. *See* gelcoat cleaners

cleaners, hand. *See* hand cleaner

cleaners, resin. *See* acetone, replacements; resin emulsifiers/cleaners

cleaners, water-based: *Aquaclean*, 33:20; disposal guides, 31:68; *Thermaclean*, 31:68. *See also* emulsifiers

Clean Seas: Barnaclean electronic antifouling system, 46:50

clear finishes. *See* paints/coatings, exterior; resins; varnish

Clearwater Electric Boats: electric glide boats/coastal cruisers, 43:17

cleats: good and not-so-good designs, 2017, 171:34; installation/hurricane damage, 30:8; installation/location/safety, 42:88; stainless deck cleat/chock with universal deck mount/Schaefer Marine/New Found Metals, 95:6; fixed and flush Nomen cleat, 95:6

Clement, Eugene P.: format for Series 62 hullforms and program, 128:18; history of stepped hulls, 85:76; on practicability and performance of Plum type boats, 90:4

Clement, Eugene P., author: "Evolution of the Dynaplane Design," 97:164; "The Plum Hulls," 88:82

Click Bond fasteners: adhesives/applications/installation, 18:4, 32:52

climate. *See* humidity; temperature, of boatshop

Climate Control, Inc.: York refrigerator compressor (HFC-134a-compatible), 16:35

clipper bow: 64:96

clipper *Noah*: crowdfunding for reproduction build of/Fairtransport, 163:98

ClipperCraft Boats: Jim Staley, 9:5

clips, metal: Clinch-Fast, 10:52

closed-molding. *See* laminating techniques, closed-molding

- cloth. See fabrics, marine/upholstery;
  - fabrics, specialty; fiberglass
  - fabrics/reinforcements *entries*
- cloth, laminating. See fabrics, specialty
  - (laminating); fiberglass
  - fabrics/reinforcements
- clothing, work/protective: air-cooling vest, 29:58; fabric/static/dust and, 22:12; footwear, 3:19; for foundrywork, 42:46; for welding work, 85:4; in hot weather, 29:58, 33:46; protective suits, 3:19, 4:58, 23:54, 33:46, 64:5. See *also* goggles; gloves; personal protective gear; suits, Tyvek
- cloud-based systems: Wheel House Technologies, 137:34
- CNC (computerized numerical cutting). See numerically controlled (NC)
  - lofting/cutting
- Clymer Publications: British Sea Gull Service-Repair Handbook, 141:30; Pro-Series handbooks, 141:30
- coal-fired steamboats, 134:6
- Chanda effect, 166:6. See *also* instability, yaw (bow steering)
- Coastal Climate Control: ozone-clean marine refrigeration systems, 26:17
- Coastal Cold Molding: customer education/workshop, 24:58
- Coastal Motor Boat: load-carrying stepped hull boat/Sir J. I. Thornycroft, 85:76
- Coastal Prop Technology: Prop Scan, 42:74
- Coastal Zone Management Act: non-point-source pollution regulation, 18:64, 27:8
- CoastDesign:
  - Autoplate/Autoship/Autoyacht software, 8:35, 17:58
- Coast Guard, U.S. See U.S. Coast Guard
- coatings, drag-reducing: Sea-Slide, 14:57
- coatings, for metal buildings: Kynar, 26:18; Galvalume, 26:18
- coatings/paints: adhesive films, 57:88, 169:28; Basic No-Blush epoxy, 86:14; defensive painting techniques, 52:54, 52:55; Fire Deer fire-resistant epoxy coating/Progressive Epoxy Polymers, 86:14; heated locker for, 52:81; LTC 38/Progressive Epoxy Polymers, 86:14; underwater epoxy, 86:14; vs vinyl wrap/labor-saving and time costs, 169:28. See *also* antifouling paints/coatings; electrochromic coatings; epoxy paint; gelcoat; linear polyurethane paints; paint; paints/coatings, exterior; paints/finishes, interior; varnishes/varnishing; *etc.*
- Cobalt Boats: builder/construction profile, 28:32, 60:104; closed-molding shop, 90:84, 113:28; cored construction/knitted reinforcements, 29:38; deck plugs/tooling, 28:10, 60:104; hull-to-deck joints, 60:104; safety-related design, 15:50; ventilation system/plant layout, 28:32, 35; 113:28; Xycon skincoat, 28:60
- cobalt naphthenate: introduction of, 38:30; promoter for vinyl ester resin, 6:16, 35:4, 44:30
- Coble, Paul Valen: on keel
  - fasteners/galling, 38:20; obit, 149:10; profile of, 88:46; propeller nut installation protocol, 149:10; surveyor tricks, 149:10
- Coble, Paul Valen, author: "Respect Where Respect Is Due," 14:64
- Cobra Cable Ties, 74:16, 76:10
- Cockburn, Conrad: on navigating a Sea of Standards and scantling standards, 155:4

- Cockerell, Sir Christopher: hovercraft inventor obituary, 61:10
- Cockey, David: on seated eye height comparison to overall height of male and female U.S. Army personnel, 143:4
- cockpit: design considerations/safety, 42:88, 48:66, 48:79, 93:98; design considerations/small power cruiser, 39:67, 93:98; drainage systems/ABYC standards, 117:18. *See also* dashboards; seats/seating; wheelhouse
- cockpit soles: encapsulated plywood vs. fiberglass, 40:54, 41:5
- Cocquyt, Andre, author: "Closed Molding, Open Technology," 66:128; "Infusion Revisited," 69:132; closed molding training at Cheoy Lee, 103:114
- Cocquyt, Andre: and Advanced Composites Training program, 110:12; on resin chemistry use in closed molding process, 68:5; Stuart Catamarans, 50:11; on developing results for Hydromat (ASTM D6416) testing, 71:5; GRPguru.com, 78:12; temperature-controlled molding (TCM) and controlled radical polymerization (CRP), 125:54
- Code casa (Italy), 108:62
- Code of Safety for High-Speed Craft (HSC code): 62:87
- code (numeric control code): "Breaking the Code," 61:104
- Codega, Lou: engineer/Hines-Farley 63, 54:56, 54:62; on model testing vs. computer prediction, 55:32; on molded integral grid systems, 46:28
- Codega, Lou: design requirements for Advanced Composite Riverine Craft (ACRC), 146:24; engineer/Hines-Farley 63, 54:56, 62; on model testing vs. computer prediction, 55:32; on molded integral grid systems, 46:28
- Codega, Lou, author: "Case Study: Bottom Panels on a Hypothetical 40' Sportfisherman," 51:26; "The Cored Bottoms Controversy," 51:22; "Cored Bottom Panels in Impact: How Good?," 51:24; "The Dynamic Stability of High-Speed Boats," 31:20; "The Engineering (of the Hines-Farley 63)," 54:62; "The Price of Speed," 62:96
- Coecles Harbor Marina & Boatyard: heatable storage tent, 19:25
- coefficients of thermal expansion (CTE): distortion of steel and fiber composites, 136:56; and Kevlar laminates, 59:5; tooling-material choices, 136:56
- coextrusion: of thermoplastics, 10:34, 11:20, 34:59
- Coffay, J. Brian: on speed prediction/Wyman's vs. Keith's formula, 57:7
- Colby, Eric, author: "The Changing Structure of Speed," 133:60; "Lucky Seven," 138:7; "Special Delivery," 135:58
- cold-forming machine: Blue Wave portable machine, 104:22
- Cold Jet dry ice blast medium, 141:6
- cold-molded construction: built-in fuel/water tanks, 52:18; Brooklin Boat Yard, 84:36, 136:22; Ashcroft System former/contemporary, 51:3, 103:54; cruising sloop *Isobel*/cold-molded wood hull/Stephens Waring Yacht Design, 136:44; impregnator applications, 5:34, 59:76; laminating frames, 13:8; large-scale, 51:36, 51:52, 62:62, 69:156, 136:22; marine and non-marine projects/Custom Composite Technologies, 103:54; plastic fastenings

- for, 9:57; post-curing/print-through prevention, 34:18, 34:21, 136:22; Rybovich sportfishermen, 25:42; Subchapter T boats, 36:22; translating into composites/Dean Schleicher, 105:23; vs. fiberglass construction, 136:44; vs. hybrid-reinforced foam-cored hull bottom, 62:73; Whiticar Custom Boats/Robert Ullberg-designed sportfisherman, 81:10. See *also* fabric impregnators; vacuum-bagging; wood laminates
- Cole, Jack: Rule 1162 compliance/Skipjack Boats, 25:8
- Cole, Stephen A., author: "Paddling to Profitability," 4:34
- Coleman Company: Ram-X canoe, 4:34
- Colin, R., Construction Inc.: pre-engineered metal buildings, 42:24
- Collamore, John: on core bonding, 9:36
- Collier, Everett, author: "Alternative Energy Systems," 80:22
- Collins, Mike: on owning component failure/policy for owner-supplied parts, 143:6
- Collins, Stephen, author: "Test-Driving a Miller Welding System," 118:8; "Virtual-Reality Welder Training," 133:12
- collisions: occupant protection, 34:13; litigation, 50:18. See *also* accidents, boat/marine
- color, hull: and gelcoat blistering, 15:13; and heat distortion/print-through, 2:6, 14:45, 14:55, 45:76, 64:22, 99:104; and post-curing, 14:45, 14:55, 64:22; seasonal freeze-thaw cycling of/data logger testing, 109:170. See *also* heat distortion temperatures (HDT)
- color, interior: design update, 6:34
- Colotti, Bob: on hot-weather FRP boatbuilding, 33:46, 33:57
- Colvic Craft PLC: Farr Millennium 65, 59:10; plug/80' motoryacht, 60:11
- Colvin, Thomas E.: on numerically controlled cutting of hulls/steel hull construction, 85:4
- Combatant Craft Department, Carderock Division, Naval Surface Warfare Center, 52:42; 140:34.
- Combridge, Wayne: on exhaust system fundamentals and formula for waterlock mufflers, 91:10
- Combridge, Stuart, Wayne: on Making and Testing Laminate Samples and better sequencing of materials, 159:4
- Combs, Merrill: on low-styrene resins, 2:4
- COMITT (Conference on Marine Industry Technical Training): workforce concerns and needs, 116:112
- Commanche*, maxi ocean racer: all-carbon prepreg construction/Hodgdon Yachts, 153:20
- commercial vessels: aluminum-fiberglass hybrids, 17:19; aluminum construction/boat kits, 43:83; Boston Whaler, 2:40; carbon fiber laminates, 58:36; chemical carrier/CATUG/Hargrave, 43:36; CWind service vessels for offshore wind farms, 168:68; design/engineering/licensure, 47:24; excursion catamarans, 3:42, 14:8, 45:120, 47:5, 47:16; fire protection regulations, 51:11, 62:78; hovercraft boats/Aluminum Marine Consultants, 168:68; marine trade associations, 51:11; NQEA, 63:106; plywood skiffs, 23:37; propeller matching, 46:61; resistance prediction, 56:26, 58:26; safety standards/regulations, 8:24, 59:44; seaworthiness/crew/litigation, 36:74; small excursion/T-boats, 36:22; overland transport, 36:33;

- weight/stability standards, 42:2, 110:68, 54:98; welded aluminum construction, 21:26; vs. yachts/marketing/finish standards, 40:24, 40:28, 40:36, 40:40. *See also* catamarans, power; dive boat; excursion boat market; ferries; fishing boats, commercial, construction
- Commodore Boats: database of British Columbia wooden boats/service for customers, 167:14; restoration of the tugboat *Swell*, 167:14; wooden boats repair and rebuilding of/going strong, 167:14
- commuter: Long Island Sound, 58:13; plane-multihull hybrid/Xtreme Xplorer, 57:15; prototype Commuter 36/*Magic*/Reuel Parker, 130:20; superyacht/Vitters Shipyard, 58:13. *See also* powerboats, motoryachts
- commuter-cat: semi-wave-piercing motorsailer, 76:60
- COMO EA runabout: iPad speed controls, 137:12
- companionway:  
design/manufacturing/liability issues, 32:11; 118:30
- compartments. *See*  
bulkheads/compartments;  
subframe/compartments
- compasses, marine: dash-mounted, 2:72; double-reading magnetic plastic compass/Plastimo, 149:68; electrical interference and windshield wiper motor, 171:34; Faria flux-gate, 11:52; Suunto Design Line, 8:54. *See also* Gaussmeter
- Competition Composites: boat and custom fabrications, 142:8; stitch-and-glue MiniMax Sea Flea hydroplane, 142:8
- component failure, 141:80, 142:4, 143:6
- components/ancillary  
equipment/accessories: aftermarket niches, 14:26, 14:32; catalog interface data, 47:80, 49:4; contracts/warranties, 41:15; discount/Tidewater 21:12; EC (EU) certification, 41:38; in-house vs. outsourcing, 35:34, 37:16, 39:70, 46:16; in-house product testing, 46:16; layout/3-D CAD models, 40:50; kitting, 39:70; lock-in accessories attachment system/Tallon Marine, 115:18; organizing/standardizing product specifications, 49:96, 55:3, 112:88; quality control, 32:64, 35:4, 112:88; weight control, 44:38. *See also* outsourcing; systems; *specific items of equipment*
- composite boats: Custom Composite Technologies, 103:54; early deep-V Kiwi/first composite sandwich boat/Peter J. Morgan, 167:16; hybrid composite sandwich boat/Symphony Boat Co., 146:10; inventor Charles Strang, 167:6 seasonal freeze-thaw cycling monitoring of, 109:170; vintage outboard replicas/Murdo Cameron, 144:10
- composite construction. *See* cold-molded construction; composite flat-panel construction; fiberglass construction, cored/sandwich; laminates, marine; laminates, marine, advanced-composite; resin-infusion molding; resin-transfer molding; roto-molding; SCRIMP; vacuum-bagging, *etc.*
- Composite Design Technologies: FiberSim stitching software, 57:88
- Composite Engineering, Inc.: carbon fiber laminates/fittings/galvanic blistering, 57:30; free-standing rotating wingmasts/*Project Amazon*, 55:44, 55:46; profile/composite racing shells/kayaks, 41:28, 41:30; satin weave glass fiber in racing shell, 106,112;



- triaxial braiding/carbon fiber spars, 47:44
- composite flat-panel construction:
  - applications/materials/techniques, 45:54, 45:62, 45:68, 63:162, 96:36, 103:54; carbon-fiber pre-pregs/class C catamaran, 39:30; carbon-fiber/PVC foam core/fast catamaran, 54:44; fabrication tips/warping/co-curing/release agents, 45:68, 48:4; Mantex composite sheets, 64:11; vs. plywood, 45:54, 142:8; reinforcements for, 45:54, 45:62; using SCRIMP laminating process, 65:84; shaping/torturing/integrating panels, 45:54. *See also* fiberglass construction, cored/sandwich, flat-panel
- composite foam barrier: for sound insulation, 5:42
- Composite Materials Handbook*, by SP Systems: 61:116
- composite panels/sheet material: Avonite Formstone Lite, 34:28, 34:32; DecoLite, 8:54, 13:43, 40:42, 40:52, 57:110; development of, 38:30; Featherboard, 11:52; scarfing, 13:43; inventorying/for flat-panel construction, 45:54; Marine-Tuff Polymer, 20:56; Nomex Decore, 51:114, 52:4; Nuvel/thermoplastic polymer, 34:28, 34:32; shop-fabricated/for flat-panel construction, 45:54, 45:62, 45:68; Saerfoam, 129:8; simulated stone, 34:28, 34:32; sources, 34:32; StarBoard, 7:64, 21:26, 35:58; Synstone, 34:28, 34:32. *See also* balsa (end-grain) cores; countertops
- composite prepping for painting: Surface Master 905/Cytec Engineered Materials, 86:14
- composite spars: design/technology, 3:42, 41:28, 41:30; G10 composite and wooden spars/Pedrick 65 yawl, 168:44. *See also* carbon fiber; masts and spars
- composite substrate: FiberStrate-MR hardboard, 35:58
- composite wing masts:
  - design/construction/performance, 14:8. *See also* carbon fiber; masts and spars
- composites, marine. *See* laminates, marine; laminates, marine, advanced-composite
- composites, material and processing
  - options: alternative to glass fiber composites/Amber Composites, 139:18; how to derive laminate properties based on ply properties, 106:62; literature and CD-Rom information for, 61:116
- Composites Education Association:
  - information exchange/program, 41:58; information on repairs/resin selection, 42:5
- Composites Fabricators Association (CFA):
  - benchmarking program, 27:61; composites-technician certification program, 44:49; gelcoating techniques video, 23:54; laminating techniques video, 24:58; membership/marine division program, 21:12, 33:69; *Regulatory Compliance Manual*, 34:59; styrene emissions/open-molding study/program, 39:90, 40:17, 41:5, 45:21, 55:26; Web site, 41:58
- Composites Industry Network: boatbuilding association, 21:12, 28:52
- Composites Technology Center/Cerritos College: program, 39:90
- Composites Technology Program: at International Yacht Restoration School, 136:10
- composites testing: called for in survey, 30:26, 36:34, 37:48, 49:24, 49:27; computer analysis vs. testing, 47:53;

damage tolerance/preferred failure, 80:40; engineering documents, 33:13; finite element analysis for optimization of laminates/Outerlimits Offshore Powerboats, 133:46; optical fiber sensing/fibre Bragg gratings (FBGs), 97:10; self-testing/"smart" composites, 46:45. *See also* blistering, gelcoat/osmotic, testing/diagnosis; surveying techniques/tools/equipment

composites testing, lab/standardized: applications/methodology/interpreting results, 4:22, 4:27, 6:5, 8:4, 8:28, 34:42, 48:16, 106:62, 166:31; builder education/composites engineering, 58:104; burnout test/glass-to-resin ratios, 51:85, 125:62; Carderock naval research facility, 42:39; classification/scantlings standards, 48:8; computer analysis vs. testing, 47:53; core materials/core bonding, 59:104; fiber-to-resin ratios, 59:30, 125:62; limitations/standardization program, 34:42, 36:4, 48:16, 48:17; list of labs, 48:33; low-styrene (DCPD) resins, 8:28, 40:22, 50:46, 52:67, 55:5; panel testing, 36:34, 106:62; regressed blisters, 51:108; sample coupons/laminates, 50:46; sample coupons/plugs/repair patches, 36:34, 37:48, 49:24, 49:25, 49:27; vs. shop testing, 50:46; stitched vs. woven reinforcements, 31:4, 114:52; styrene emissions, 40:17, 40:18, 40:22. *See also* composites testing, panel testers/test fixtures

composites testing, non-destructive (NDT): carbon fiber sailing yacht/Marine Survey Bureau, 133:104; choosing the right technique and person, 163:93; fiberoptic borescopes, 35:42, 35:50; infrared thermography, 25:18, 35:42, 133:104,

163:93; limitations of, 133:104; moisture meters, 19:8, 16:50, 23:42; Smart Hammer, 47:57; ultrasound, 17:58, 35:42, 133:104; workshop, 47:57. *See also* surveying techniques/tools/equipment, non-destructive

composites testing, panel testers/test fixtures: Baldwin universal test fixture, 58:36; for bending test, 48:16; dynamometer, 48:16, 56:26; for tensile strength test, 87:62; Hydromat, 34:42, 35:4, 36:4, 45:62, 55:79, 64:11, 68:26, 68:30; Satec controller, 58:36; for tensile strength test, 48:28, 58:36

composites testing, shop: adhesion between finish coating and epoxy laminate, 49:59, 51:6; balsa core, 52:30; Barcol hardness/post-curing, 48:16; bending test, 48:16, 64:11, 99:104; catalyst ratios/gel times, 1:6, 2:6, 6:5, 6:64, 8:28; Component and Composite Design Analysis (CODA) commercial program, 166:31; core bonding, 39:30, 48:16; DCPD/low-styrene resins, 8:28, 48:16, 50:46; dynamometer, 48:16; equations for calculating symmetric orthotropic panel bending moments, 166:31; fiber-to-resin ratios, 59:30; fiber-to-resin ratios/Kevlar, 56:61; gelcoats, 48:16; heat-cured laminates/carbon-fiber pre-pregs, 39:30; impact loading/bottom panels, 51:24; importance of/advanced composites, 39:3, 39:30, 42:52; Instron machine/Bertram, 39:70; vs. lab testing, 50:46; laminate test samples, 50:46; lap shear, 28:27, 48:28; low-cost program, 48:16, 48:17; low-styrene (DCPD) resins, 52:67, 55:5; mast compression, 39:30; plate vs. beam, 48:30;

polyurethane adhesive/sealants, 28:27;  
 putty shrinkage, 58:54; quality  
 control/education, 58:104; secondary  
 bonding, 19:46, 39:19; skin laminate  
 porosity, 39:30; tensile peel, 28:27,  
 49:59; tensile strength/modulus, 48:16,  
 48:17, 48:28, 106:62

compounds: for electrical systems, 8:12;  
 for keel fasteners, 38:20. *See also* anti-  
 seize lubricants/compounds; buffing  
 compound; epoxy compound; fairing  
 compound; fillers; polyester compound;  
 sealant; silicone caulk; thread-locking  
 compounds

compounds (polishes) for gelcoat  
 restoration: types/applications, 15:44.  
*See also* gelcoat finishes

Compozitex: print blocker, 7:50, 7:62

compressed-air (pneumatic) tools/systems:  
 equipment/applications/shop  
 techniques, 33:58, 33:64; for spray  
 systems/hot-weather, 33:36. *See also*  
 air coolers; air dryers; blowgun; caulking  
 gun, pneumatic; chain hoists,  
 pneumatic; chisel, impact; drill, air;  
 hammer, air-impact; pumps, diaphragm;  
 ratchet, air; sander, pneumatic DA;  
 shears, pneumatic; vacuum cleaner, air-  
 powered

compressed natural gas (CNG): boat  
 fueled by, 44:49

compression test: using ASTM D664,  
 87:62

compressors (for air  
 conditioning/refrigeration): Dometic  
 SmartStart start-up control, 132:6;  
 electronic starters for, 37:26

compressors, reciprocating (for pneumatic  
 tools/systems): Ingersoll-Rand T-30,  
 33:58; types/selection/applications,  
 33:58

compressors, rotary-screw (for pneumatic  
 tools/systems):  
 types/selection/applications, 33:58

Compromiss Composites consulting firm  
 (Netherlands), 132:24

COMPSYS Incorporated: PRISMA  
 preforms/composite stringers, 41:62,  
 48:48

computational fluid dynamics (CFD):  
 camber shapes for lifting/planing  
 surfaces, 97:164; drag/wavemaking  
 prediction/Olin Stephens, 60:66; ISIS  
 CFD software, 121:50; MICHLET  
 computer program analysis, 74:54; rear  
 foils in hydrofoil-supported catamaran  
 application, 157:68; on semi-  
 displacement yacht at anchor/Van  
 Oossanen, Peter van/velocity prediction  
 program; VEEM Interceptor strips for  
 propellers, 119:6

computer-aided design/computer-aided  
 manufacture. *See* CAD/CAM

computer applications. *See* CAD/CAM  
 (computer-aided design/computer-aided  
 manufacture); CAL/NCC (computer-  
 aided lofting/numerically controlled  
 cutting); computer software; engines,  
 marine, computer applications; metal  
 construction, CAL/NCC (computer-aided  
 lofting/numerically controlled cutting)  
 applications; systems

computer applications, online (Internet):  
 bulletin boards, 32:48; Diosa  
 Yachting/Macintosh database/forum,  
 38:51; e-mail address directory, 38:51;  
 information, 40:80, 41:58; information  
 database/services, 15:70;  
 information/marketing/*Canoe & Kayak*,  
 40:62; Internet Waterway, 40:62; marine  
 industry directory/YachtWorld's Boating  
 Yellow Pages, 44:49; marketing/Web

sites, 38:51, 40:62, 41:58; Outdoors Online, 40:62; PBB Online, 32:48, 33:69, 36:74; PierVantage yard management system, 127:10; Unix-based software business management system/Stingray Boats, 127:30; VesselVanguard, 139:18; vocational education/Composites Technology Center, 39:90

computer hardware: insuring, 7:28; protection/hurricanes, 27:18, 27:21

computer hardware, for CAD/CAM: Intergraph, 8:35, 17:58; 3-D modeling capability/interior joinerwork, 40:52; workstations, 8:35, 9:5, 40:42

Computer Methods Corporation: electronically managed engines/diagnostic systems, 20:8

computers. *See* computer hardware

computer software: Smartsheet file sheet application, 167:40; Egnyte file management, 167:40

computer software, 3-D modeling/graphics: Accurender/photorealistic rendering/raytracing, 40:24; Femap pre-processing software/finite element solver (Nei/Nastran), 133:46; Mannequin/ergonomics, 48:66; microstation models, 66:90; RevWorks, 78:94; Rhino/photorealistic scrapbooks, 57:15; Solid Edge program Origin: 66:90; SoldidWorks, 66:90, 78:94; SolidWorks and AutoCAD compatibility, 66:90, 68:5; 3-D WorkShop (Mac), 32:52; vs. 2D CAD, 66:90

computer software, accounting/inventory/estimating/management: Alpha 4, 50:59; Armor, 27:70; AutoCAD, 28:32; Business Planning & Control System software (BPCS)/Cruisers Yachts, 114:68; cloud-

based vessel-maintenance management software, 137:34; custom, 57:74, 57:80; Excalibur, 18:54; Lotus 1-2-3/spreadsheet, 21:38, 50:59, 57:74; Microsoft Excel, 57:74; Peachtree, 57:74; Perception, 23:50; relational database vs. spreadsheet, 50:59; Sextant Systems, 3:60; spreadsheet, 57:74; Windows Access 95, 50:59. *See also* bar code system; inventory; inventory/parts, computer tracking; inventory/parts, purchasing/control; payroll/wages

computer software, animation: Mannequin Professional, 40:48

computer software, CD-ROM: ABYC small-craft standards, 49:79; MSDS (material safety data sheet) Access System, 23:54; photorealistic/animated multimedia sales tools, 40:48

computer software, hull design/fairing: Algor/stress analysis, 8:35; AutoCAD, 48:66, 52:12; Baseline, 38:47; Baseline II, 17:58; for control station/ergonomics, 48:66; curvature/fairing aids, 25:4, 61:102, 114:20; Fairline, 7:18, 8:35, 12:60, 17:58; Fast Yacht, 7:18, 18:4; Finite Element Analysis/panels/loading, 45:62, 64:52, 66:90; Hard-Chine BoatDesign, 33:69; Hullform, 17:58; Intergraph, 8:35, 17:58; for interior joinerwork, 40:42, 40:52, 40:53; for Macintosh systems, 8:35, 9:5, 25:4, 32:52; MacSurf, 8:35, 25:4; MultiSurf, 40:42; Nautilus, 7:18, 7:25, 9:5, 17:58, 24:26, 24:32, 42:26; online access, 33:69; planar sheer, 27:4; Prolines, 8:35, 17:58, 33:69, 66:90, 68:5; Prolines Basic, 30:60, 33:69; Rhino/3-D modeling, 57:15; ShipConstructor, 114:20; 3-D modeling capability/interior

joinerwork, 40:42, 40:52; variable-order b-splines, 18:4; Wings, 8:35; WorkShop, 32:52. *See also* CAD/CAM (computer-aided design/computer-aided manufacture)

computer software,  
hydrodynamics/performance prediction:  
vs. model testing/sea trials, 55:32, 58:26

computer software,  
hydrostatics/stability/weight: Autopower, 36:78; CAL/NCC integration (metal construction), 38:47; custom/limited-edition sportfisherman, 54:62; MicroSoft Excel spreadsheet/weight estimating, 42:26; Ship Hull Characteristics Program (SHCP), 17:58; Shiphull 2000, 17:58

computer software, laminate properties:  
GENLAM, 47:53; VectorLam Cirrus 2.0, 173:6

computer software, laminate schedules:  
analysis/CoreDes, 53:4; stacking sequence, 53:20

computer software, lofting/parts  
generation: ABS Construct, 8:35; AutoCAD, 7:18, 24:26, 38:47, 52:12; AutoKon, 7:18, 17:58; Autoplate, 17:58; Baseline, 7:18, 38:47; Boolean operations capability, 38:38, 40:42; CADKEY, 13:48, 40:52; expanding/unfolding capability, 38:38; Intergraph, 8:35, 17:58; for interior joinerwork, 40:42, 40:52; for Macintosh systems, 9:5, 17:58; McDonnell-Douglas, 7:18, 8:35; for metal construction, 38:38; Nautilus, 24:26; parametric surface equation/Fairline/1 [CAD], 79:8; parts-nesting programs, 38:38; reverse engineering of existing tools/Rhino 3D software/Turn Point Design, 137:12; ShipCAM, 17:58, 38:47;

sources, 24:32, 38:49, 40:53; 3-D modeling capability/interior joinerwork, 40:42, 40:52; Unigraphics/parametric, 40:42. *See also* CAD/CAM (computer-aided design/computer-aided manufacture); CAL/NCC (computer-aided lofting/numerically controlled cutting); metal construction, CAL/NCC (computer-aided lofting/numerically controlled cutting) applications

computer software, propeller/propulsion analysis: Autopower for Windows, 36:78; custom/limited-edition sportfisherman, 54:62; EasyProp, 5:58, 17:58; vs. model testing, 55:32, 58:26; NavCad, 17:58, 26:54, 46:62, 55:32; for propeller matching, 46:52, 46:62; Prop Scan, 42:74; PSOP (Propeller Selection and Optimization Program), 46:62; SmartEngine, 45:105; spreadsheets/design analysis, 49:8; spreadsheets/Lotus 1-2-3, 46:52, 46:62; spreadsheets/speed prediction, 59:56. *See also* computer software, hydrodynamics/performance prediction; performance prediction

computer software, relational database program: Alpha 4, 50:59; for tracking production/materials/labor, 50:59; Windows Access 95, 50:59

computer software, spreadsheets (flat-file database): for design analysis, 49:8, 64:52; limitations vs. relational database/production tracking, 50:59; software/weight estimating, 42:26; for speed prediction, 59:56

computer software, temperature monitoring: epoxy laminates, 42:62

computer software, testing/data acquisition: Camille Data Acquisition system/styrene emissions, 40:17, 40:18;

Sierra Touch and Test System (STATS) electronic diagnostic tool, 141:30  
 computer software, 3D modeling/graphics: vs 2D CAD, 66:90; CATIA software brands/Dassault Systemes, 113:10; MicroStation modeler, 66:90; photo-realistic still pictures/Luc Vernet/Vietnam, 113:10; SolidEdge 2D drafting program, Origin, 66:90; SolidWorks, 66:90, 113:10; SolidWorks and AutoCad compatibility, 66:90, 68:5  
 Comtex Development Corp.: composites testing, 4:22  
 Concept Boat 2002: transportable boats contest, 75:14  
 concept designs: Blohm & Voss Shipyards (Hamburg, Germany) 364' motoryacht, 145:12; Tony Castro Design (Southampton, England) 136' flybridge ketch, 145:12; Ivan Erdevicki Naval Architecture & Yacht Design (Vancouver, BC) ER175 yacht, 145:12  
 Concordia Company, Inc.: Beetle Cat production, 23:32; bow redesign/Freedom 36/38, 45:86; yard boats/tugboat, 42:34  
 Concordia Systems: bottom prep/wastewater collection, 31:10, 31:16, 31:18  
 Concordia Yachts: post-curing epoxy, 14:45  
 concrete: canoes, 31:62; moorings, 31:4  
 condensation: in boat sheds, 35:15, 36:4; delamination of core bonds, 9:36; HyperVent Marine's air-circulation fabric, 72:10; shrink-wrapping caveats, 18:28; temperature fluctuations/shop practices, 33:46, 50:46  
 Condon, Bill: on chopper guns, 3:54  
 conductors. See wire/cable, marine, conductors

Conyplex (The Netherlands): laminating techniques/vacuum infusion, 108:18  
 Conner, John: outdoor model testing on *Gentry Eagle*, 78:22  
 Connor, Philip, author: "Wanted: Reasonable OSHA Guidelines for Limited Spray-Painting," 80:96  
 Connolly, Desmond: on keel attachment/fasteners, 40:4; on real vs. personal property, 51:6  
 Concealing valuables: furniture and fixtures. See *also* Marcali Yacht Brokerage & Consulting  
 Consolidated Yacht Corporation: builder profile, 47:34; Egret flats skiff, 47:40, 120:62; Extender fairing system, 27:70; Norship Composite Yachts, 120:62; sportfisherman/DuFLEX panels, 59:10, 63:162  
 consultant, marine, profession of: qualifications/ethics/conflicts of interest, 59:89. See *also* Game, E. Charles (Charlie); International Marine Consulting Associates (IMCA); Pike, Dag, Associates  
 Container Yachts (Rhode Island): boat-in-a-box/Robert H. Perry motorsailer, 105:12  
 Contract Facile Technologies, Inc.: Facilon tent fabric, 21:12  
 contracts. See builder's contracts/estimates/bidding; merchant's contracts  
 Control Products, Inc.: waterproof switch, 5:58  
 control station: design/layout, 48:66, 48:79, 80:12, 141:62, 142:3; Gaussmeter and Gaussmeter iPhone app/measuring magnetic-field strength, 171:34; HelmView LCD customizable display, 112:10; Instrument and dashboard

reflection/bad visibility, 171:34;  
 SIMRAD's electrostatic paper mock-ups  
 for instrument display placement, 80:12;  
 visibility/windshield and wiper blade,  
 171:34; wiper motors/fishfinder and  
 compass interference issues, 171:34.  
*See also* cockpit; dashboards;  
 instruments/instrument panel; navigation  
 instruments/systems; navigation station;  
 seats/seating; wheelhouse  
 conversion kit: for LED lights (StarChip),  
 87:80  
 Conveyor and Drive Equipment Co.:  
   Material Mixer, 21:60  
 Cook Composites and Polymers Company:  
   AquaClean emulsifier/cleaner, 33:20;  
   AquaWash resin emulsifier, 33:20;  
   Armorcote IMC (In-Mold Coating)  
   gelcoat, 13:70, 45:76; DCPD low-profile  
   resin, 45:76; education program/Closed  
   Mold University, 124:12; Free-Flo water-  
   blown (CFC-free) foam system, 24:62;  
   on gelcoat thickness, 23:4; on gelcoat  
   weathering, 15:49; on internal mold-  
   release agents, 13:11; *Polycor Polyester*  
   *Products Applications Manual* ("The  
   Cook Book"), 10:52, 20:8; solvent  
   cleaners/epoxy, 42:62; ThermaClean  
   machine, 33:26; ThermaClean water-  
   based cleaners, 31:68, 33:20; water-  
   based cleaners/disposal guides, 31:68,  
   33:20; Xycon/skincoat, 28:60;  
   Zycon/urethane-modified polyester  
   barrier coat, 49:59  
 Cook Paint and Varnish: Armorcote In-  
   Mold Coating, 1:68  
 Cookie Too, sportfisherman: tuna tower,  
 76:80  
 Cookson Boats: mega  
   catamaran/*PlayStation*, 58:13, 60:11,

63:10; profile/New Zealand builder,  
 55:58  
 cookstove, galley. *See* stoves, galley  
 Cool Corporation: Supercool refrigeration  
   subassemblies, 7:64  
 coolant recovery bottles: in sea trial tests,  
 145:56  
 coolers, air. *See* air coolers  
 cooling systems: Gridcooler keel coolers,  
   2:70; intercooler, aftercooler, and  
   reduction-gear coolers, 111:66; keel  
   coolers for metal hulls/dual heat  
   exchanger cooling, 111: 16; outdoor air-  
   conditioning/Misters Unlimited, 89:8;  
   R.W. Fernstrum & Co. keel coolers,  
   111:66; tank or shell keel cooling,  
   111:66; tubing for, 111:66; Walter Keel  
   Cooler, 111:66  
 Cooper, Gordon: NASA astronaut/Mercury  
   Project/powerboat racer, 155:20  
 Cooper Power Tools: Brewer-Titchener  
   latch kit (for lifting hook), 12:60;  
   Gardner-Denver pneumatic chain hoist,  
   41:62; Pivex replaceable-bit pivot driver,  
   44:54  
 Cooper, Richard: on Navigating a Sea of  
   Standards, 159:4; and one discharge  
   remote shutoff valve, 159:4  
 Co-Plas: on internal mold-release agents,  
 13:11  
 copper-based antifouling paints/coatings.  
   *See* antifouling paints/coatings, copper-  
   based (non-tributyltin)  
 copper/copper alloys: galvanic corrosion,  
   32:36, 32:39, 33:28, 52:18, 82:40,  
   105:96, 107:4  
 CopperClad: antifoulant, 2:12, 7:42, 7:48  
 Copper Coat: antifoulant, 1:68  
 Copperlok: antifouling coating, 8:4  
 copper sheathing, applications: adhesives  
   with, 9:5; copper alloy (Mariner 706),

7:42, 7:48, 9:5, 23:4; copper/nickel foil, 7:42

cordless tools. See tools, power, hand-held

core bonding, materials/techniques: balsa core, 9:36, 33:46, 45:54, 45:68, 70:92, 71:38, 91:96, 94:48, 99:4, 120:18, 150:4; bedding, 51:22, 51:29, 73:40; bond inspection/surveying/testing, 33:46, 45:76, 48:16, 82:104, 100:80; bondline venting/bleeder/flat-panel fabrication, 45:68, 94:48; co-curing/panel warping/flat-panel fabrication, 45:68; contour-cut cores vs. thermo-formed plain foam cores, 80:40, 94:48; cored bottom panels, 51:22, 51:24, 51:26, 51:29, 53:20, 55:5; core failures/performance, 82:103, 94:48; cored veneer epoxy construction system (COVE), 75:38; core failures/performance, 13:36, 25:18, 31:34, 34:5, 37:48, 43:96, 52:40, 56:5, 59:104, 70:92, 73:40, 100:80; gel times/temperature/Core Block Test, 33:46, 70:92; Havilland Mosquito fighter/bomber/balsa core material, 150:4; honeycomb cores, 22:8, 22:20, 36:78, 45:54, 45:62, 45:68, 58:13, 64:82, 91:154; with high-performance resins (vinyl ester and epoxy), 53:20, 104:42; with low-styrene/DCPD resins, 2:4, 2:67, 8:28, 45:68, 52:67, 55:5; *Red Jacket*/Cuthbertson & Cassien-design/full balsa-cored hull, 150:4; sprayable lightweight core/polyester resin and hollow fibers, 108:16; with photo-curing resins, 19:8, 21:4, 22:8, 32:28; PVC foam cores, 9:36, 9:38, 9:42, 9:44, 9:47, 25:18, 31:34, 31:39, 33:46, 43:96, 45:54, 47:57; 48:8, 51:22, 51:26, 53:4, 54:5, 56:5, 58:36, 59:104, 64:22, 91:154; outgassing, use of

forensic testing, 87:62; room-temperature cure (RTC), 70:92, 94:48; tapered vs. square-cornered transitions, 110:86; temperature/hot weather, 33:46; workmanship/training, 59:104. See *also* balsa core (end-grain), in fiberglass cored/sandwich construction; composite flat-panel construction; delamination; fiberglass (FRP) construction, cored/sandwich; foam cores, PVC; honeycomb cores; laminating techniques; photo-curing resins; putties, bonding/bedding; putties, syntactic; vacuum-bagging, applications/techniques

Core-Bond syntactic foam bonding/bedding putty: applications/performance, 9:36, 9:44, 30:18, 31:34, 31:39, 33:46, 45:76; summer/winter grade, 33:46

Core-Cell linear polymer foam: vs. Airex, 35:58, 51:6, 51:22, 52:30, 53:4, 56:5; Bead & Cove Planking System/foam-cored one-offs, 35:58; for bow ramp in Advanced Composite Riverine Craft, 146:24; vs. cross-linked PVC foam core, 70:44; for cored bottoms, 51:22, 53:4; for full-length lifting strakes, 45:86; Sterling Atlantic 43 (SA43) hull, deck and house construction, 103:14, 138:48; structural core material, 52:30, 53:4, 133:46, 149:56. See *also* foam core, SAN

Core Composite: state-of-the-art fabric impregnator for Boston Boatworks, 157:50

Corecork, 120:4

Core outgassing: 87:62

cored laminates. See core bonding;

fiberglass construction, cored/sandwich

cored panel penetration: repairs to, 97:130, 99:44



cored/sandwich construction. See  
 composite flat-panel construction;  
 fiberglass construction, cored/sandwich  
 Corel 45: one-design racer, 61:66  
 Coremat: print-through control, 7:50, 7:62;  
 weight savings, 3:27  
 core materials: for bottom panels, 51:22,  
 51:24, 51:26, 51:29, 53:4, 54:62, 55:5,  
 56:5, 57:7, 70:92; brittle vs. ductile,  
 51:22, 53:4, 53:40, 55:5, 56:5, 59:104;  
 for flat-panel construction, 45:54, 54:44,  
 54:62; linear vs. cross-linked, 51:22,  
 53:4, 54:44, 56:5, 70:44; precut laminate  
 kits, 35:58; standardized testing/safety  
 factors, 34:42; steel sandwich panels,  
 103:44;  
 stiffness/strength/density/modulus/  
 loads/failure, 52:30, 53:4, 51:22, 55:5,  
 56:5, 58:36, 70:92; structural, 52:30,  
 53:4, 54:62, 56:5, 70:92. See *also* balsa  
 core; foam cores, PVC; honeycomb  
 cores; interior joinery/cabinetry;  
 plywood, as core material; Spherecore  
 SBC  
 CoRezyn: vinyl ester resin, 6:10  
 cork composite: Marinedeck 2000 decking,  
 41:62, 125:20  
 Corkery, Steve: on Bill Tripp's boats, 109:6  
 Cornelius & Gump Woodworks:  
 outsourcing/boat kits/Gold Coast  
 Yachts, 37:16, 37:18  
 Cornell, Chris, author: "The Case for  
 Handsome Lines," 1:80; "Concerns  
 about 'The 10% Solution,'" 12:2;  
 "Custom Water Tanks Fill Niche," 20:56;  
 "A Dandy from the Dean," 21:68; "Don't  
 Kill the Patient," 13:2; "Flameless  
 Catalytic Heaters," 8:54; "Getting the  
 Job Done Right," 11:2; "Here Come the  
 Heavyweights," 18:54; "Hooded  
 Respirator Provides Workable

Alternative," 1:68; "A Pair of Savvy  
 Veterans/Strategies for the '90s," 29:8;  
 "Saltwater Options," 7:3; "A Spray Gear  
 Primer," 26:54; "Truth in Advertising,"  
 9:2; "Used-Boat Strategy," 10:2  
*Coronet*, schooner yacht: restoration in  
 see-through shed at International Yacht  
 Restoration School, 101:24  
 Correct Craft: buyout of PCM Marine  
 engines and Crusader Engines,  
 153:8; cruise control, 54:18; founding of  
 company, 1925, 153:8  
 Correia, Lou: Viking builder profile, 46:16  
 Correll, Tom: on surveyors and boatyards,  
 conflict of interest, 70:5  
 corrosion, galvanic: aluminum, 43:64,  
 45:54, 47:44, 53:31, 54:70, 59:5, 57:30,  
 60:5, 60:104, 105:96, 107:4, 130:66;  
 aluminum engine valve cover and plated  
 bolt corrosion, 123:6; aluminum lithium  
 anti-corrosion coating, 67:13; aluminum  
 mast, 34:72, 82:58; aluminum sail drive  
 and sacrificial anode, 123:22; aluminum  
 tanks, 52:18; and ethanol blend  
 gasoline, 160:54, 161:3;  
 bonding/cathodic systems, 8:44, 23:4,  
 30:38, 31:4, 32:36, 52:18, 54:70; with  
 carbon fiber composites, 43:64, 45:54,  
 47:44, 53:31, 54:70, 57:30, 59:5, 60:5;  
 corrosion inhibitor, 82:80; crevice,  
 15:23, 32:36, 38:20, 39:4, 40:4, 52:18,  
 54:70, 146:48; detector, 40:4; dissimilar-  
 metal/early *America's* Cup boats, 53:31;  
 electrical potential, 32:36, 32:39, 82:80;  
 flawed forestay chainplates/using  
 polyurethane bedding compound, 159:4;  
 galvanic series, 32:36, 32:39, 33:30,  
 54:70, 132:62; grounding wires/AC  
 grounding circuit, 30:38, 32:36, 33:4,  
 65:38, 82:80, 105:96, 107:4;  
 intergranular (weld decay), 52:18; keel

fasteners, 38:20, 39:4; passive/active, 54:70; pitting, 15:23, 52:18, 54:70, 82:40, 130:66; prevention/resistance, 33:28, 123:22; prevention/resistance/fasteners (Tef-Gel), 60:104, 126:6; prevention/resistance/vinyl ester/tanks, 6:10, 52:67; references, 33:34, 53:12; shore power and, 32:36, 82:80, 105:96, 107:4, 123:22; and silver ion water treatment/corrosion investigation/Marine Survey Bureau, 130:66; stainless steel, 54:70, 60:104, 84:82; stress-corrosion cracking, 54:70; testing/multimeters, 36:78, 82:80; of through-hulls/sea valves, 8:42, 8:44, 32:36, 82:80; titanium corrosion and erosion resistance, 132:62; types/causes, 15:23, 32:36, 32:39, 33:28; weld decay, 32:41. See *also* corrosion, stray-current; blistering, carbon fiber/galvanic

corrosion, stray-current: aluminum foil experiment/Dick Troberg, 105:96; 107:4; bonding system protection for, 138:18; causes/prevention, 32:36, 33:28, 41:21, 65:38, 82:80; galvanic isolators and, 30:38, 31:4, 33:4, 41:21, 43:5

corrosion test meter: vs. galvanic isolator/capacitor, 31:4

Corsair Marine: builder profile/manufacturing system, 29:22, 172:12; carbon fiber masts, 51:11; foiler 2200 center-console powercat, 86:14; flow coaters/Rule 1162 compliance, 25:58; and Ian Farrier's F27 trimaran with folding amas, 172:12; methacrylate adhesives, 26:56; racing multihulls/F24s/F27s, 23:4; trimarans, 30:48; UV-PPG fabrication, 48:35; vacuum-bagging, 30:22, 172:12

Corson Boat Company: profile, 38:36

Cote, Gene: on floating-frame construction/scantlings, 50:5

Cote, James: on bonding basics and wire brushing zinc anodes, 139:5; on chemical conversion and danger of high ambient temperatures using lithium-ion battery systems in the tropics, 155:4; on cost considerations/standards/unsinkable boats, 141:4; on hybrid propulsion, 143:6; on smoke detector installations for fire prevention, 169:6

cotter pins: cotter pin puller, 101:12; Blue Wave's Smart Pin, 104:22

Cottrell, Robert L.: on controlling fiberglass dust, 28:38

Cottrell, Robert L., author: "The Environmental Audit," 20:40; "Profitable Compliance," 21:18

Couach, Guy: founder of Guy Couach Shipyard/Couach Yachts, obit, 148:10

counterfeits: counterfeit Faria gauges, 103:128; thwarting counterfeiters/defensive manufacturing, 103:134

countertops/surfaces: Avonite, 7:64, 34:28, 34:32; DecoLite, 8:54, 57:110; design mock-ups, 9:28; lightweight alternatives, 32:21, 34:28, 34:32; natural stone, 34:28, 34:32; simulated stone, 34:28, 34:32; technology/development of, 38:30; thermoplastic, 34:28, 34:32; upgrading, 32:15. See *also* composite panels/sheet material

coupling flange. See propeller shaft

Court, Ken: on racing yacht scantlings/floating-frame construction, 50:5

Courtauld's Coatings/Courtauld's Aerospace: nontoxic bottom paints, 31:10; report on blister causes/repairs,

16:42; urethane/silicone hybrid sealants, 28:27; Veridian 2000 foul-release system, 31:10. See also Interlux Yacht Coatings; Products Research & Chemical Corp.

Couto-Laine, Gonzo: on correcting roll instability/ventilating rudder clarity, 86:4

COVE system (COre-Veneer-Epoxy): for ultralight composite construction, 55:79

cover(**guard**: flame-retardant protection system, 64:11

Covey Island Boatworks: Westernman 51, 56:10, 57:13, 63:86, 100:24; J-class racing sloop *Ranger* replication, 67:13; *Maggie B* wood epoxy schooner, 100:36; Sparkman & Stephens AeroRigged cruising sloop *Barbara Ann*, 67:13, 100:36; and Nova Scotia Boatbuilders Association apprenticeship program, 100:24

cowl ventilators: reduction of/*Katrinka* refit/Brooklin Boatyard, 138:48

Cox, Robert O.: on dealerships, 11:5

Cox, Thomas M.: on CAD/CAM technology, 8:4

Cox North America/PC Cox: Solo clamp, 33:75; Solo 100 C-clamp, 24:62

Coyle, Jay, author: "True Yacht Designers Wear Many Hats," 9:64

CPI Plastics Group Ltd.: Extrudawood plastic wood, 56:10

Crab Products Ltd.: Crab Clamp, 41:62

cradles: for moving/storing boats, 50:38; rolling/folding, 54:18; three-hoisted cradle with two axles/Poncin Yacht Group, 115:142; triple support (conformal) cradle, 106:80

Craig, Jay: on core repair, 112:4

Craigie, Larry: on CFA styrene emissions study, 40:17

Cramer, Carl, author: "Craft vs. Commodity," 81:168; "Rovings," 50:11; "Soft Data in a Depressed Market," 7:72; "Truly A Parting Shot," 148:80; "Twenty Years On," 121:120; "We're All in This Together," 60:136; "You Can't Buy Editorial Ink," 39:112; 155:3

Cramer, Carl: *Boatbuilding Live!*/educational event announced, 154:12; launching of *Professional BoatBuilder* magazine, 1989, 148:80

Cramer, Margie: on advertising agencies, 6:42

Crandon, Alan T., author: "In Search of Remediation for a Rip-Off," 93:112

Crane, Frank: builder profile/Consolidated, 47:34

Crane, John, Co.: shaft face seals, 32:4

Crane Materials International: TimberGuard UV-resistant polymer encapsulation for dock pilings, 109:17; GatorDock/aluminum piers/gangplanks, 109:17; ShoreGuard/composite and aluminum seawalls, 109:17

Crane, Stephen: on DCPD laminate repairs, 52:67; on fiber-to-resin ratios, 59:30; on standardized lab testing, 50:46; on switching to thermoplastics, 10:34; three-point load deflection tests on laminates materials, 114:52

Crane, Stephen, author: "Early Glass," 38:30

cranes. See boat lifts/hoists

Crawford, Roger: on Rule 1162 development, 26:34

Crealock, William: Pacific Seacraft designs, 10:20, 10:31, 59:21; obit, 124:12

Creative Extruded Products: non-metallic trim stabilizers, 35:58

- Creative Systems: General Hydrostatics  
System hydrostatics software, 17:58
- Crestliner, Inc.: welded aluminum boats, 4:42
- Crestomer 1152 PA: resin, paste, adhesives brand name, 67:5
- Crete, Dan, author: "A Mechanic's Warnings," 102:26; "It's Running Now?" 115:136; "Lessons from Ethanol's Freshman Year," 107:46
- crew-friendly yachts, 115:88
- crew transfer vessels (CTVs): United States CTV *Atlantic Pioneer*, 168:68. See also CWind, utility skiffs, wind farm support vessels, Aluminum Marine Consultants, offshore service vessels, offshore wind farms
- Crichetto brake, clutch, and torque limiter coupling, 113:10
- crimping tools, 143:22, 147:6
- Cripps, David: *Composite Materials Handbook*, 61:116; profile/carbon fiber composites, 58:36; on low-temp pre-preg construction, 64:82
- Cristos, José: on displaying hull identification numbers, 61:5
- Croatia: *Vladimer Nazor* passenger ship conversion to yacht *Seagull I*, 100:4
- Crocker, S.S.: yard tugboat, 42:34
- Crocker, Sturgis: yard tugboat, 42:34
- Crosslink 3: roto-molding technology (Old Town Canoe), 10:34, 11:20
- cross-linking: of adhesives/primary vs. secondary bonding, 13:67, 19:44, 39:27, 42:5, 70:44; in blister repairs, 17:11, 70:44; catalyst ratios and, 1:6, 2:6, 33:46, 70:44; conventional resins vs. photo-initiated resins, 18:8; DCPD (low-styrene) resins, 8:28
- Crouch, George: *Baby Bootlegger*, 169:62; Crouch's formula/estimating speed, 51:6, 53:4, 54:96, 126:38, 169:62; Formula modification/Lorne Campbell, 169:62
- crowdfunding, 163:98; reproduction build of clipper, *Noah*, 163:98; *Plastic Whale*/fishing for plastic, 163:98
- Crowley, Michael, author: "Putty-Delivery Systems," 27:70; "The Rotoswitch," 27:70
- Cruden (Amsterdam): motion simulator for high-speed boat training, 166:64
- Cruisair: M2 closed-loop air-conditioning system, 32:52
- Cruisers Yachts (Wisconsin): profile of, 114:68
- Cruising Club of America (CCA): rule, 61:77; Pedrick 65 Yawl/traditional ethics with modern performance, 168:44. See also Pedrick Yacht Designs
- Cruising Design Inc.: feathering propeller, 13:70
- Cruising Equipment Company: DC systems supplier, 19:50, 19:55
- Cruistar: CAD/CAM applications, 7:18; design mock-ups, 9:28; licensing rights acquirement by Willard Marine Inc, 153:58; molds for U.S. Navy's first fiberglass lifeboat, 153:58
- Crusader Engines: 350XL gas inboard, 22:56
- Crystaliner boats: Challenger Marine/Don Mucklow, 105:4
- C. Tremblay & Associates: PC-SHCP, 17:58
- Culler, Pete: on designing yard tug, 42:37; tug-ette yard tug, 42:34
- cumene hydroperoxide: hot-weather catalyst, 33:57, 44:30; Tigonox 239A, 44:30
- Cummins Engine Co. Inc: quality service manuals, 157:14

Cummins MerCruiser Diesel (CMD):  
 MotoTron/SmallCraft networked communications system for electronic engine control, 106:42; Skyhook Electronic Anchor, 106:42  
 Cummins Engine Company, Inc.: Flight Saver System (FSS) monitoring system, 14:34; Zeus drive system vs. Inboard Performance System (IPS), 106:42  
 Cuneo, Joseph: on P.E. (Professional Engineer) licensure, 73:5  
 curing. *See* cross-linking; post-curing; resins, curing/exotherm cycle  
 Curnow, Gene: on gelcoat application/troubleshooting, 11:42  
 Current Designs: kayaks/We-no-nah, 49:36  
 Currie, Sackville: on lithium-ion batteries and characteristics of the wet-cell nickel cadmium batteries, 121:9  
 Currier, Rich: on Coast Guard's experimental "rubber band" mooring, 113:4  
 curtain: magnetic hazmat containment curtain/Armstrong Marine, 152:36  
 curtains: modernizing interiors, 32:15; Shapco self-pleating system, 32:15  
 Cusanelli, Dominic, author: "Stern Flaps," 70:81  
 cushions. *See* upholstery/cushions  
 Custom Composite Technologies (Maine): profile of, 103:54  
 custom/semi-custom/one-off construction: 1990s retrospective, 60:27; accessories/hardware/ancillary equipment, 14:26, 14:32, 64:11; advanced-composites racing catamaran/*Cogito*, 39:30; Aluminewman (aluminum custom cockpit), 17:19; aluminum vs. FRP, 53:20; batteries/DC system, 18:44; boulevardier's boat, 64:11; builder's

contracts/recordkeeping/change orders, 12:40, 12:72, 37:60, 37:61, 40:24, 40:36; Cerny Island Trail 22 design, 135:36; change orders/controlling weight/stability, 42:26, 44:5; composite flat panels/limitations, 45:54; controlling print-through, 34:18; custom boat lines, 2:4; design mock-ups/interiors, 9:28, 40:42, 97:108; DuraKore (balsa-core) one-offs, 1:20, 2:12, 15:34, 34:18, 34:21; in economic downturn, 12:50; estimates/bidding/profit margin, 12:10, 21:4, 28:72, 32:64, 40:24, 44:30, 48:50; importance of customizing, 46:16, 97:108; industry profile, 44:3; look-alike, perform-alike syndrome, 17:8; market trends/economic strategies, 12:4, 29:8, 54:43, 55:58; New Zealand/freelance boatbuilders, 54:43, 55:5, 55:58, 55:61; one-off foam-cored composite hulls, 10:42, 32:18, 35:58, 52:30, 53:20, 54:43, 54:44, 55:5, 55:58; one-off metal hulls, 38:38; one-off resin-infused hulls, 44:30, 44:35; overhead, 54:43, 55:58; vs. production boats, 2:60, 54:43, 55:58; profit margin, 54:43, 55:58; resale value, 46:16; SCRIMP applications, 31:42, 44:30, 53:20; secondary bonding, 19:44; tooling/one-off composite construction, 2:4, 2:42, 2:60, 3:5, 10:42, 32:18, 44:35, 47:34, 55:58; welded aluminum, 21:26, 53:28; wood sportfishermen/Rybovich, 25:42, 25:49. *See also* boatshops, small; megayachts; production boatbuilding; tooling, for custom/one-off boats  
 Custom Steel Boats: building of Moloka'i Strait MS75 *Hercules* vessel, 114:20; murder of Richard and Rosa Flowers, owners, 82:8

customer support, 147:80; at Lazarra Yachts, 169:44; at Marine Concepts, 151:68; at Saunders Yachtworks, 148:38

Cuthbertson & Cassein: employees and friends reunion, 138:6; *Red Jacket*, racing sailboat/balsa-cored hull, 115:100, 150:4, 152:4, 171:10; Novis Marine, 115:100; obit, 171:10. *See also* C & C Yachts.

Cuthbertson, George: founding of C&C Yachts, 92:48; scimitar-shaped rudder, 142:8

Cuthrell, J.H., Co.: pre-engineered steel buildings, 17:34, 26:18

Cutler, James W., Jr. (Jim): on battery cables/connections, 22:4; removing broken screws, 24:58; on wiring specifications/selection, 36:4

Cutless bearing: seized, 156:54; tool for removing, 48:86

Cutting Edge, Inc.: automated cutting machinery, 21:60

cutting tools: Dormer Tools/Elect S high-temp drill bits, 131:12; self-cleaning holesaw/transom drill/carbide-tipped 3-wing drill, 105:12

Cut's Edge Harbor Marine: profile, 161:8

Cuyuna Engine Company: personal watercraft engine, 5:26

CWind: crew transfer vessels (CTVs)/Aluminum Marine Consultants, 168:68

C.W. Paine. *See* Paine, C.W. (Chuck)

cyanoacrylate adhesives: description/applications, 41:44

Cyclone Power: external-combustion steam engine, 134:6

Czap, David: drive systems for solar yachts/Naval DC, 161:48; solar-powered

Czeer MK1 launch, 161:48; user interface for solar boats, 161:48

---

A B C **D** E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

Dagger: roto-molded polyethylene kayaks, 29:33

Dahlgren, Jeff: on Airtech vacuum valves (frogs), 45:5

Daily, Mark: on Prop Scan/propeller pitch, 42:74; on Porsche speedboat, 116:4

Daimen Corporation: air conditioners, 2:70

Dali foils, 162:52. *See also* Dynamic Stability Systems (DSS)

Dalinger, Rudy: Viking product line, 46:16, 46:26

Dalrymple-Smith, Butch: on the foil fix vs. overweight boats, 164:4; response on arc-shaped foil vs. horizontal foil, 164:4; response on Best of Inclinations and formula for inclining experiment, 165:4

Dalrymple-Smith, Butch, author: "Best of Inclinations," 162:24; "Correcting Flawed Forestay Chainplates," 157:112; "The Foil Fix," 160:32; "Saved by the Wood of Life," 166:40

Dalzell, Steve: on The Landing School's design program, 102:4

damage, major: assessment/repairs, 25:18, 57:74. *See also* blister repairs; delamination; hurricanes/major storms; insurance, boat/marine; repair techniques; surveying techniques/tools/equipment; surveyors/surveying, profession/judgment

damage, minor: composite repairs assessment, 82:22

damping materials. *See* vibration, engine/propeller, control

Dana, Lee W.: on bilge pumping systems, 57:48; on engineroom ventilation, 37:26; on E10 (ethanol) gasahol and degradation of fiberglass and metal fuel tanks/Bertram Yachts, 103:6; profile/Bertram Yacht, 39:70, 43:5; on shaft seals, 32:4

Dana, Lee W., author: "Lower Tier Licensure," 98:112; "A Marine Engineer's Casebook," 93:98; "Solving the Station-Wagon Effect," 39:79 "What's Wrong With This Picture?" 112:120

Danfoss: DC-powered refrigerator compressor, 26:8

D'Antonio, Steve C, author: "The Amazing Mister Moesly," 91:116; "The Art of Concealment," 150:10; "Back in the U.S.S.R. with the Tupolev A-3 Nadezhda," 165:10; "Best Gas," 169:72; "Biodiesel," 116:28; "Big Banks," 133:24; "Blackwater Guide," 162:38; "Blue Flame Afloat," 141:16; "Bonding Basics," 138:18; "Bring on the Diesel Outboard," 151:128; "Capacitor Power," 153:8; "A Case for Quoting," 127:128; "A Case for Complexity," 137:34; "The Competitor," 165:36; "Contemporary Boats, Tasmanian Tradition at Denman Marine," 160:8; "Centrifugal Filtration," 115:122; "The Curious Mind of the Professional," 137:80; "Dealer (No) Support," 160:80; "Deep Storage," 122:50; "Desperately Seeking Apprenticeships," 166:80; "Documentation and Instructions, Please," 132:80; "Don't Close the Door on Side-Access Ports," 159:10; "Editors' Picks of New Tools and Technology," 150:72; "Elling Yachts," 158:54; "Euro Vision," 167:54; "Exemplary Marine

Trades Training, 139:18; "Fixed Firefighting Systems," 125:24; "Fleming: An Asian Pacific Venture," 151:96; "Fresh, Clean, and Clear: Potable Water Systems, Part I," 152:48; "Get-Home Systems," 139:86; "Go. No Go.," 126:30; "In Gear," 134:18; "In Summary," 157:128; "Internal Combustion's Backside," 170:60; "Lessons from the Oil Sump," 143: 62; "LPG Tank Recall," 145:20; "Marineco's EEL Shore-Power Cord," 138:8; "The Necessity of Straight," 159:36; "Polishing The Fuel," 112:100; "A Yard Manager's Casebook," 94:104; "An Unusual Repower," 77:82; "Ice Class," 89:16; "Joystick Evolution," 146:10; "Major Refit," 82:40; "More Reinforced Plastic Plumbing, Please," 155:10; "Nuts. Bolts. Screws." 118:52; "Oil Change Delayed," 144:24; "Once More, With Feeling," 147:80; "Owning Component Failure," 141:80; "Performance Metals' Navalloy and Intelligent Anode System," 136:10; "Plumbing the Depths," 147:48; "The Power and Peril of Stainless," 146:48; "Power Trip," 157:26; "Refine the Ride," 120:42; "Seacocks," 114:82; "Show and Tell: A Better Wire Stripper," 141:30; "Show and Tell: Go-Anywhere Diagnostic Software," 141:30; "Showstoppers: Sioux Pneumatic Tools," 168:80; "Showstoppers: CDI Torque Products torque wrench," 168:80; "Showstoppers: Neander Motors diesel outboard," 168:80; "Showstoppers: Scanstrut Waterproof USB socket," 168:80; "Showstoppers: Fastmount 'Blind' Textile Clip Range TC-06 seat-cushion fasteners," 168:80; "Showstoppers: Simarine PICO battery

and tank monitor,” 168:80; “So You Think You Know Diesel,” 115:112; “The Stability of Spin,” 113:72; “Strainers Inside and Out,” 127:116; “To Heat and To Hold,” 153:36; “Trial by Water, 145:5; “Vibraseal Marine Thread Sealant,” 140:7; “What the Computer Doesn’t Say,” 162:96; “Without A Factory,” 163:56

D’Antonio, Steve C.: response on Capsize! and lessons for boatbuilders/fire extinguishers, 150:4; on chemical conversion/failure of lithium technology, 157:6; response on controllable pitch propellers, Kort nozzles, Rice speed nozzles and multi-speed gearboxes, 158:4; on “Correcting Flawed Forestay Chainplates”, and using polyurethane bedding compound to stop corrosion, 159:4; response on fixed fire-extinguisher photo/improper placement of, 153:4; on importance of smoke detectors on boats, 139:5; on propeller nut installation protocol/American Boat & Yacht Council, 121:9, 123:6, 124:6; on “Pushing Batteries to the Limit”; response on “Internal Combustion’s Backside” and benefits of muffler drain, 172:4; on salvaging drowned engine, 47:5; response on plated valve cover bolt corrosion, 123:6; response on flexible coupling/advantages of Centa thrust bearings, 122:6; response on limited stability of biodiesel, 118:4; response on biodiesel vs. distillate fuels, 118:4; response on bonding basics, 139:5; response on a case for complexity, 139:5; response on custom sea chest with monel filtering screen, 139:5; response on Desperately Seeking Apprenticeships, 168:4;

response on Internal Combustion’s Backside and water injection hole diameters, 171:4; response on low-drag intake with integral strainer capability, 132:4; on nontoxic antifreeze for winterization, 155:4; response on Oil Change Delayed/centrifugal spinner systems, 146:4; response on Plumbing The Depths and two bilge-pump-wiring systems, 149:04; response on Plumbing The Depths and T-fittings/light vs. buzzer alarm for bilge pump failure, 149:04; on policy of owner-supplied parts/components, 143:6; response on The Power and Peril of Stainless and distinction between pitting and corrosion, 148:4; on securing your training investments, 145:4; on “Smoke Detectors: What’s It Going to Take,” 169:6; response on raw-water strainer design, 130:6 (see *a/so* Dean, Paul.); responses on a relay switch for large capacity pumps; installed backwards switch, 148:4; response on scoop-strainer equipped engine seacocks on sailboat and anodic protection for metal strainers, 128:6; response on Service Manual Lament/diagram installation/installation of nut, 158:4; response on shaftling alignment/do-it-yourself alignment tool kits /using a laser light, 161:3; response on Trial By Water and backing high knot boats down, 147:6; on water tanks/check valves/composite aluminum PEX plumbing, 155:4; response on ZDDP additive and oil analysis, 144:4

Dark Matter Composites: advanced training courses, 144:10; portable and bench dust-extractors, 144:10; step-sanding tool kits, 144:10



- dashboards: console cutouts, 49:24;  
 design/color/layout, 42:88, 48:66, 48:79;  
 outsourcing, 37:16; safety/liability, 15:50
- Dashew Offshore: semi-custom sailboats,  
 30:48, 139:86; downwind sailing set-up,  
 139:86
- Dashew, Steve: on steering system  
 fundamentals/ABS rule for keel structure  
 and rudders, 100:4
- Dashew, Steve and Linda: *Beowulf*  
 VI/Norm Riise, 124:12;  
 motoryacht/computational fluid  
 dynamics analysis capability, 89:8; Fast  
 Patrol Boat 64, long-range cruiser,  
 113:10, *Windhorse* "unsailboat," 117:26
- Dassault Systems: Catia CAD/CAM  
 engineering software, 57:88, 113:10
- data acquisition hardware/heating  
 source/software, 139:40; depth retrieval,  
 139:40
- data loggers, 109:170, 119:38, 127:8
- Data Tag: Motorola identification chip for  
 boats in the U.K., 71:27
- Daubert Products Inc.: Tape'n Drape, 3:60
- Daugherty, Colin: on fuel systems for  
 pleasure craft, 85:4
- David Taylor Model Basin. See Taylor,  
 David, Model Basin
- Davidson, Ken: model testing/performance  
 prediction, 60:66
- Davidson, Laurie (New Zealand boat  
 designer): 71:70
- Davies, Richard: on surveying and  
 ethics/judgment, 110:4
- Davies, Roger: on trailering/point loading,  
 60:5
- Davis, Arch, author: "Mold Alternatives for  
 One-Offs," 10:42; "Strip-building in  
 DuraKore," 15:34; "Training Down  
 Under," 20:25
- Davis, Jr., Carson "Buddy," obit, 130:20.  
 See also Davis Yachts.
- Davis, Darryl: FRP manufacturing waste-  
 reduction manual, 28:48, 28:52; FRP  
 manufacturing waste-reduction study,  
 27:17, 55:26
- Davis, Greg: osmotic blister database,  
 53:4; on seaworthiness/crew/litigation,  
 36:74; on seaworthiness/survey reports,  
 34:55; on smoke/CO detectors for  
 boats, 91:10
- Davis, Jack, author: "Clean, Green  
 Spraying Machine," 112:10;  
 "Interlaminar Infusion," 116:13
- Davis, Judy Bell-. See Bell-Davis, Judy.
- Davis, Lincoln: vintage outboard engines,  
 92:68
- Davis Yachts: Carson "Buddy" Davis, Jr.,  
 obit, 130:10  
 worker training, 13:54
- Dawson, Dudley: on Benetti navigation  
 simulator, 110:4; on boatbuilding to a  
 single standard, 105:4; on chartered  
 boat/T-boat, 37:4; on Desperately  
 Seeking Apprenticeships, 168:4; on  
 Ernest Brierley, 41:5; on Jack Hargrave,  
 41:5; on hauling and launching safety,  
 52:4; on laminate strength/stiffness/resin  
 content, 56:5; on model testing vs.  
 computer prediction, 55:32; on new  
 committee establishment by SNAME for  
 professional engineer (P.E.) licensure  
 issues, 72:112; on Once More, With  
 Feeling/the importance of good  
 customer support, 148:4; on  
 photography for marine surveyors, 80:4;  
 on resistance/shallow-water effects,  
 60:5; on propulsive  
 efficiency/turbulence/slip, 46:5; on  
 standardized warning labels and

suggestion to instead include in owner's manual, 157:6

Dawson, Dudley, author: "Adaptive Boating," 73:79; review of book by Donald L. Blount: *Performance by Design: Hydrodynamics for High-Speed Vessels*, 153:46; "Calling All Superyacht Designers and Builders," 91:192; "Design and Engineering (1990s Retrospective)," 60:27; "Faster, Farther, and More Fuel-Efficient," 44:38; "Fundamentals of Resistance," 58:26; "The Geometry of Shapes," 125:50; "Homeland Insecurity," 112:40; "In Defense of Yachts," 111:120; "Isolating Engine Vibration," 34:22; "ISOmetric Exercises," 48:14; "The ISO Process, Simply Explained," 55:79; "J.B. Hargrave, Designer," 43:36; "Keeping It Simple," 47:57; "Large-Project Management, illustrated," 101:32; "Laying Out the Engineroom," 37:26; "Life Lessons," 124:72; "Mining the Archives," 98:22; "Once Around the Design Spiral," 49:8, 50:5; "Professionalism Isn't About A License," 95:104; "Rudder Design for High-Performance Boats," 78:72; "The Savitsky Method," 126:66; "Small-Craft Stability," 54:98; "Trim Control," 75:140; "We Has Met the Enemy," 33:88; "We Has Met the Enemy – Part II," 84:104  
Daytona Plastix, Inc.: Marine-Tuff Polymer, 20:56

DBE (dibasic ester) solvent: in acetone replacement/performance, 6:10, 10:8, 10:17, 33:20; replacement for (emulsifier), 20:56; in water-based stripper, 33:75

D.B. Follansbee. See Follansbee, D.B., Inc.

DC electrical systems/equipment: compact distribution panel for all high-current switches, breakers, and fuses, 89:29; design/engineroom layout, 37:26, 73:102, 97:148; grounding, 23:4, 30:38, 30:44, 33:28, 94:84; high-capacity/components/charging systems/sources, 38:55, 38:56, 39:56, 60:27; 76:21; high voltage electric motors, 98:69; installation/operation, 18:44, 57:99, 62:7, 64:5, 76:21; 97:148; integrated load management, 60:27, 62:7, 64:5; overcurrent protection, 36:41, 45:32; SALT monitoring system, 33:75; stray-current corrosion, 33:28, 66:38; suppliers, 19:50, 19:55, 97:148; systems technician certification, 57:99, 57:100; wiring connections/cables, 20:50, 22:4, 23:4, 33:28, 39:56, 62:7, 66:38, 97:148, 98:50

DC electrical systems/equipment, charging systems: alternators/regulators, 19:50, 19:55, 21:4, 23:4, 39:56, 120:52; battery chargers/relay systems, 20:50, 27:24, 27:26, 33:28, 39:56, 120:52; battery installations/engineroom layout, 37:26, 39:56, 73:102, 89:28; connections, 20:50, 21:4, 23:4, 62:7, 64:5, 76:21; brushless DC motors, 92:12; DC-to-DC converters, 76:21; dual/single/parallel house battery banks, 39:56, 41:5; high capacity components, 170:32; electric starters, 37:26; equalizer and coverter pros and cons, 76:21; fluctuating input voltage and load and speed changes, 92:12; power plant amortization, 120:52; resistive connections, 170:32; voltage drops, 170:32. See also batteries, marine; battery chargers, marine

DC tester: pen-sized/Santronics, 34:59

DCM Clean Air: dust control tools/systems, 87:10

DCPD (dicyclopentadiene)-blended, low-styrene resins:  
applications/strength/performance/problems, 1:30, 2:4, 2:67, 7:50, 8:28, 13:36, 25:8, 36:4, 42:52, 50:46, 52:67, 55:5, 59:30, 66:78, 75:58, 80:40; bucket-and-roller laminating techniques, 45:76; controlling print-through, 7:50, 8:28, 50:46; costs/properties/controlling resin content, 59:30, 59:34; vs. epoxies, 42:52, 55:5; introduction of, 1:30; and osmotic blistering, 15:13, 51:108; photo-initiated, 18:8; repairs/damaged laminates, 43:54, 52:67, 55:5, 66:78, 107:70; puddles, 59:30; secondary-bonding performance, 13:67, 19:44, 25:8, 36:4, 39:19, 52:67, 55:5, 59:30, 59:30, 66:78, 75:58; shrinkage/springback, 45:68, 60:104; styrene emissions/waste reduction, 8:28, 40:17, 40:22, 55:26; and ultraviolet radiation, 75:58; vs. urethane, 75:58; vs. vinyl esters, 42:52; for woven vs. knitted reinforcements, 29:38

DC-to-DC converters: for driving LED lights, 87:80, 115:74; vs. linear voltage regulators, 115:74; and radio frequency interference, 115:74

Deal, D. Scott: on flats-boat market, 30:4  
dealers/salespeople: boat shows/sales techniques, 36:60, 36:64; canoe/kayak market, 49:36, 49:40; customer manufacturer support, 160:80; design input from, 2:60, 9:28; engine installations, 160:80; lessons from Boston Whaler, 2:34; paint job/boat markets, 37:47; relationship with manufacturer, 11:5, 11:34; sailboat market, 6:20; tracking labor/materials,

50:59; use of owners' manuals, 27:46; use of videotapes, 16:22; women's advisory board, 38:51; yacht market, 40:40

Dean, Paul: on fiberglass itch, 64:5; on soldering stainless steel flat bars on flush-mount bronze through-hull/raw-water pick up, 130:6

deBethune, Chris: on fastening ballast keel, 38:20

DeBord, Frank, author: "Repower," 116:80

decibel meters, hand-held: for testing soundproofing, 5:42

deck, tooling for: stick-built plug, 28:10

deckbeams, 119:50

deck coverings/coatings, nonskid. *See* nonskid deck coatings/coverings

deck hardware/fittings, installation/bonding:

acrylic adhesive/X-Serts for, 18:4; chocks, 30:8; cleats, 30:8; for carbon fiber laminates/galvanic blistering, 57:30; for cored laminates, 15:21, 32:44, 34:52, 36:78; epoxy-potted fasteners, 15:21, 32:44, 36:78; hurricane damage and, 30:8; loading/cored construction, 52:40; 3M 5200 sealant for, 15:21, 28:27, 29:4

deck hardware/fittings, manufacture: in-house vs. outsourcing, 35:34; quality control/defects, 54:79. *See also* hardware, marine; rigging, stainless steel

deck hardware/fittings, used:

salvaging/recycling/Sailorman, 60:82

deckhouse: sliding-top, 54:18. *See also* pilothouse; wheelhouse; windows

decking, prefabricated/panels: balsa-cored, 45:54; cork composite, 41:62; Douglas-fir, 11:52, 18:54; Nomex/carbon, 45:54, 45:62; recaulking teak decks, 131:66;

Seacork, 102:14; teak, 5:26, 51:114; 131:66

deck light: Hellamarine halogen reflector lamp, 40:66

deckplate: rebedding/water-saturated flotation foam, 37:48

deck repairs: redecking/*Balclutha* restoration, 56:10; scarfed-seam/FRP, 37:48; teak, 1:46; waterlogged plywood, 32:44, 52:40. *See also* caulking/reaming/reefing tools

decks, carbon fiber: composite/Consolidated, 47:34

decks, design considerations/safety: liability, 15:50; side decks, 39:67, 42:88, 69:92; small power cruisers, 39:67

decks, digitally imaged, 102:14

decks, FRP, cored: balsa-cored, 45:54; compressive loads/deck hardware, 52:40; exposed underside/no headliner, 42:52, 42:59; Nomex/carbon, 45:54, 45:62; problems/solutions, 27:61; scarfed-seam repair/deteriorated flotation foam, 37:48; strength/deflection/structural core materials, 52:30. *See also* hull-to-deck joint

decks, FRP: controlling print-through, 7:50; part fit/fiber-to-resin ratios, 59:30; scarfed-seam repair/deteriorated flotation foam, 37:48; tooling/hull-to-deck joints/part fit, 60:1204; turning/Posi-Turner, 10:52. *See also* hull-to-deck joint

decks, plywood-cored/FRP sheathed: vs. fiberglass/loading, 40:54, 41:5; finishing, 40:61; vs. foam core/loading, 52:40; lobsterboat work deck, 45:80; waterlogged/repair, 32:44, 52:40

decks, teak: cork and PVC as replacement for, 125:20; 128:6; deck leaks, 165:3;

manufactured teak decking with plywood subdeck/Teakdecking Systems (TDS). *See also* Esthec; Flexiteek; Marinedeck; NuTeak; PlasDECK; SeaDek: Teakdecking Systems (TDS)

decks, wood planking: power-reaming, 21:60; teak/laid, 45:47; teak/prefabricated, 5:26, 51:114; teak/reconstruction, 1:46. *See also* caulking/reaming/reefing tools

deck sealants: urethane, 41:44

DecoLite: core for cabinetry, 13:43, 40:42, 40:52, 47:17, 57:110; source, 8:54

Dee, Rick (boatbuilder): boulevardier's boat (sportfisherman), 64:11

Deep Creek Design Inc.: LED lights, 87:80

Deere & Co.: Ammarine 404 marine diesel engine, 19:28

defects, latent, 130:66

DeFever, Arthur: trawler yacht designer/obit, 144:10

de Groot, Guido (designer): VQ boat series for Vanquish Yachts, 173:6

dehumidifiers, 122:52

Deknatel, John: on Ray Hunt/deep-V hullform, 50:32

delamination: of core bonds (causes/repair), 9:36, 29:8, 36:34, 96:16; damage assessment/repairs, 25:18, 30:72, 36:34, 96:16, 97:4, 105:26; interlaminar (resin/fiber elongation), 13:33, 39:19, 48:16; low-styrene (DCPD) resins, 2:4, 2:67, 8:28, 52:67, 55:5; Peel Ply/air-inhibited resins, 39:27; of polyester/epoxy bonds, 2:72; of secondary bonds, 19:44, 39:19. *See also* core bonding, materials/techniques; secondary bonding

Delcam: software for multiaxis turning equipment, 106:10

DeLillo, Michael: on Lee Dana/Bertram Yacht, 43:5  
*Delphine II*, steam-powered yacht/Horace and John Dodge, 163:14; reconverted by U.S. Navy to *USS Dauntless*, 163:14  
 Delta International Machinery Corp.: bench saw, 1:68; Dust Collector/Sweeper, 20:56; miter saw, 3:60; portable bench saw, 45:105; profile of, 94:32; radial drill press, 11:52; Sidekick Saw Stand, 45:105  
 Delta Marine Industries: CAD/CAM applications, 8:35; fiberglass megayachts, 2:42, 64:52; hull molds, 94:32; 126' expedition yacht, 70:21; transition/commercial fishing boats to yachts, 40:24, 64:52  
 delta shape circuit racers, 135:26  
 Deltron automotive acrylic urethane paint: alternative to linear polyurethanes, 19:12  
 DeMarco, Peter: Integrated Entry Surface Effect Ship hullform, 96:6; obit, 114:10  
 DeMartini, Marilyn, author: "Betting on Bay Boats," 169:116  
 Dencho Marine: profile/Dennis Choate, 126:56  
 Denick, Tom: Island Marine/Wilbur 34 redesign/lifting strakes, 45:86  
 Denison Marine: hurricane-recovery assistance, 20:8; megayacht market, 12:50; Roamer restoration, 4:30  
 Denman Marine (Tasmania): wooden boatbuilding and repair, 160:8  
 Denmark: yacht restoration, 52:12  
 Densmore Associates Inc. (DIA): Modular Marine/aluminum kit boats, 43:83  
 Department of Homeland Security: small vessels security threat scenario, 112:40; America's Waterway Watch Program, 112:40

De Plessis, Hugo: on the first large fiberglass production motoryacht, and *Tarantula* high-speed yacht, 115:6  
 DePlume, Norm, author: "Knowing When to Jump," 51:128  
 depthsounder: internally mounted transducer/drag reduction, 45:29  
 Derektor Gunnell Inc.: aluminum-fiberglass hybrids, 17:19; consolidated as subcontractor, 47:34; yard boats, 42:34  
 Derektor, Robert E., boatbuilder: profile of, 75:126  
 Derektor Shipyards: ABS classification, 39:80; Dennis Kozlowski's ex yacht, 82:8; 105' motoryacht, 1:20; Mariner 12 meter, 75:126; motoryacht *Starlight*, 64:82; plasma-cut parts/outsourcing, 42:74; Thunderhead ocean racers, 75:126  
 Dermashield: barrier cream, 21:60  
 Derrer, Tom: Eddyline Kayaks/Carbonlite 2000, 60:11  
 desalinator. See watermaker  
 Deschamps, Laurent: on designing and building in wood/composite construction, 70:5  
 Design Challenge, Professional BoatBuilder magazine: Brown, Russell, 122:24, 130:52; Burkett, Jerry, 122:24; Bynes, Graham, 122:24; Cerny, Kurt/Island Trail 22 design, 135:36; de Souza, Paulo Alves/Ames, Jon/WWBD 26 Sharpie, 135:36; Devlin, Sam, 122:24, Dowie, Chris, 129:18; Eliasson, Rolf, 121:42; 122:24, 127:20; Fanello, Giuseppi, 129:18; Gilding, Tim, 129:18; Harman, Anthony, 122:24; Heyman, Gabriel, 133:40; Imaginocean Yacht Design, 129:18; Lathrop, Tom, 122:24; Lillistone, Ross, 129:18; Jolley, Eric,

122:24, 130:52; Jonsson, Sigurdur Olafs, 122:24; Marples, John, 133:40; Migueis, Ronaldo Fazanelli, 122:24; Morabito, Margaret and Michael, 122:24; Murnikov, Vlad, 129:18; Nazarov, Albert, 122:24, 127:20, 135:36; Noyes, Daniel, 122:24; Patrix, Ronan/Swift 26 trimaran, 135:36; Patterson, Simon, 129:18; Raspo, Pablo, 129:18; Rodger Martin Yacht Design/3 Nines camp-cruiser, 135:36; St. Joseph Sound Launch/Jon Ames, 127:20; Silver Arrow 860/Albert Nazarov, 127:20; Stimson, David, 122:24; Van Abbema, Mark, 129:18; Vrimbo 39 outboard cruiser/Sjoerd Bouma/Rob Tander, 127:20; Xanthakis, Jannis, 129:18

#### design drawings/drafting/models:

computer-generated vs. hand-drawn, 53:28, 54:3, 54:82, 78:3, 130:80, 167:3; Frederik Henrik of Chapman, 78:3; half models, 54:3, 54:62, 54:82; Herreshoff, 54:82, 54:92; invitation to collecting and preserving of, for WoodenBoat Library, 167:3; isometric/perspective, 38:47; Mylars/lofting liability, 38:14; parametric, 40:24; photorealistic/raytracing, 40:48; 2-D/engine room, 37:26; 3-D model/hull design, 24:62; 3-D models/metal construction, 38:38, 38:47; 3-D drawings/wood interior joinerwork, 40:42, 40:52. See *also* CAD/CAM (computer-assisted design/computer-assisted manufacture); CAL/NCC (computer-assisted lofting/numerically controlled cutting); computer software, hull design/fairing; computer software, 3-D modeling/graphics; designs/plans; lofting

#### design/engineering

considerations/parameters: in 1990s/retrospective, 60:27; Air-Assist hullform/Scout Boats, 135:6; anchor-stowage systems, 22:29; back-up engineering, 138:80; ballast keel/canting keel, 47:17; ballast keel/lead bulbs, 23:24, 30:4, 49:45; ballast keel/jettisonable keels, 23:24, 23:26; 85:46; bifoil skeg, 118:22; Big-T telefax steering cable for flying bridge/Rickborn, Chris and Harold, 166:12; books/references, 12:24, 21:68, 44:54, 49:14, 72:22; bow/built-on, 45:86; bow/bulbous, 57:123, 114:20, 118:8, 121:50; bow configurations/performance, 25:55, 27:4, 45:86, 114:20, 169:104; bow railings, 42:88; canoe-body draft, 52:4; capsize water line, 139:54; carbon fiber laminates, 57:30, 73:79; carbon fiber spars, 47:53; carbon monoxide/station-wagon effect/back-drafting, 39:79, 45:32; centerboard housing, 50:18; challenge for G4 foiling catamaran, 156:40; chines, 58:79, 60:5, 113:32, 138:32; CNC cut metal kits for hull construction/Smart Kits, 148:46; cockpits, 39:67, 42:88, 48:66, 48:79, 114:30; composite/FRP boats, 47:66, 70:5; composite flat-panel construction, 45:62; control station, 48:66, 48:79; cored bottoms/loads/strength, 51:22, 51:24, 51:26, 53:40, 55:5, 120:18; core strength/standards, 34:42, 82:66, 120:18; curved-stepped hull, 54:18, 58:79; custom vs. production boats, 2:60; dashboards, 15:50; deadrise, 58:26, 139:54, 155:20; deck/hull fittings (sandwich construction), 34:52, 120:18; deep-V displacement hulls/station-

wagon effect, 39:79, 58:26; deep-V hullform, 39:79, 47:16, 50:3, 58:262, 114:20, 134:62, 138:32, 139:18, 155:20; deep-V monohulls/Mystic Powerboats, 119:6; deflection/oilcanning, 41:28, 120:18; Delta Conic hullform, 155:20, 160:16; design/engineering documents, 33:13, 45:14; designing/engineering for production, 2:60, 3:27, 95:64; design ratios booklet, 51:11; design spiral/speed and powering data, 49:8, 59:56, 113:32, 153:46; Displacement Glider hullform/Alsphere Engineering GmbH, 86:14; displacement to semi-planing hull/Zimmerman Marine, 77:82; displacement study, 59:56, 59:57; double M hullform, 97:10; drag reduction/dimpled bottoms/thighs, 57:15, 58:17, 59:5, 60:11; drag reduction/fish-scale/antifouling roughness patterns, 59:5; drag reduction/internally mounted transducer, 45:29; drag reduction/resistance prediction, 55:32, 58:6, 58:26, 60:66, 118:22, 169:104; drag reduction/textured films, 57:88, 60:5; dynamic (positive) stability, 23:24, 23:26, 31:20, 36:22, 36:32, 39:4, 42:26, 44:5, 48:8, 48:14, 49:8, 50:11, 54:98, 55:32, 60:66; dynamic stability/high-speed boats, 31:20, 31:28, 33:4, 34:5, 44:38, 72:10, 153:46, 155:20; elliptical hull, 139:54, elliptical V-hull/Chris Rickborn, 166:12; ; engine/forward location, 51:96; engineroom, 25:42, 37:26, 37:30, 37:34, 46:16, 59:44, 137:34; fatigue analysis of membrane concept/hull bottom, 150:22; form/function, 42:88, 79:48, 114:30, 147:18; free-standing rigs, 55:44, 55:46, 57:7, 72:22; hotmolding, 147:64, 150:4;

hull resistance/predicting, 116:80, 147:18, 166:48; galvanic blistering/prevention, 57:30, 59:5; galvanic corrosion/prevention, 33:28; ghost line/Kiko Villalon, 114:94; green yachts, 117:26; guide to preliminary design, 12:24; Gunboat 55/infused carbon fiber hull, 144:58; head arrangements, 5:50, 39:67; hollow-section girders/in-situ girders, 120:18; hull changes/improved performance, 45:86, 49:8, 65:102, 75:140, 88:62, 113:32, 144:36, 155:20, 166:48; hull loads/framing/cold-molding, 51:36; hull bending/Flevo Jachtbouw, 132:18; hull stretching/extension, 2:42, 7:18, 46:16, 46:26, 47:34, 77:82; hydrostatic loading/hogging/sagging, 51:36; impact loading/bottom slamming, 52:4, 53:4, 53:20, 55:5, 68:32, 70:5, 72:22, 150:22; impact loading/safety factors, 43:54, 72:22; fast displacement hull forms (FDHF) evolution/Van Oossanen Naval Architects, 172:12; impact loading/shock loads, 53:40, 68:32, 70:5, 72:22; innovative trihull/Jelle Bilkert design, 147:10; in Maine lobsterboats, 73:88; integrating aesthetics and structure, 51:45; interior arrangements/decoration, 5:50, 6:34, 9:28; IOR/cruising yachts, 25:55, 30:48, 55:44; IOR/offshore racing yachts, 25:55, 55:44, 60:66; keelbolts/keel attachment, 38:20, 39:4, 40:4; laminate schedules/stress concentrations, 13:36; length-beam ratio/resistance, 58:26, 140:34, 147:18; length overall, 49:8, 50:5; lifting strakes, 45:86, 58:79, 155:20; lobsterboat hullform, 51:96; longitudinal center of gravity/resistance, 58:26, 75:140; longitudinal center of

gravity (LCG)/steering, 45:96; 11:9, 11:19, 48:66, 48:79, 53:50; measurement rules/offshore racing yachts, 60:66; modified-V/Deep-V/Stepped-V, 126:36; molded lines/extent of, 59:56, 75:140; morphing hull/general design guidelines for, 173:54; morphing hull prototypes/*Morph II* and *Morph III*, 173:54; navigation stations, 11:9, 11:19, 48:66, 79, 53:50; M-shaped hull; sportfisherman/Mangia Onda, 80:12; no “magic formula”/internet forums, 130:80; offshore racing/performance yachts, 34:42, 34:48, 35:3, 39:30, 42:26, 43:90, 46:38, 46:43, 48:8, 51:36, 53:50, 60:66, 126:38; 159:60; the OK hull, 171:10; parabolic curve/38 Bertram, 155:20; pilothouse/wheelhouse/deckhouse, 48:66, 48:79, 54:18, 57:10, 114:30, 115:36; planing catamarans, 47:16; power vs. structure/offshore powerboats, 49:54; *Principles of Small Craft Design*, 52:43; prismatic coefficient, 58:26; product specifications/standardizing/PILOT database, 49:96, 60:136; propeller matching, 46:52; propeller pitch/sizing/tunnels, 42:74, 44:38, 44:43, 44:45, 44:46, 46:5, 46:16, 113:32; “quiet chine” innovation/ Palm Beach Motor Yachts, 165:36; racing shells/kayaks, 41:28, 57:30; resistance/laminar and turbulent flow, 58:6, 58:26, 59:5, 60:66; reverse-tricycle geometry/Sonny Levi designs, 135:26; rigging loads/displacement, 50:18, 51:36, 53:50; round bilge hullform/Unity 24/Paul Bury design, 120:4; round bottom design, 114:20, 173:54; rudder seating/visibility, 48:66, 48:79;

size/geometry/angle location, 34:52, 45:96, 103:160; safety/product liability, 15:50, 34:13; semi-planing cruising powerboat/Neo 41/ Steven Weiss design, 151:44; Series 62/65 resistance-to-weight regression analysis, 140:34; ships vs. boats/small craft, 47:24; shoal draft monohulls and stability, 139:54; side decks, 42:88; simultaneous fabrication of hull and deckhouse/Aluminum Marine Consultants, 168:68; simple hull shape/W17 Trimaran, 169:104, 170:4; Slide Hull vessel, 164:12; small craft, 44:46, 47:24, 48:4, 49:79, 52:43, 79:48; small power cruisers, 39:67, 114:30; speed/length barrier (displacement boats), 8:4, 29:72, 30:4; speed/powering data, 49:8, 59:56, 59:57; 113:32, 153:46; speed/resistance, 58:26; split hull mold/Orust builders, 82:66; sportfishermen, 1:22, 1:28, 39:70, 39:79, 114:30; squatting/spray, 45:86, 113:32, 114:20; spray rails, 60:5; *Standard Specifications for U.S. Navy Craft*, 52:43; steering systems, 42:88, 45:96, 53:50; stepped chine, 46:16, 58:79; stern bulbs, 118:22; stern configurations, 25:55, 27:4; structural adhesives/bonding, 41:44, 41:48; structural hull liners/Precision Boat Works, 164:46; submerged torpedo-like hull/SWATH, 129:40; surface-propelled boats, 2:55; suitability of hullforms for hybrid propulsion, 145:100; SWATH hull (small waterplane area twin hull), 117:26; SWEEP bulbous bow, 112:10; transom corners, 58:79; trends/myths, 30:4, 113:32, 130:80; trihedral/stepped-cavity hullform, 49:42, 85:76; trim angle, 58:26; triple chine, 114:20;



tugboats/yard boats, 42:34; tunnel hulls, 44:38, 44:46, 46:5, 46:16, 49:42, 59:10, 72:10; velocity prediction program (VPB), 79:48; venturi slot, 53:50; wavemaking/drag reduction (displacement boats), 26:31, 28:6, 29:4, 58:26, 60:66; water ballast, 53:50, 53:61, 79:48; weight and centers calculation, 59:56, 59:57; weight estimating/management/stability testing, 42:26, 44:5; weight estimating/propulsion efficiency, 44:38, 59:56; windshields, 42:88; *Yacht Designs III*/William Garden, 21:68; yacht standards/comfort, 40:24, 137:34; *Yacht Style*/Daniel Spurr, 44:54. *See also* CAD/CAM; computer software, hull design/fairing; design drawings/drafting/models; designer/naval architect, profession/responsibility; designs/plans; displacement hulls; model testing; performance prediction; planing hulls; product liability; product lines; speed, estimating; stability, dynamic/positive; weight (hull), controlling/reducing design/engineering schools: composites engineering, 58:104; licensure and, 47:24, 58:104. *See also* education; Landing School of Boat Building and Design, The; Westlawn Institute of Marine Technology designer/naval architect/engineer, profession/responsibility: *Boat Plans International*/recruitment for designers, 28:6; builder's contracts and, 37:60; builder-designer relationship, 3:27, 40:12; builder-designer relationship/NC lofting, 25:4, 38:14; client-designer relationship, 21:68, 149:03; defined, 9:64, 159:80; design contracts

(drafting/negotiating), 40:12; educational courses for, 101:106; ethics for the naval architect, 159:80; expert-witness work/forensic engineering, 47:24, 50:18, 50:20, 50:25, 56:53; history, 60:66, 100:120; insecure line of work, 51:128; liability/coverage, 40:12, 43:3; licensure/Professional Engineer, 43:3, 47:24, 49:4, 51:6, 56:53, 58:104, 74:5, 76:36; 98:112, 100:3, 100:120, 101:106, 102:4; Ship Design Engineering, 56:53, 72:22; weight/stability, 42:26. *See also* lofting designers, interior. *See* interior designers designs/plans: copying/anti-splashing legislation, 45:21; Herreshoff, 54:82, 54:92; preservation/Mark Kellogg, 21:12; source/BOAT/U.S database, 30:54; source/Boat Plans International catalog, 28:6. *See also* design drawings/drafting/models Design Systems and Service: Fast Yacht software, 7:18, 18:4 De Souza, Paulo Alves: Design Challenge, WWWBD 26 Sharpie, 135:36. *See also* Jon Ames De Stille Boot (Netherlands): solar-powered recreational launch, 161:48 *Destriero*: Donald L. Blount and Associates, 102:4; 109:5, 100; 113:4; sea trials, 110:50, 111:4; speed/length ratio, 126:38; trim tabs, 111:4; vs. *Moonraker*, 126:38; and Virgin Atlantic Challenger Blue Riband Award, 135:26 Det Norske Veritas: advanced-composites research, 47:57; safety standards/testing cored composites, 34:42, 34:45, 63:38, 68:32, 142:40; type-approved materials/data and scantlings standards, 142:40

- Detroit Diesel Corp.: DDEC electronic management system, 14:34, 14:38; electronically controlled/low-polluting engines, 27:61; megayacht engines, 12:50
- Devcon Environmental Products: spill prevention/control brochure, 21:60
- DeVilbiss Ransburg Industrial Coating Equipment Co.: HVLP spray systems, 34:35, 37:42; IGHU-530 spray gun, 37:42; Maximizer HVLP spray gun, 34:35; OMX spray gun, 37:71; profile, 37:71; spray-finishing manuals, 26:54; spray-finishing workshop, 28:54
- Devlin, Sam: *Edward S. Dawson* Sockeye 45 design, 85:10; Design Challenge, 122:24; Godzilla tugboat, 85:10
- Devlin, Sam, author: "Spraying Linear Polyurethanes," 19:12
- Devlin, Sam: Design Challenge, 122:24
- Devlin Designing Boat Builders: CAD/CAM applications, 7:18, 8:35
- De Vries Scheepsbouw (Aalsmeer, Netherlands): composites fabrication of hatches and hatch rings, 132:24; "concurrent painting," 77:52; D. Bonsink Trading Company fairing putty machine, 120:38; pre-preg temperature and cure cycle monitoring, 132:24; profile of, 77:70; in-house composites skills, 132:24
- DeWalt Industrial Tool Co.: cordless drill/driver, 48:86; extra-long, high-speed twist drill bits, 35:58
- DeWalt, Peter: on damage tolerance, 82:4
- Dexter Corp.: Frekote Aquiline GP-100 (water-based), 19:59; Frekote 44NC, 59:76; Frekote polymeric mold-release, 12:27, 13:11; tooling maintenance/troubleshooting video, 25:59
- Dherlin, Roger: on trademarks, 14:4
- Dhows to Deltas*, book by Renato "Sonny" Levi, 165:10
- DIAB: expanding production in foam cores, 62:12; Divinycell core material for flying boats, 154:12; Divinycell H-grade for PVC foam cores, 70:44; Grid Score Thin (GST) core materials, 138:6; International Sandwich Symposium, 102:14; MX 10-8 foam core/strength to weight ratio, 138:6; ProBalsa Plus, 52:30; One Directional Cut (ODC), 138:6; and SP Systems, 61:116, 70:44
- diacetone alcohol (DAA-FRP): non-acetone resin cleaner, 25:59
- diagrams: for electrical and plumbing systems, 132:80
- diamond abrasives. See abrasives, diamond
- diamond-grit saw blades. See saw blades
- Diamond Machining Technology: flat-file sharpener, 19:59; whetstone sharpener, 1:68
- Diamond Saw Works: Sterling saw blades, 12:60
- Diana Yacht Design: megayacht construction/market, 12:50
- diaphragm pumps. See pumps, diaphragm
- Diaship: megayacht construction/market, 12:50
- DiaTrim Tools Ltd.: Diavac dust extractors, 4:58; dust collectors/extractors, 28:38, 28:46, 28:47; Festo air-driven sanders and cutters, 5:26; Portavac dust collector, 34:59
- dibasic ester. See DBE (dibasic ester) solvent
- Dibber: handheld laminating tool, 154:12
- Dickes, Geoff: designer/*Boomer* sportfisherman, 57:110

- DICKEY-john Corp.: Custom Instrumentation Package, 21:60
- Dickson, Dan, author: "Two of the Many," 87:26
- Dickman, Michael W.: on environmental protection (manatee) vs. recreation, 5:7
- dicyclopentadiene. *See* DCPD (dicyclopentadiene)-blended, low-styrene resins
- diesel fuel: asphaltine contamination, 112:100, 115:112, 122:52, 126:30, 172:36; and biocides, 115:112, 122:52, 158:64, 172:36; biofilms/shock rate for, 172:36; compression ignition (CI) principle, 115:112; demulsifiers, 126:30; E-Diesel, 116:28; filters for, 126:30; fuel dyes, 115:112; fuel filters/centrifugal separators, 115:122; fuel polishing system for, 112:100, 115:112, 172:36; grading/cetane measurement of diesel, 115:112; high-pressure injection system, 158:64; high surfactancy fuels test, 158:64; hydro-desulfurization, 158:64; large cylinder vs. small cylinder engines efficiencies, 107:82; microbial proliferation, 172:36; portable ground fuel polishing unit, 122:52; soy-based (biodiesel) production/applications, 34:55; 77:21, 115:112, 116:28; Rudolph Diesel's engine experiments with vegetable oils, 77:21; stabilizers, 122:52, 158:64; storage, 122:52; sulfur content, 115:112, 126:30, 158:64; testing fuel at fill-up time, 172:36; thermal expansion, 87:4, 112:100; ultra-low sulfur #2 diesel/OptiMax/MercuryRacing, 166:64; using borescope and airhose, 172:36; vacuum gauge, 126:30; vent dessicant for spore and water vapor, 122:52; water contamination/bio-contamination, 115:112, 126:30, 158:64; water-in-fuel alarm, 126:30
- diesel heaters: diesel hydronic heater, 141:16; fan-speed control, 141:16; KB 20 furnace/Kabota, 141:16; Scheer, 141:16
- Diesel, Rudolf: replica of 1908 engine/MAN Engines (Nuremberg), 157:26
- diesel waterjet outboard engine: 70:21
- Difede, Rich: Gold Coast Yachts/outourcing, 37:16, 37:18. *See also* Gold Coast Yachts
- differential-scanning calorimeter (DSC): for monitoring cure rate, 14:48
- Digital Technologies (Seattle, WA): Trimble GS200 laser scanner, 99:/shrinkage for exact tooling allowance, 99:20
- digital technology: operating systems, 98:3; and three-cable boat, 97:148
- digitizers. *See* numerically controlled (NC) lofting/cutting equipment
- Dijkstra, Gerard (designer): profile of, 89:50
- Dildelian, Ira: development of woven roving, 38:30
- Dill, Bob: designer/land yacht, 60:11
- DiMateo, Nick: on cored borroms, 51:22
- dimethylaniline (DMA): accelerator for vinyl ester resin, 6:16, 44:30
- dinghies: catamaran with symmetrical hulls/Jerry Burkett, 75:14; nesting dinghy sail kit/Russell Brown/carbon fibre tubes, 165:10; Paper Jet 14/Dudley Dix, 110:26
- dinghies, powered: Healey Marine 75, 173:6; Ski-Master powered dinghy/Donald Healey/Healey Sports Boat, 173:6. *See also* Healey, Donald
- dinghies, sailing: International 14, 134:42, 142:62; International 141 double-trapeze sailing dinghy, 134:42; Laser

- racing dinghy/Bruce Kirby; market for, 6:31; racing/differences/U.K. vs. U.S., 167:72. *See also* sailboat market/industry; sailboats, racing skiffs/daysailers; Bruce Kirby
- DIN-rails: requirements for Recreational Craft Directive/electrical panel breakers, 154:56
- Dinsmore, Dan: on marine wiring, 9:5
- dioxolanone. *See* propylene carbonate (PC)
- direct current. *See* DC electrical systems/equipment
- dispensing pumps/systems: for catalyst/resin, 1:6, 30:57; for putties/adhesives, 31:68; Gougeon Brothers/crank-operated, 76:80; Patriot SSB System/Magnum Venus Plastech, 111:12
- Disposal of End-of-Life Plastic Boats*: publication by the Nordic Council (2013), 160:40
- displacement hulls: conventional displacement hull and performance of hybrid systems experiment, 124:54; deadrise, 58:26; displacement/speed calculations, 8:4, 59:56, 59:57, 61:66, 63:86; dynamic stability, 31:28; for semi-planing cruising powerboat/Neo 41, 151:44; low moment of inertia value/high moment of inertia value, 149:20; monohull vs. surface-effect ship, 65:84; speed/length barrier, 8:4, 29:72, 30:4; rocker/hook, 58:26; station-wagon effect, 39:79; trim angles/squatting, 58:26; wavemaking/resistance, 26:31, 28:6, 29:4, 58:26, 59:56, 60:66; weight/propulsion, 44:38, 59:56
- Di Sesa, David: on Trial By Water and backing high knot boats down, 147:6
- distributed power systems, 97:148, 98:50, 108:34; on Malo Sailing Yacht *Nada*, 119:38; troubleshooting, 119:38
- Ditmore, Stephen: on secondary bonding replacement for carrying high loads in critical areas, 20:4; on lofting/planar sheer, 27:4; on the China trade and skilled boatbuilders, 105:4; on Lake George, NY excursion boat (*Ethan Allen*) loss and U.S. Coast Guard jurisdiction, 101:4; on professional engineer (P.E.) licensure, 72:5; on resin formulations/engineering information, 20:4; on tooling for DuraKore, 16:4
- Ditmore, Stephen, author: "Re-examining the Stem and Stern of the Modern Sailboat," 25:55
- dive boat: Dive Tender 14 skiff/Reuel B. Parker design, 172:52; power catamaran, 59:10; rigid-hull-not-inflatable, 52:12; waterjet-driven, 65:11. *See also* Dive Tender 14, fishing skiff
- Dive Tender 14 skiff with open outboard transom/ Reuel B. Parker design, 172:52
- diversification/sidelines: Admiral Marine/carbon fiber components for aircraft, 51:11; Brownell/boat stands, 22:32; carbon fiber laminates, 58:36, 58:52; Competition Composites, Inc./fabrication parts, 142:8; Composite Engineering, 41:28; Consolidated, 47:34; fabrications for Disney World/Disneyland, 54:18, 60:116; Fabrication Specialities, 56:40; Hood, 33:40; Luke/accessories/hardware, 14:26, 14:32; North End/SCRIMP, 44:35; Padden Creek/shower-tub units, 37:16; at Precision Boat Works, 164:46; Rybovich/accessories/hardware, 14:26, 14:32; at Scully Aluminum Boats, 173:6;

- TPI/exercise pools, 33:36; as survival strategy, 9:13, 12:4, 13:80, 46:72, 47:34, 173:6; trends, 7:17; USWatercraft, 147:38; ZF Marine/gearboxes and transmissions, 134:18
- Divilette: bonding putty (foam cores), 9:36, 9:44, 31:34
- Divinycell (cross-linked/thermoset PVC) foam, for FRP sandwich construction: contour-cutting, 9:36; core material for flying boats, 154:12; for cored bottoms, 51:22, 51:26; core bonding/installation, 9:36; H-grade, 70:44, 142:8; in catamaran configuration, 63:106; megayachts, 1:22, 3:5; for Shearwater power cruiser, 115:162; structural core material, 52:30, 54:62, 142:8
- Dix, Dudley, author: "Adding Water to Windward," 153:52; "Capsize!," 149:20; "One Hull Fits All," 110:26; "Performance Yacht toa Box Rule," 152:16; "The Imaginary-Supplier Scam," 155:80
- Dix, Dudley: Didi Mini Mk3/Didi 950 kit, 152:10; Didi 950 and DidiMini/plumbing for stability, 153:52; Didi 38 design (*Black Cat*)/capsize of, 149:20, 150:4, 153:52; on floating-frame construction/ABS classification, 52:3
- Dixon, Bill (designer): custom carbon/epoxy Baltic 70 sailing Yacht, 85:46
- DMA. See dimethylaniline (DMA)
- Dockstavarvet AB: InterceptorCraft IC-16M 11 R/Petter Hakanson, 167:28
- document- and boat-management proram, 122:52. See also SeaKits.
- Dodge, Horace and John: steam-powered yacht *Delphine II*, 163:14
- Dodge, L.E. (Duffy): profile, 45:3, 97:3
- dodger: patterning/canvaswork, 29:54
- doghouse: turret-style invicta centerboard yawl/Pearson Yachts, 105:56
- dolly, motorized: Power Mover 7000, 15:70
- Dolto, Gregoire: on ISO Standard 12215-9 update, 116:4, 119:4
- Dometic Marine: Breathe Easy air purifier for air conditioning ducts, 132:6, 141:6; SmartStart single-phase compressor motor start-up control for start-up current surge, 132:6; SailVac Compact toilet unit, 132:6; WhisperFan controller/pulse width modulation for smoother electrical current, 135:6
- Donaldson, Sven, author: "Advanced Spray Gun and Small Impregnator," 14:59; "Alternative Antifouling Systems," 7:42; "A Builder's Guide to Watermakers," 66:26; "C&C – Now," 92:60; "Fuel Cells," 69:38; "How and Why Fiberglass Breaks," 13:33; "Inside Catalina Yachts," 35:34; "Polyethylene Powerboats from China and Canada," 11:28; "System Three's 'Environmentally Friendly' Coatings," 22:55; "Tractor Power," 93:20; "Turning A Page in Diesel Technology," 86:74; "The U.S. Sailboat Industry," 30:48; "Vocational Training Vancouver Island Style,," 79:77; "Waterline Yachts," 83:72; "Zodiac-Hurricane Technologies," 48:50
- Donzi Marine: Don Aronow and Allan Brown, 104:100; fuel-flow meters, 26:54; and Walt Walters/Wyn-Mill racer/Donzi 16, 132:36
- Donzi Yachts: line-boring for bolt-on propulsion system (BOSS)/Seatorque, 128:8
- door locks: One Look-One Lock designs/Southco Marine, 112:10
- doors: aluminum/Freeman Marine, 41:62

- Dorado Marine: PT boat-like fiberglass workboat, 74:9
- Dor-Mor: mooring anchor, 30:8, 30:16
- Dorworth, Louis C. (Lou): on laminate repair, 66:78; low-temp pre-pregs, 64:82; non-destructive inspection/phased-array UT, 124:26; pre-pregs workshop, 47:57
- Dorworth, Louis C. (Lou), author: "Why So Steamed?," 60:103
- dory, planing: C-Dory, 23:41; Nexus Marine, 23:37, 23:41
- Dos Santos, Alejandro, author: "The Runner-Up," 109:30
- Double Barrel Marine: jetsprint boats, 57:15
- Dougherty, Bob: designer for Boston Whaler, 2:34, 2:38, 102:96
- Douglas, Gerry: builder profile/Catalina Yachts, 35:34; on interior design/Viking, 6:34, 6:39; on owners' manuals/product-liability litigation, 27:46
- Douglas-fir: marine-grade plywood panels, 16:12, 16:20, 28:8, 40:54, 42:5; prefabricated decking/panels, 11:52, 18:54
- Douglas Marine: designer-builder Peter Hledin/Skater catamaran performance boats, 109:80
- Douglass & McLeod: profile/heated locker for rasins and coatings, 52:81
- Dow Chemical Company/Composites Laboratory: Derakane epoxy vinyl ester resin/DCPD laminate repairs, 52:67; Derakane epoxy vinyl ester resin/SCRIMP additives, 44:30; Rovel plastic, 34:59; styrene emissions study/test enclosure, 40:17, 41:5; vinyl ester fabrication manual, 44:36
- Dowco Marine: custom-made covers and biminis, 116:10
- Dowie, Chris: Design Challenge, 129:18
- Downs-Honey, Richard: developments in UV-cured pre-pregs, 131:28; High Modulus/New Zealand advanced composites supplier/engineer, 55:58, 121:100, 158:54; laminate samples/preparing suitable test specimens/What to Test, 158:54
- Downs-Honey, Richard, author: "The China Trade: The Completely Kitted Composite Boat," 103:104; "Exploring the Options, Part I," 119:50; "Three Case Studies," 120:18; "The Unknowable Lightness of Composites," 142:40; "Wet-pregs vs. Pre-pregs," 55:61
- Dr. LED (Seattle, WA): LED replacements for common marine halogen lights, 115:74
- draft: canoe body/offshore racing yacht classification, 48:9, 50:5
- draft, shallow/shoal: interchangeable keel/Interkeel, 37:66; and surface propellers, 2:52; vs. deep draft, 139:54
- draft marks/freeboard: measuring/stability test, 47:63; measuring tools, 42:32, 4:5
- drag/resistance: air drag, 58:26, 59:56, 67:136; appendage/propeller, 2:52, 58:26, 59:56; appendage/transducer drag 45:29, 58:26; eddy-making, 58:26; induced/triangular sail planform, 55:44; of planing hullform, 55:32, 58:6, 58:26, 59:56, 67:136; residuary drag, 60:66; small-craft data sheets, 58:26, 59:56; and speed prediction, 59:56, 59:57; viscous (friction) drag, 58:26, 59:5, 59:56, 60:66, 74:54, 85:78; viscous (friction) drag/model testing vs. full-scale testing, 58:6, 59:56, 60:66; viscous drag/reduced drag, 85:78; wavemaking/prediction/model-testing, 55:32, 56:26, 58:6, 58:26, 60:66, 74:54.

See *also* planing hulls; resistance, hull; performance prediction

drag/resistance, reduction: depthsounder installation, 45:29; dimpled bottoms/thighs, 57:15, 58:17, 59:5, 60:11; fish-scale/antifouling roughness patterns, 59:5; internally mounted transducer, 45:29; mechanical controls, 29:58; resistance prediction, 55:32, 58:6, 58:26; textured films, 57:88, 60:5

DragonFlyer sailing dinghy, 148:18

Dragon Powerboats: Dragon 39 all-epoxy boat with carbon and Kevlar reinforcements, 92:6

drainage: reducing drainage area requirement calculations, 114:4

drawer slides: Accuride ball-bearing slides, 107:14

drawings/diagrams: for owners' manuals, 27:46. See *also* design drawings/drafting/models

dredging: ship channels/ACE policy, 51:11

Dreyfus, Tom: on woven roving/cored construction, 29:38

drill, air: applications, 33:64

drill bits: auto-reversing tapping head, 60:104; Bullet, 2:70; for cutting sample coupons/plugs, 49:24, 49:25; extra-long, high-speed twist, 35:58; Scorpion Anti-Slip/drywall screws, 15:70

drill press: Delta 32" radial, 11:52; metal-drilling, 48:56

drills: auto-reversing tapping head for, 60:104; DeWalt cordless drill/driver, 48:86; Drill-Mate caulking gun, 13:70; right-angle, 10:52; solid-grip/hammerdrill, 1:68

Drip-Free Packing: stuffing box packing, 29:14, 29:21

driver, pivot: Pivex replaceable-bit, 44:54

drive systems. See propulsion/drive systems

dropcloth: Tape'n Drape, 3:60. See *also* painting supplies

Drott Manufacturing: Marine Travelift acquisition, 57:133

*Drum* (monohull): 62:46

drums, resin/gelcoat/chemical: Barrel Harness, 8:54; containers for (Enviropac), 9:56; Drumroll leak-control system, 26:54; storage/inert-gas cap, 15:13

dryers, air. See air dryers

dryers, hot-air: for drying water-saturated flotation foam, 37:48

dry ice: use for cleaning and removal of contaminants/Cold Jet, 141:6

dry storage. See boat storage, dry-stack

Dubois, Ed, N.A.: obit, 162:12; 12-meter *Victory*, 162:12

du Plessis, Hugo: book *Fibreglass Boats/modular moldings/emergency repairs*, 79:8; on DCPD laminate repairs, 55:5; on English or Metric Units, 103:6; on moisture meters, 66:5; on safety aspects of boats built with modular moldings, 79:8

Du Pont: DBE (dibasic ester), 6:10, 10:8, 10:17, 33:20; development of polyester resin, 38:30; 50P isocyanate-free enamel, 15:70, 19:8; FE 241, 30:60; HFC-134a refrigerant, 16:35; Kevlar cutting/machining manual, 43:54; MP 39 refrigerant, 22:56, 26:8; MP 66 refrigerant, 26:8; Nomex Decore, 51:114, 52:4; R-M 858 compound (for gelcoat), 15:44; R-12 (Freon) refrigerant, 16:35

Du Pont Imaging Systems: Quantum QFT-2 ultrasonic scanner, 17:58

Duckboats: 56:10; safety concerns, 63:10

- Duckworth, Arnie: developer of DuraKore, 15:34; DuFLEX panels, 59:10, 63:162; on smarter, faster tabbing/WOMBAT Junior tape-impregnating machine, 121:9
- Duclos, George: Gladding-Hearn/T-boats, 36:22
- ductile material: vs. brittle/cored bottoms, 51:22, 53:4, 53:40, 55:5, 56:5, 59:104; vs. brittle/metals, 51:56, 53:4, 72:22
- Duffy Electric Boat Company: electric speedboat, 50:11; *Duffy Voyager*, 61:52, 76:60; trial of fuel cell powered water taxi, 75:14
- Duffy Voyager*: wave-piercer, 50:13, 61:52, 76:60
- DuFLEX: balsa-cored composite panels, 59:10, 63:162
- Duggar, Rodney: on video production, 16:22, 22:42, 22:45
- Duke, Bob, author: "The Risky Business of Major Repairs," 57:74; "Slane Marine: Profile of a Small Yard," 57:76
- DUKWs, amphibious vehicle: 56:10; 63:10
- Dumond Chemicals: Peel-Away Marine Safety Strip, 18:54, 31:10, 33:75; Recyclean pressure-washing/vacuum-recovery systems, 33:75
- Duppenthaler, Vic: and Sunbird Yachts (China), 103:72; 128:38
- Duppenthaler, Vic: on blister repairs, 16:42; on bottom prep/environmental compliance, 31:10, 31:16; on diversification/Padden Creek Marine, 37:16; on gelcoat maintenance/restoration, 15:44
- DuraCraft: 69:52
- DuraKore end-grained balsa, strips: costs, 15:34; joining end-to-end, 15:34; *Ocean Surfer*/Dick Newick, 122:40; one-off applications, 1:20, 2:12, 15:34, 34:18, 34:21; print-through/post-curing, 34:18, 34:21; strength/stiffness, 15:34; strip-planked construction, 34:18, 34:21, 77:82; strip-planked construction/tooling, 15:34; tooling for, 16:4; vs. foam core, 15:34. *See also* balsa core (end-grain), in cored/sandwich construction; Baltek Corp.
- Duramold: hot-molding process/*Spruce Goose* wood airplane/Howard Hughes, 151:6
- DuRant, Suzi, author: "Prop Re-Pitching Made Easier," 119:6
- Dura-Skrim: fiber reinforced polyethylene covers and tarps, 155:4. *See also* Hall, Thomas
- Duratec: for plug/high-temp tooling, 59:76; polyester epoxy bondcoat, 49:59, 51:6; sanding/fairing, 59:76; vinyl ester primer, 34:21, 42:59
- Duroboat: interlocked aluminum boats, 4:42
- durometers. *See* Barcol hardness tester; Shore tester
- Dusseldorf Boat Show, 115:128
- dust, fiberglass: controlling, 28:38, 29:4, 84:10, 129:8; definition, 28:39; Dustron booth/J & J Marine, 104:78; and secondary bonding, 20:32; static electricity and, 22:12, 48:86
- dust, wood: controlling/Blovac air gun, 8:54; controlling/Bad Dust Containment Systems, 129:8; exposure limits/1989, 1:30. *See also* dust collectors, for air-driven sanders and cutters; dust-collection/extraction systems
- dust-collection/extraction systems: anti-static gun/Nuclejet, 48:86; benefits/types, 28:38, 28:47, 84:10, 84:10, 87:10; Bad Dust Containment Systems/centrifugal air current, 129:8;



for bottom prep, 31:10; centralized systems, 28:38; Delta Dust Collector/Sweeper, 20:56; Diatrim's heavy-duty air saw trimmer with dust extractor, 84:10; Dustcontrol/Transmatic, 28:38, 28:46, 28:47; exhaust, 28:38; Hutchins Manufacturing Company surface sanding equipment, 85:4; ionizing blow-off guns/The Neutralizer, 129:8; Portavac, 34:59; in Scandinavia, 2:67; separators, 28:38; sources, 28:46, 87:10; for vacuum-bagging, 28:38. *See also* vacuum cleaners/systems; ventilation systems, shop

dust collectors, for air-driven sanders and cutters: AirWall, 13:70; Dust Muzzle, 19:59, 66:5; Festo/Diatrim, 5:26; pollution control, 29:4; Powermatic Artisan 73, 18:54; Sand Trap 73505, 20:56; sources, 87:10; Vacuum Sanding Systems, 20:56

dust control: sanders, 84:10, 87:10; through-the-pad vacuum sanding/Hutchings Manufacturing Co., 85:4

Dustcontrol/Transmatic: dust extractor shrouds, 28:38, 84:10; dust-collection systems, 28:38, 28:46, 28:47, 84:10

dust mask: improved, 3:60

dust, wood: Oneida Air Systems dust collection, 87:10

Dutch Carbon Yachts (Netherlands): D Carbon 36 carbon constructed sailboat, 104:12

Dutch Sea Rescue Organization (KNRM): NH 1816 model rescue boat/Damen Shipyards, 147:10; 149:48

Du Toit Yacht Design (South Africa): expedition power catamaran, 143:10

dye penetrant testing, 111:26; 113:4

Dyena's Acceleration Recorder device, 142:8, 144:80

Dyer 29: center console with cuddy cabin, 82:8

Dykem machinist's dye: for sanding/fairing plug, 59:76

Dykstra Naval Architects: Gerard Dykstra, 89:50, 141:50; *Dream Symphony*/world's largest private sailing yacht, 141:50; *Hetairos*, 219' ketch/Baltic Yachts, 141:50; J-Class Yachts, 141:50, 143:40; never built yachts, 141:50; 152' *Windrose of Amsterdam*/Holland Jachtbouw, 143:40

*Dyna*: welded aluminum yacht and *Morag Mhor*. 86:4

Dynabrade, Inc.: air router with dust extrator/Dark Matter Composites, 144:10; DA pneumatic sander, 33:58, 33:64; Dynaline finishing sander, 42:74; Dynorbital random-orbit wet-sander, 17:58

Dynaloy, Inc.: Dynasolve M-30 solvent replacement, 20:56

dynamic mechanical analysis (DMA) testing: 87:62

dynamic stability. *See* stability, dynamic

Dynamic Stability Systems (DSS): retractable horizontal hydrofoil/shifts lift to leeward, 157:14, 162:52; Dali foils/appendages design, 162:52

dynamometer: composites testing, 48:16, 56:26

Dynamote Corp.: inverter supplier, 25:34, 25:40

Dynaplane Design: model-testing, 160:66; stepped planing boat, 97:164; 116:40

Dynarig: furling system for/Gerard Dijkstra design, 89:50

DynaYacht Inc.: builder profile/DynaFlyer  
40, 47:17; canting ballast/twin foil,  
76:10; merger with Reichel/Pugh, 76:10  
Dynel: applications, 11:5; 85:10

---

**A B C D E F G H I J K L M N**  
**O P Q R S T U V W X Y Z**

---

E and F Corp.: E-Flex 9000 Super Stick  
silicone adhesive/sealant, 13:70  
E-A-R Specialty Composites: IOLOSS HD  
vibration damping/isolation material,  
34:59; noise/vibration bulletin (EB-306),  
26:54; Tufcote sound-absorption  
barriers, 12:60  
East Carolina University: Center for  
Applied Technology/boatbuilding  
association, 21:12  
East Coast Interiors: motoryacht MJM34z  
interior modules, 98:28, 99:52; yacht  
interior components, 97:10, 98:28  
Eastport Yacht Co.: Eastport 32 utility-style  
luxury powerboat, 12:10; twelve boats a  
year business plan, 123:10  
Echlin, Bill: on marketing and publicity, 6:5  
Echtermeyer, Andreas: advanced-  
composites research, 47:57  
ECI: Extender putty delivery/fairing system,  
27:70  
economic development: outsourcing for  
company expansion, 63:29  
economic downturn/recession: advice for  
career continuation/recreational marine  
industry, 124:72, 135:72, 137:4; at  
Bruckmann Yachts, 139:74; business  
strategies for service yards and  
boatbuilders, 121:62, 127:30; at  
Campion Marine, 143:52; financial  
management, 9:13, 11:34, 12:2, 13:26;  
at Cable Marine, 121:62; Dennis C.  
Choate, 126:56; at Gold Coast Yachts,

124:42; at Huckins Yacht Corporation,  
121:62; James Betts, 129:38; at Keefe  
Kaplan Maritime, 121:62;  
marketing/advertising, 7:72, 11:34,  
117:54; R&D/product development,  
45:120; 117:54, 127:4; “Refresh, Not  
Refit”/ Knight & Carver Yacht Yard,  
127:42; retrofitting molds/San Juan  
powerboat/San Juan Composites,  
121:62; at Stingray Boats, 127:30; at  
Trinity Yachts, 121:62; at Westport  
Shipyard/Pacific Mariner, 121:62; at  
Willis Marine, 121:62

economics, impact on marine industry:  
mid-1970s devaluation/embargo  
(American Marine), 19:28; 1980s/90s  
recession, 7:72, 9:13, 11:34, 13:26,  
15:80, 16:4, 19:28, 45:120, 138:3,  
139:74; luxury/sales/use taxes, 4:9,  
12:2, 12:50, 16:4, 18:64, 20:64, 25:3,  
37:66; post-recession composite  
boatbuilding, 123:26, 151:68; and profit  
margins/pleasure boat market, 21:4,  
32:64, 123:72. *See also* taxes,  
luxury/sales/use

Eco-Wolf: Seacast/pourable recycled  
fiberglass, 134:6. *See also* SeaWolf

Eddyline Kayaks: thermoformed  
hulls/Carbonlite 2000 polycarbonate  
acrylic alloy, 60:11

Eddy Products: Mark IV heat gun, 12:60

Edensaw Woods: lumber inventory variety,  
135:6; thirtieth anniversary 151:12

Edey & Duff: 27' guide fisherman, 3:11

Edinger, Bill: on reverse-osmosis  
watermakers, 68:5

Edmund Scientific:  
borescopes/fiberscopes, 35:42

Edorado Marine (Amsterdam) 8S runabout  
with retractable foils and electric inboard  
propulsion system, 173:34

EDS: Unigraphics parametric CAD system, 40:42

Edson AnBar: patternmaking/custom castings, 42:46

Edson International: Anbar Foundry acquisition, 158:18; Bone Dry 120 high-capacity diaphragm pumps, 44:54; bronze spline weights for drafting and lofting, 97:10; new 15<sup>th</sup> anniversary catalog, 114:10; gallon-a-stroke manual diaphragm pump, 158:18; Green Team environmental awareness program, 24:58, 38:51; Model 282 Pump-Out Cart, 29:58; NavCom tower for FLIR thermal-imaging night vision equipment, 113:10; pumpout boat service/equipment, 158:18; radial-drive steering system, 158:18; wormgear steering systems, 158:18

Edson, Jacob: founder of Edson International, 158:18

education: Advanced Composites Training Facility/Andre Cocquyt, 110:12; Batten College of Engineering & Technology, 110:12; The Boat School (Eastport, ME), 112:10; 137:12; boatyard management, 22:51, 35:25, 35:30, 35:31, 35:52; 47:57, 50:11, 64:112, 94:3; composites/composites engineering, 41:58, 42:5, 47:57, 58:104, 59:10; 110:12; Educational Tall Ship (ETS)/*Matthew Turner* brigantine, 157:14; electrical systems, 54:32; engine mechanics, 57:15; environmental, 20:8, 24:58, 31:16, 35:25, 35:52; Marine Service Technician (MST) apprenticeship/Canada, 169:136; Marine Training and Education Center (NC), 105:12; naval architecture/marine engineering programs/Webb Institute, 76:36, 101:106; no “magic

formula”/internet forums, 130:80; need for apprenticeship programs, 166:64, 169:136; Old Dominion University/Naval Architecture and Marine Engineering Certification, 110:12; providing opportunities for apprenticeship programs, 162:12, 169:136; sailing/PACT 95, 31:62; state-of-the-art education/MAN Engine Academy, 157:26; surveying, 37:80; traditional skills, 94:3, 130:80; Yacht Design Institute correspondence course, 101:106. See *also* apprenticeship programs; training, of employees; training, vocational

Edward’s Boatyard: yard boat, 42:34

Efficient Spray Technology: SATA HLVP Jet 95 sprayer, 37:42; SATA HVLP paint system/air-fed mask, 23:54

Eggerts, Fritz: on mold release, 12:27

Egg Harbor Yachts: outsourcing/laminate kits, 35:58; acquisition of Predator Custom Yachts, 87:16, 102:86; Egg Harbor 37 lobsterboat, 102:86

Egret Boat Company: Egret Offshore boat, 71:6

Eichinger, Chuck: on jet boat design, 36:50

EIFO (Easily Identified Flying Object): carbon fiber racing trimaran/Hydrosail, 75:14

Eikenberry, Peter D., Sr.: on reverse-label makers for affixing HINs, 60:5; on professional engineer (p.e.) licensure, 102:4

Eiland, Brian: on diesel electric technology/permanent-magnet DC motors, 144:4; on radical custom sportfishermen boats, 103:6

Ek, William J. (“Bill”): recreational boat companies/sales and marketing/obit for, 158:8

Ekelmann, Tom: on lightweight, reliable diesel engines vs. larger HP-per-ton types, 126:6

Elan Marine (Slovenia): Elan Power 35 boat, 85:10

ELCI (equipment leakage circuit interrupter), 117:18, 171:76; faults/test kits/Blue Sea Systems, 164:12

Elco: 24' electric launch, 3:11; electric launch replicas, 18:20; electric motor repowering, 135:6, 137:6; EP-1200 three-phase AC motor, 135:6; interior design, 6:34; wooden runabout replicas, 18:20

electrical appliances, AC: battery charging, 19:50, 39:56; grounding, 30:38, 30:44; maintenance manual, 43:83. *See also* electrical loads

electrical appliances, DC: maintenance manual, 43:83. *See also* DC systems/equipment; electrical loads

electrical cables: arcing faults, 134:54; excess wire lengths, 152:58; equipment leakage circuit interceptor (ELCI)/residual current devices (RCDs/tripping, 164:12; ELCI Field Test Kit/Blue Sea Systems, 164:12; fire-resistant cables/Belden Next Generation, 109:17; Molex, 156:4; protective boot for DC positive feed wire to starter motor, 152:58; sizing/safety standards, 35:18, 35:19, 35:23, 37:4, 38:4, 66:38, 70:35; sizing/AWG vs. AWG, 37:4; stray-current corrosion/prevention, 33:28, 94:84, 134:54; tinned cable, 82:58, 134:54, 135:4, 138:3, 139:5; thermoset vs. thermoplastic insulation, 55:99; untinned wire, 138:3; wire splices/crimping, 134:54; wiring/overcurrent protection, 36:41, 38:4, 57:48, 94:84, 135:4, 138:3.

*See also* battery cables; cable sheathing; cable ties; grounding; wire/cable, marine

electrical fires. *See* fires, electrical

electrical loads: battery selection, 18:44, 18:47, 111:82; DC-to-AC inverters, 25:30, 25:38, 39:56, 57:100; genset selection/installation, 37:26. *See also* electrical appliances

electrical panels: AC vs. DC, 8:12; Cantilupi designed and built (Viareggio, Italy), 108:62; location, 11:9; outsourcing, 37:16, 82:40; *Palawan*, 82:40; waterproof/Newmar Seaproof, 45:105; wiring considerations, 8:12, 70:35, 82:40

electrical power: actual cost of, 120:52

electrical service: for machine shop, 48:56

electric shock:  
causes/prevention/grounding, 30:34, 94:84; marina swimming death/cause of, 94:84; silicone rubber for sealing electrical connections, 104:4

electrical systems: 1990s retrospective, 60:27; bilge pump wiring, 57:48; bus bars, 36:44, 38:51, 64:5, 134:54; bus bars/high-current/shop-made vs. manufactured, 59:21, 62:7; cranking circuit/slow-blow fuse, 134:54; Controller Area Network (CAN), 99:82; Digital Signal Rocker Switch/Cole Hersee Co., 86:14; digital switching electrical systems, 105:78, 131:46; drip loops, 134:54; efficiency challenge, 28:54, 66:38; electrical installation mistakes, 134:54, 152:58; electromagnetic radiation, 91:56; EmpirBus, 99:82, 105:78, 108:34, 131:46; E-Plex circuit board, 99:62, 99:82; E-Plex networking system, 105:78; fail-safe, 62:3, 62:7, 64:5; ground fault leakage/detection/ELCI,

171:76; grounding, 33:4, 33:28, 70:35, 94:84, 98:4, 100:56; high-output alternators, 134:54; inspection of for long-term storage, 122:52; integration/power distribution, 57:100, 105:78, 108:34; isolation transformer, 98:4, 104:30; lightning protection systems for, 43:64, 66:38; overcurrent protection, 57:48, 66:38, 100:56, 104:30, 134:54; remote switching of loads, 99:82; Seaplex at Sealine (U.K.), 99:84; standards for in global marketplace, 75:22; stray-current corrosion, 33:36, 33:28, 66:38, 105:96; systems complexity/design-and-installation audit, 59:21, 66:38; systems manual, 43:83; systems training/certification, 54:32, 57:98, 57:99, 57:100; through a surveyor's eyes, 66:38, 70:35; troubleshooting/diagnostic devices, 91:56; types of terminal connectors on DIN rails, 163:14; U.S. and European wiring oversights, 152:58. *See also* AC/shore-power electrical system; alternator, high-output; batteries, marine; battery charging systems; circuit breakers; DC electrical systems/equipment; electrical appliances; electrical loads; electrical panels; galvanic isolators; generators/gensets; inverters, DC-to-AC; isolation transformers; regulators; solar power; wind turbines/generators/blades; wiring, marine

electric boats: electric-powered water taxi/Duffy Electric Boats/Mangia Onda, 80:12; Canadian Electric Boat Co./Quietude 156/Fantail 217/Bruce 22, 165:10; electric propulsion luxury

barge/Vripack, 135:6; fuel cost comparisons, 77:82; launches/Black Duck Boat Works, 43:17; launches/Clearwater Electric Boats, 43:17, 77:82; launches/replicas/Elco, 3:11, 18:20; launches/Stephens, Waring, & White, 124:12; propeller generating electricity/"regeneration," 109:140, 118:40, 135:6; *Snap Dragon*, Charger 40 prototype, 77:82; 30-passenger ferry/La Rochelle, France/AlternativesEnergies (Alt.En), 122:12; water taxi/DCH Technology, 75:14

Electric Yacht: repower option for sailboats/QuietTorque, 135:6

electrician: certification program, 54:32

Electric Marine Propulsion: catamaran solar panels, 120:52; marine hybrid development, 127:30

electric propulsion system: 69:52; E Fusion all-electric outboard/ReGen Nautic/Campion Marine, 143:52; MasterVolt PodMaster for Watch Hill 15 daysailer/Artisan Boatworks, 137:6

electrochemical decomposition. *See* corrosion, galvanic

electrochromic coatings: on "smart" composites, 46:45

electrochromatic glass, 131:54. *See also* I-Shades.

electro-coagulation treatment system: at Keef Kaplan Maritime service yard, 140:18

electronic-control (EC) engines: 65:106

electronic management systems (EMS): for marine diesels, 14:34, 14:38, 60:11, 65:106, 67:5

electronic monitor displays: Beyer Electronics' sun-readable displays, 118:8

- electronic temperature measurement. See  
a/so thermocouples.
- electronics: components/catalog interface  
data, 47:80, 49:4; controller area  
network (CAN), 156:24; wireless local  
area networks (WLANS), 154:24; See  
a/so navigation instruments/systems
- electronics: options/systems, 87:46
- elevator: for wheelchair-accessible yacht,  
57:15
- Eley, Don, author: "Critical Mass," 108:62
- Elgin outboard motors, 121:9
- Eliasson, Rolf: 2006 International  
Sandwich Symposium/DIAB, 102:14;  
Design Challenge, 121:42, 122:24,  
127:20
- Eliasson, Rolf, author: "STIX," 81:128;  
"Case Study," 104:42
- Elling E4 motoryacht: Neptune Marine  
Shipbuilding publicity run to meet EU  
Category A ocean classification, 156:12
- Elling Yachts: E4 motoryacht/capable of  
360° rollover/Frank Mulder, designer,  
158:54; hydraulic pivoting mast, 158:54;  
profile of, 158:54
- Elliot, Henry: cored parts, 136:56;  
profile/advanced composites, 56:40;  
profile/advanced composites/*Cogito*,  
39:3, 39:30, 47:57; on fabric  
impregnators, 5:34, 39:3; honeycomb  
cores/sheet adhesive, 36:78; on  
integrating carbon fiber skin plies, 61:34;  
and Composites Technology Program at  
IYRS, 136:10; on post-curing, 14:45,  
14:48
- Elliot, Henry, author: "Advanced  
Composites in a Simple Shop," 39:30;  
"Adventures in Cheap Tooling," 59:76,  
60:96; "Fixing *Young America*," 65:66;  
"A Ron Jones Retrospective," 56:40;  
"The *Seahorse* Sandwich-Failures  
Debate," 43:96; "Switching to Pre-  
Pregs," 63:151; "Urethane Gelcoats for  
Epoxy Laminates," 49:60
- Elliot Bay Boatworks: steam launch  
replicas, 18:20
- Elliott Bay Design Group: 3D structural  
model of Moloka'i Strait MS75 *Hercules*  
vessel, 114:20
- Elliot Corporation: WebCore, 52:30
- Elliott, Bill: builder profile/Bay Ship & Yacht  
Company, 20:8, 21:38; on estimating,  
21:38
- Elliott Associates: honeycomb core  
installation, 36:78
- Elliott Bay Design Group: CAD/CAM  
applications, 7:18; CAL/NCC integration,  
38:38, 38:47; kit boats/3-D CAD models,  
40:24
- Ellis Boat Company: Ellis 36 Express  
cruiser, 67:70; UltraJet waterjets, 67:70
- Ellis, Mark: and Mark  
Bruckmann/Bruckmann Yachts, 139:74;  
Abaco 40, 147:10; Niagara 35 and 42  
designs, 138:32; designer/Nonsuch  
30/free-standing masts, 55:46; 24'  
Limestone/molded integral grid system,  
46:28, 138:32; developing new boating  
niche market, 138:32; pilothouse  
model/motorsailer, 139:74; single-  
engine deep Vs, 138:32
- Ellsworth, Robert: on fuel-injected gas  
engines, 12:4
- Elsevier Advanced Technology: *Data Book  
of Thermoset Resins for Composites*,  
25:59
- Elsherif, Moustafa: drafting of Rule 1162,  
26:34
- Elvstrom, Paul: author of book *Expert  
Dinghy and Keelboat Racing/Paul  
Elvstrom Explains the Yacht Racing*

*Rules*, 166:14; obit for/Danish sailor, designer, sail-maker, 166:14

Emarine Training program: and *Professional BoatBuilder* magazine, 96:6

emergency craft: The Clam, folding-rigid inflatable boat (FRIB), 71:6

emergency flotation system: Yachtsaver II, 13:70

Emerson Industrial Automation: diesel-electric propulsion system for 150' aluminum motoryacht, 164:12

Emglo Products Corp.: single-phase compressor, 33:58

emissions: diurnal emissions  
control/phase-in, 121:72; evaporative emissions rule, 121:72; charcoal absorption system for small shop, 73:26, 28; European Union and allowable carbon dioxide emissions, 158:88; for recreational vessels, 157:40; IMO compliance deadline, 157:40; implementation of IMO Tier 3/EPA Tier 4 and phase-in, 157:40; Marine Engine Testing and Emissions Laboratory testing/Maine Maritime Academy, 161:8; nitrogen oxides, 157:40, 158:88, 161:8; selective catalytic reduction, 157:40; test cycles within ISO 8178-4 and CFR Title 4, 157:40; urea/conversion for nitrogen oxide emissions, 157:40; Volkswagen diesel cars/emissions software rigging, 158:88; -emission solutions/Alternatives Energies (Alt.En), 144:10. *See also* fumes, removal.

EMMA (easily manipulated mechanical arm), 118:16

Empacher, Dieter: *Comet*, retro commuter, 97:82; design ratios  
booklet/*Understanding Your Boat Using Design Ratios* booklet, 51:11; 70'

center-cockpit ocean cruiser/Brooklin Boat Yard, 84:36

EmpirBus, 97:148; 98:50; NMEA 2000 switchover, 131:46; multifunction navigation devices, 131:46

employees. *See* work force (employees)

emulsifiers. *See* resin emulsifiers/cleaners

Encompix: materials requirements planning system software, 96: 52

Endeavor Catamaran Corp.: offering sea stainer, 61:115

*Endeavour*, J-class sloop: Gerard Dijkstra & Partners, 89:50

endless shelf life: EcoPoxy resin, 123:10

end-of-life boats, 111:12; *MDV-1 Immanuel* Dutch fishing vessel/steel over composites, 170:10

engine beds: fiberglass boat recommended dimensions for, 72:46; problems with hollow aluminum, 72:46; rebuild of 1965-vintage Chris-Craft, 156:54; steel I-beam vs. aluminum, 46:16

engine chuck: high-precision, 5:58

engine cleaner/degreaser: Super Clean, 38:55

Engine Connection, The: remanufactured gas engines, 44:54

engine-control systems, electronic: Micro Commander, 1:68; Volvo/smaller engines, 57:15

engine-control systems, mechanical (push/pull): wire chases/dragging tools, 28:14, 30:4; Solo low-drag control cable, 29:58

engineer. *See* designer/naval architect/engineer, profession/responsibility

engineered wood. *See* hardboard substrate

engineering. *See* design/engineering considerations/parameters;

designer/naval architect/engineer, profession/responsibility  
 engineering consultants. See International Marine Consulting Associates  
 Engineering Plastics, Inc.: custom-engineered plastic components, 35:58  
 engine exhausts: back-pressure/horsepower ratings, 59:56, 89:66; maintenance/corrosion, 45:5, 45:32; exhaust gas bubbles ascension rate device/ Kiko Villalon, 114:94; mufflers/silencers, 37:26, 43:44, 43:75, 46:5; noise/vibration reduction, 34:22, 34:27, 35:4, 43:75; in sizing/ventilation/layout, 37:26, 112:48; smoke/station-wagon effect/carbon monoxide, 39:79, 39:90, 43:44, 45:5, 45:32, 51:6, 114:94, 115:18; sportfishermen, 1:22, 1:28. See also engine exhaust system, dry; engine exhaust system, wet; exhaust hose; mufflers/silencers; piping, engine; vibration control, engine/propeller  
 engine exhaust system, dry: exhaust hose, 43:44; installations, 37:26, 43:44, 135:6; resilient mounts/noise isolation for, 114:4; stainless steel dry exhaust/removable risers/*Diamond A* yacht, 135:6  
 engine exhaust system, wet (water-cooled): above-water bypass, 37:26; ABYC standards for, 170:60; advantages/installations, 43:44, 46:5, 90:13; 135:6; Boesch V8/water spray blade, 143:10; carbon monoxide/exhaust line maintenance/corrosion, 43:44, 45:5, 45:32, 51:6, 107:94, 170:60; comparison/detailed with wet exhaust systems, 112:48; cooling-water supply indicators/flow detectors, 45:5, 46:5;

drowned engine, 48:4; drystack configuration, 112:48; drystack exhaust pumps, 112:48; engine and generator manufacturers' guidelines for, 170:60; exhaust hose/back-pressure, 43:44, 48:4, 90:34, 107:94; exhaust hose/clamping, 49:16, 51:6; exhaust hose/leaks, 46:5; exhaust loops, 46:5, 90:34, 160:80; fire prevention, 43:44; fire resistant paint for, 112:48; formula for waterlock mufflers/Wayne Combridge, 91:10; idle-bypass line, 90:34; Oncology super alloy, 170:60; jacketed and dry risers, 170:60; manifolds and risers, 46:5, 89:66, 170:60; mixing elbow, 170:60; mufflers/silencers, 43:44, 45:47, 46:5, 143:10; rumrunner covers, 89:66; siphon break/vacuum breaker, 43:44, 170:60; temperature alarm, 46:5, 170:60; testing, 45:47; waterlift mufflers, 89:66, 90:34, 107:94, 170:60; wrapping exhaust pipe, 112:48, 170:60; underwater nacelles, 90:34; watersep mufflers, 90:34;  
 engine management systems. See engine-control systems, electronic; engines, computer applications; engines, marine, diesel; engines, marine, gas  
 Engine Management Systems, Inc.: gas inboard engines/electronic controls, 17:44  
 engine-monitoring software: SmartEngine, 45:105  
 engine mounts: all-attitude, 13:70; Aquadrive/Fluidlastic, 38:55, 72:46; carbon-fiber reinforcements, 28:18; 8-way Adjustable Engine Mount/Mastry Engine Center, 89:8; self-locking patch for, 35:58; and shaft seals, 32:4



engine mounts, resilient: early/Luders, 36:4; installation, 34:22, 34:26; for reducing noise/vibration, 5:42, 34:22, 34:26, 34:27, 36:4; suppliers, 34:27. *See also* vibration control, engine/propeller

engine oil: changing/Reverso pump oil-change system, 40:66; bypass filter system/manufacturers, 144:24; centrifuge oil filter systems, 146:4; coking/sulfation, 144:24; crankcase oil/engine storage, 122:52; dissecting oil filters, 143:62; field oil analysis tool, 144:24; oil analysis/prediction, avoidance for mechanical failures, 143:62; oil analysis program offer/Volvo Penta of the Americas, 149:10; oil cooler, 85:130; oil sampling valve, 143:62; permanent filters, 49:79; purifier, 3:60; puraDYN bypass filter heater, 144:24; synthetic oil, 144:24; synthetic oil change intervals, 144:24; ZDDP additive, 143:63, 144:4

engineroom fires, 137:22

engineroom layout: accessibility  
allowances for/good vs. poor layout, 124:32; batteries/charging, 39:56; design/construction/Rybovich, 25:42; Boat Engine Integration Center/services for design layout, 115:32; design/long-range cruiser/Sparkman & Stephens, 59:44; design/size/layout, 37:26, 37:30, 37:34, 46:16, 165:48; fixed fire extinguishing systems, 125:24, 137:22; Integral Engineroom Cooling & Ventilation System/Vripack designed yachts, 108:44; moisture reduction in engine room, 165:48; stand-up headroom on N59C Coastal Pilot/Nordhvn Yachts, 165:48;

temperature in, 145:56; ventilation control system, 137:34

engines, marine, CNG (compressed natural gas) fueled: Honda, 44:49; repowering of 33 Bertram/diesel vs. gasoline engine, 116:80

engines, marine, combined diesel and gas turbine (CODAG): horsepower ratings/speed prediction, 59:56

engines, marine, computer applications: diagnostics/performance software, 13:38, 14:34, 14:38, 20:8, 45:105, 54:62; electronic fuel injection (EFI), 11:52, 12:4, 14:34, 36:46; engine management systems, 14:34, 14:38, 162:96; over-reliance on electronic computer-generated data, 162:96; pre-purchase engine surveys, 162:96; SmartEngine engine-monitoring software, 45:105. *See also* engine-control systems

engines, marine, cruise control: for ski boats/Correct Craft, 54:18

engines, marine, diesel: ABS/LR classification, 39:80; Atlas Imperial engine/1890s-vintage tug *Elmore*, 150:50; biodiesel soy-based fuel, 34:55; bolt-on transom bracket/Yanmar, 133:12; bonding systems, 33:28; Caterpillar, 14:34; Caterpillar 3500C series ACERT makeover, 95:6; Cobra sterndrive, 14:34; control-station design/layout, 48:66, 48:79; Cummins, 14:34; Cummins MerCruiser Quantum, 90:13, 111:42; Detroit Diesel, 12:50, 67:5, 126:6; diagnostics/borescope, 35:42; diagnostics/Wyman's formula, 54:96, 55:5, 57:7; diesel outboard reliability and efficiency, 151:128; digital diagnostics/repair, 14:34, 14:38, 20:8; double-level steel rail system for heavy

engine removal/Ken Priest, 168:28; drowned/salvaging, 43:52, 46:5, 47:5, 48:4; DSI (diesel park ignition) 3-liter two-stroke outboard, 166:64; early engines/first true diesel engines, 167:54; early German and French diesel-engine submarines, 157:26; electronic management systems (EMS), 14:34, 14:38, 17:52, 20:8, 57:15, 67:5; engine-cranking battery, 39:56; extraction of broken V-8 marine diesel from motoryacht/Front Street Shipyard, 168:28; fuel consumption/efficiency, 44:38, 44:43, 49:8, 53:28, 59:56, 95:6, 151:128; ; fuel-flow meters, 26:54; high-speed four stroke engines/commercial/recreational, 157:26; horsepower ratings/speed prediction, 59:56; injectors, 47:5; low-polluting, 27:61, 95:6; Lugger four-cycle, 11:52; for megayachts, 12:50; Man Engines and RDI Marine, 157:26; MerCruiser D-Tronic V-8, 60:11; Mermaid Turbo-four, 15:70; MTU, 14:34, 14:38, 95:6; Murray & Tregurtha (M&T) diesel outboards, 151:128; noise/vibration control/engine mounts, 34:22, 34:26, 34:27, 35:58, 38:55; noise/vibration control/soundproofing, 5:42, 5:49, 17:19, 53:28, 70:21, 109:140; OMC, 14:34; OptiMax/Mercury Racing, 111:42, 166:64; power/propulsion analysis/efficiency, 44:38, 49:8, 53:28, 54:96, 59:56, 70:21. 126:6, 150:50; power vs. structure/offshore powerboats, 49:54, 126:6; propeller matching, 46:52; Rand Cam/leading-edge, 57:88; raw-water hoses, 49:16; replacement parts, 22:56; sailboat auxiliary, 2:70; Seatek 600-hp, 13:70; Seatek 1,100-hp, 46:38, 46:43;

for sportfishermen, 1:22, 1:28; Star Powr, 9:56; station-wagon effect/carbon monoxide, 39:79, 39:90, 43:44, 45:32; Steyr-Daimler-Puch (SDP), 14:34; Steyr Motors 256 Monoblock, 90:13; TorqueBoost idea/Nigel Calder, 150:50; turbocharged, 17:44, 46:38, 46:43, 46:52, 49:54, 60:11; Universal M3-20 (gas Atomic-4 replacement), 2:70; valve stem failure, 52:4; vane-restraint technology, 57:88; Volvo Penta Duoprop (turbo), 34:55; warranty repairs/provisions, 22:56, 35:8; weight reduction, 53:28. See *also* engine-control systems; instruments/instrument panel; noise/vibration control; performance prediction; propeller shaft/drive shaft; propulsion/drive systems; speed, estimating engines, marine, drive systems. See propulsion/drive systems engines, marine, fuel efficiency: and environment/marketing, 15:80, 16:4; of diesels, 44:38, 49:8, 53:28, 59:56, 86:74; of gas engines, 44:38, 49:8, 59:56, 92:68; of inboards, 17:44, 92:68; KAD 44 diesel I/O for Monaro planing hull boat, 140:4; monitoring software/SmartEngine, 45:105; multispeed gearbox vs. big propeller, 158:4; propellers and, 46:5, 46:52, 59:56, 80:76; SES hullform, 48:6; Stolkraft hullform, 49:42, 58:6. See *also* propellers; propulsion/drive systems engines, marine, gas: Atomic Four/diesel replacement, 2:70; carbon monoxide/exhaust systems, 43:44, 45:32; charging/induction, 17:44; cooling systems, 17:44, 111:66; Crusader 350XL inboard, 22:55; drowned/salvaging, 43:52; emissions

reduction, 17:44; engine management systems/electronic fuel injection (EFI), 11:52, 12:4, 17:44, 17:52, 36:46; ethanol/E85 bullet/Outerlimits Offshore Powerboats, 133:60; ethanol fuel additive, 102:24, 26, 109:6; fuel-flow meters, 26:54; Honda four-stroke fuel-injected outboard, 22:56; horsepower/propulsion analysis/efficiency, 44:38, 49:8, 59:56, 158:4; horsepower ratings/speed prediction, 59:56; Indmar 285 V-8, 14:57; marinized aircraft engine, 3:60; Mazda fuel-injected, 12:4; noise/vibration control, 5:42, 5:48, 43:75; for personal watercraft, 5:26, 43:75; Pro Boss, 16:52; remanufactured/Engine Connection, 44:54; sources, 17:56; supercharged, 17:44; turbocharged and intercooler OXE diesel, 166:64; Whipple superchargers, 133:60; Yamaha sterndrive, 6:52; warranty repairs/provisions, 35:8. *See also* engine-control systems; engine mounts; propulsion/drive systems

engines, marine, inboard: bonding systems, 33:28; ceramic pistons, 92:68; cooling systems/ventilation/installation, 37:26; flooding/salvaging, 43:44; fuel efficiency, 17:44, 92:68; noise/vibration control (engine mounts), 34:22, 34:26, 34:27, 35:58; twin-screw rudder installation, 45:96, 54:62; wet exhausts, 43:44, 89:66

engines, marine, installation/layout: bedding/alignment, 29:14; accessibility, 108:4, 109:6; bed/support/stringers, 37:26; engineroom design/layout, 25:42, 37:26, 37:30, 37:34, 46:16, 59:44; forward location, 51:96; installing a

hatch cut-out for accessing engine, 106:34, 36; and propeller-shaft stuffing box, 29:14; weight reduction in, 64:52. *See also* engineroom, layout; engines, marine, noise/vibration control

engines, marine, magnetic levitation (maglev) technology: development of, 59:56;

engines, marine, noise/vibration control: damping material/IOLOSS HD, 34:59; damping materials/propeller, 5:42; damping materials vs. noise-reducing laminates, 32:4; engine mounts, 5:42, 13:70, 28:18, 32:4, 34:22, 34:26, 34:27, 35:58, 36:4, 38:55; soundproofing, 5:42, 5:49; for surface drives, 2:52; turbo silencer/Navy specwar, 52:43; bration isolators/damping systems, 5:42, 34:59, 35:4, 38:55. *See also* engine mounts; noise pollution; noise/vibration control; soundproofing insulation

engines, marine, outboard: acoustic/performance testing, 52:43; grounding/bonding systems, 23:4, 33:28; high-performance propellers for, 48:86; Honda fuel-injected, 22:56; Mariner/specwar, 52:43; mufflers/silencers/boat-noise control, 43:75

engines, marine, steam: Rankine-cycle/silent/multi-fuel capability/Harry Schoell, 160:16; *Titanic*, 53:12

engines, marine, turbine: horsepower ratings/speed prediction, 59:56; power vs. structure/offshore powerboats, 49:54; Textron-Lycoming TF40B, 12:60. *See also* engines, marine, diesel

engines, marine, twin: 79:128

engine performance: Janelle's PowerMate System/new vs. used engine comparison, 79:48

engine synchronizers: Auto-Sync, 2:70;  
 Electro-Sync, 7:64

England: carbon fiber/production  
 boatbuilding, 58:36; pedal punts, 55:16;  
 RORC debate/cored-sandwich-  
 construction scantlings/offshore racing  
 yachts, 43:96; Royal National Lifeboat  
 Institution (RNLI)/motor lifeboats/carbon  
 fiber, 58:36; 2HO/cored structural  
 laminate, 52:30; Wolfson Unit/University  
 of Southampton (England)/model testing  
 facility, 58:26. *See also* Carbospars Ltd.;  
 Colvic Craft PLC; Irens, Nigel; Pike,  
 Dag; Southampton Yacht Services; SP  
 Systems; Sunseeker International;  
 Vosper Thornycroft; Wise Handling Ltd.

Enholm, Gustaf: on Scandinavian hybrids;  
 Mereth Oy Silver line of boats, 19:4

Englehard Industries/Electrocatalytic:  
 galvanic isolators, 41:21

ENP (Estaleiros Navais de Peniche)  
 Shipyard (Portugal): catamaran  
 ferry/Nigel Gee and Associates,  
 designers, 114:10

Entec West: plug-in generator, 7:64

environmental concerns/protection  
 measures: at Campion Marine, 143:52;  
 at Cheoy Lee (China), 103:112;  
 chromated copper arsenate and dock  
 pilings, 109:17; at Edwards Boatyard,  
 MA, 61:10; at Sunbird Yachts (China),  
 103:108; engine emissions reduction,  
 17:44, 86:74; Halon/fire extinguishers,  
 17:4, 21:12, 26:3, 30:60; hurricane  
 salvage, 20:6; vs. marine  
 industry/recreation, 4:18, 5:7, 28:52,  
 60:11;  
 information/education/newsletters/works  
 hops, 31:16, 35:25, 35:52; at Lyman-  
 Morse Boatbuilding, 115:56; oil  
 spills/fires, 39:44; ozone depletion, 2:31,

34:40; plastic films/solid waste (vacu-  
 molding), 31:42, 144:48;  
 refrigeration/Freon (CFCs), 16:35, 17:4,  
 18:4; shrink-wrap, 18:28, 21:12, 33:69,  
 144:48; at Tiara Yachts, 71:52;  
 TimberGuard UV resistant polymer  
 encapsulation for dock pilings, 109:17.  
*See also* air pollution; boatyard waste  
 disposal/reduction/compliance; CFCs;  
 Clean Air Act/Amendments;  
 Environmental Protection Agency  
 (EPA),  
 regulations/guidelines/compliance;  
 Halon; Halon, replacements for; HCFCs;  
 recycling programs; spills, fuel/chemical,  
 cleanup/containment kits; VOC  
 emissions, reduction/compliance; water  
 pollution

Environmental Container Corporation:  
 Enviropac containers (for drums), 9:56;  
 Spill Cleanup Kits, 20:56

environmental control booths: for dust  
 control, 28:38

environmental health: clinics/resources,  
 38:6; illness/allergies, 36:88, 38:6. *See*  
*also* chemical sensitivities/allergies

Environmental Protection Agency (EPA),  
 regulations/guidelines/compliance:  
 acetone, 33:69, 91:96, 115:56; air  
 quality/Clean Air Act/Amendments/VOC  
 emissions, 1:30, 10:8, 20:40, 21:18,  
 33:69, 34:40, 53:73, 60:3, 60:39,  
 66:128, 68:5, 97:200; BACT/New  
 Source Performance Standards (NSPS),  
 10:8, 60:39; CFC-based refrigerant  
 regulation/fines, 26:8; chromated copper  
 arsenate, 109:17; compliance manual,  
 34:59; compliant low-permeation hose,  
 121:72; copper bottom coatings, 7:42;  
 emission limits/convergence EU and  
 US, 157:40; enforcement, 31:18;

environmental workshops, 38:51; EPA 313 environmental audit/calculations, 20:40, 21:18; evaporative emissions rule, 121:72; on HFCF flotation foams, 28:54; *Guide to Pollution Prevention*, 20:8, 27:17, 28:48; jargon, 53:3, 54:5; MACT definition/rulemaking/process changes, 31:3, 34:3, 34:40, 66:128, 68:5, 91:96; (MACT) guidelines/point values and weighted averages, 60:39; paints/marine coatings, 34:40, 42:3; position on zinc anodes, 157:94; proposed evaporative emissions rule, 97:200; renewable fuels tracking system/ethanol, 160:54; styrene emissions/AP-42 calculations, 1:30, 20:40, 21:18, 29:54, 40:17, 45:21, 53:73, 54:112; Title V permits, 33:69, 34:40, 34:59, 39:90, 40:17, 45:21, 53:73; water pollution/runoff, 18:64, 27:8, 29:4, 31:10; *Waste Minimization Opportunity Assessment Manual*, 20:8. *See also* best available control technology (BACT); Clean Air Act/Amendments; maximum achievable control technology (MACT); NAAQS (National Ambient Air Quality Standard) EnviroStrip wheat starch blast media, 154:12

Envision Boats: marine insurance program, 30:54

Epaint: environmentally friendly antifouling paints, 105:106

Epic, Inc.: Novanex moisture meters, 23:42, 23:45, 23:47, 23:49, 35:58

Epifanes: destruction of Aalsmeer, Netherlands, factory, 66:11; nonskid deck coating, 1:68; profile of new plant, 95:6

E-Plex: E-Logic software package, 98:50; touch screen, 97:148

epoxy, hydrophobic: AdTech ES-211/tooling surface coat, 60:96

epoxy adhesives: for cold-molding, 51:36; description/applications, 41:44; for pressure-treated lumber/plywood, 23:50, 27:42. *See also* epoxy resins; pre-pregs *Epoxy Basics* book by Russell Brown, 150:72, 152:4

epoxy-based antifoulants: Epco-Teck 2000, 9:56; POX-E-COP, 7:42, 7:48

epoxy bondcoat/tiecoat: Duratec, 49:59, 51:6

epoxy compound: Redimix gun, 6:52

epoxy foam: expandable two-part epoxy foam/PRO-SET for filling sailboat appendages, 139:18, 140:4; for RTM tooling, 6:52. *See also* epoxy syntactic tooling foam/slurry/putties

epoxy gelcoat/pigmented epoxy: blister prevention, 42:59; in-mold application, 49:59, 51:6; POX-E-GEL, 2:72

epoxy paints/coatings: application, 52:54; ceramic/CeRam-Kote, 54:18; epoxy chromate/aluminum boats, 37:36; in-mold application, 49:59, 51:6; strippers for, 33:75

epoxy primer: amine blush (carbamation), 52:54; applications, 52:54, 53:31; in-mold coating/substrate, 49:59, 51:6, 52:54; water-reducible (System Three WR-155), 22:55

epoxy putty: for bedding flotation foam, 37:48; cure cycles/secondary bonding, 39:27; for repair of plywood-cored deck, 32:44. *See also* epoxy syntactic tooling foam/slurries/putties

epoxy resins: advantages/production building, 42:52, 42:59, 42:62, 53:20, 62:62, 64:82, 69:156, 95:6; 96:6; additives/moisture meters, 60:48; allergic reaction/sensitization, 3:19,

42:62, 45:105; AME 5000, 21:60; amine blush/air inhibition/secondary bonding, 19:44, 19:48, 20:4, 39:27, 70:3, 70:92; amine blush/reduction/removal, 42:59; amines/exposure to, 3:19, 42:62, 45:105, 48:104, 53:40, 55:5, 57:7, 96:36; vs. bio-based “green” resins, 169:88; blister prevention/repairs, 17:11, 51:108; blister protection/fiberglass hulls (POL-E-BOND, POX-E-COP), 2:72, 7:42, 42:59; Bodotox brand, 126:8; with carbon-fiber reinforcements, 28:18, 63:151; casting/hatch base, 21:58; catalyst ratios/temperature/cure cycle, 1:6, 33:46, 33:57, 39:27, 42:62, 43:5, 53:20, 70:44; chopper-gun application, 3:54; costs, 42:52; disposal, 45:105; epoxy laminate/in-mold coatings, 49:59, 51:6, 75:78; epoxy laminate/polyester gelcoat/compatibility, 42:52, 43:5, 44:5, 49:59; G/Flex high-elongation epoxy, 125:36; glass-transition-temperature (T<sub>g</sub>), 34:18, 34:21, 95:16; Gurit 20LV/foaming, 132:50; high-modulus/flat-panel construction, 45:54; high-temp/tooling surface coat, 59:76; high-viscosity/vacuum-bagging, 52:30, 53:20; impregnator applications, 42:52, 75:78, 95:16; with Kevlar reinforcements, 28:18, 42:52, 43:5, 56:61; low-viscosity, 56:61; mixing/metering systems, 42:62, 95:6, 112:88; with peel ply/flat-panel construction, 45:54; with peel ply/secondary vs. primary bonding, 39:27, 75:78; for plywood laminates/flat-panel construction, 45:54, 69:156; post-curing/print-through prevention, 14:45, 14:48, 15:4, 17:11, 34:18, 34:21, 42:52, 53:20, 59:76, 92:60, 95:16; for potting/bonding hardware/fasteners,

15:21, 32:21, 32:44, 36:78; pre-pregs, 24:18, 25:59, 58:36, 64:82; reinforcements for, 42:62, 53:20. 79:114; repairs/delaminated core bond, 9:36, 25:25, 36:34; repairs/secondary bonding, 20:32, 25:25, 36:34, 55:5; repairs/structural bond/surface preparation (single-skin laminates), 43:54, 43:62, 55:5, 69:156; for RTM tooling, 27:34; safety/fabrication manuals/videos, 21:60, 45:105; safety/regulations, 53:40; for single-skin laminates, 43:54, 43:62, 53:20, 69:156; solvents/cleaners for, 42:62; spraying/high-solids, 42:62, 43:5; storage/heated locker, 52:81, 55:5; strength testing, 4:22, 83:84, 125:36; temperature control, 42:52, 42:62; thixotropes for, 42:62; tooling for, 42:52; tropical formulation/two-part, 42:62, 43:5, 75:78, 76:80; vs. vinyl esters, 42:52, 42:62, 53:20, 55:5, 57:7. *See also* Applied Poleramic; epoxy adhesives; epoxy putty; epoxy syntactic tooling foam/slurries/putties; post-curing; resin infusion molding; System Three Resins; vacuum-bagging; WEST SYSTEM products  
 epoxy syntactic tooling  
   foam/slurries/putties: foam core bonding, 9:44, 31:34, 31:39, 33:46, 55:5, 70:92; and print-through, 6:52, 7:50; resin drainout, 33:46; sprayable, 7:50, 83:84; secondary bondline contamination, 39:19; temperature/humidity, 33:46. *See also* putties, syntactic  
 Equipment Engineering: Paint Pig, 8:54  
 Equipment Sales Co.: plasma-arc cutting equipment, 24:34

Erdevicki, Ivan (designer): Erdevicki 64 expedition ketch, 85:10

ergonomics: chair, 34:31, 34:32; hand tools, 37:71; head arrangements, 5:50; helm station, 114:30, 115:36; high-performance seats, 70:66; nav stations, 11:9, 65:33, 115:36. *See also* mock-ups, interior, as sales/design tools

Eric Goetz Custom Sailboats. *See* Goetz Custom Sailboats

Ericson Safety Pump Corporation: Ericson Safety Pump/bilge pump, 40:66, 60:5

ES Manufacturing Inc.: catalog of laminating tools, 25:59

Escalera, Dwight: "Lithium-Ion Batteries: Handle With Care," 136:80

Esposito, Lorenzo: on laminate repair, 66:78; on standardized lab testing, 50:46

Essex Island Marina: three-legged hoist, 36:20

ester oil: lubricant (refrigerator compressor), 16:35

Esthec, composite deck material, 125:20,

estimating/bidding. *See* builder's contracts/estimates/bidding

ETAP Yachting: sailboat/resin-transfer molding, 50:11

Ethernet: advantages over Controller Area Network (CAN) cable system, 98:50

Etsell, Richard W. (Rick): on designers' association, 7:5; on simplified stability/inclining tests, 44:5

Etsell, Richard W. (Rick), author: "CAD/CAM Software Is Improving All the Time," 17:58

Euromere barrier coat: vs Spraycore barrier coat products, 113:4

Europe: blistering problems/repairs, 16:42; cooperative boatbuilding ventures in, 23:4, 26:51; European

Community/European Union, 55:87, 60:82; FRP recycling programs, 60:82; resin-transfer molding in, 26:44; trade exhibition (Marine Equipment Trade Show), 55:3; U.S. and European wiring oversights, 152:58; yacht restorations, 52:12. *See also specific countries*

Europe, exporting to: boat cable standards, 51:69; CE designation/certification, 37:66, 40:62, 41:38, 54:98, 55:87, 154:56; certification process/standards/harmonizing, 27:3, 28:54, 37:66, 40:62, 41:38, 41:43, 46:10, 55:3, 63:38, 66:11, 154:56; composites testing/standards, 34:42, 34:45; homologation, 55:87; ISO certification/standards/process, 28:54, 34:42, 37:34, 41:38, 41:42, 43:17, 48:8, 54:98, 55:87, 154:56; NMMA certification program, 4:9, 15:50, 16:4, 37:66, 40:62, 41:38, 41:41, 43:17, 46:10, 55:87; owners' manuals, 29:4; quest for a single standard. 154:56; sportfishing yacht market, 39:70; yacht classification, 39:80, 39:86, 48:8. *See also* certification; International Standards Organization (ISO) standards

Europe, model-testing facilities. *See* model basins/tank-testing facilities and programs, Europe

Europe: competition in powerboat building trade, 74:96

European Union Directive: on whole body impact and vibration, 142:52

European Union (EU): CE marking/European exports, 129:8, 154:56, 165:48; removal of Categories A to D, 165:48; standards for exporting boats to, 63:38, 81:128, 84:18, 129:72, 142:8; STIX, Stability Index, 81:128; and

Tier 3/Tier 4 limits for emission standards, 157:40

European Union Recreational Craft Directive: the EURCO Guide/manufacturing recreational boats to meet RCD requirements, 160:8; stability standard ISO 12217, 150:88, 154:56

European Watercraft Directive (WCD): revised name for Recreational Craft Directive, 160:8

Eurostyle: interior design, 6:34

Evans, Chris: on designing for production, 2:60; on design mock-ups, 9:28

Evans, Frank: on photo-initiated resins, 18:8, 18:17

Everglades Challenge: Fast Forward Composites/ultralight trimaran *Sizzor*, 173:18; Randy Smyth/trimaran races/using hybrid wing sail, 170:48

Evinrude Motors: direct-inject outboard, 92:68; Elto engine, 92:68; Wisconsin Detachable 2 Hp. Row-boat motor, 92:68; multi-fuel outboard, 121:78

Evolution Company, The: lip-type shaft seal, 29:14, 29:21

excursion boat market: Blount Marine 192-footer, 3:11; business of/Scarano Boatbuilding, 164:22; catamarans, 22:64, 30:48, 45:120, 47:5, 57:15; dinner-cruise/gaming vessels, 36:22; marine trade association, 4:9; NQEA, 63:106; sailing kayaks, 22:64; Scarano day charter fleet, 164:22; Subchapter T boats (small passenger vessels), 36:22; Westport Shipyard 95-footer, 51:11. *See also* ferries; passenger vessels

Exeltech: inverter supplier, 25:34, 25:40

exhaust hose: double-clamping, 51:6; fiberglass, 43:44, 46:5; standards/quality, 49:16, 51:6; wet-

exhaust system/standards/installation, 43:44, 46:5, 49:16

exhaust system. *See* engine exhausts; engine exhaust system, dry; engine exhaust system, wet; mufflers/silencers

Exley, Chris: on sportfishermen tower pod, 104:4

exotherms: “bucket effect,” 108:100; exothermic reaction/cross-linking/catalyst ratios, 1:6, 50:46, 108:100; “the hot hut” fireproof disposal site/Viking Yachts, 131:54; monitoring/photo-curing resins, 18:17; resin shrinkage/open- vs. closed-molding, 45:68, 50:46; resin shrinkage/tooling, 21:50; runaway exotherm/controlled cure, 125:54; specific heat/laminate table/warped panels, 45:68. *See also* resins, curing/exotherm cycle

*Expert Dinghy and Keelboat Racing*, author Paul Elvstrom, 166:14

expert witness: qualifications/rules/testifying as, 47:24, 50:18, 50:20, 50:25, 56:53, 59:89

exporting: to Europe, 41:38, 55:87, 63:38, 129:72

Extend-a-Yacht: American Custom Yachts' custom steel jig for extending hulls, 66:11

extensometer: tensile testing on laminates, 87:62

extrusion molding. *See* coextrusion

*Exxon Valdez*, 127:104

---

A, A B C D E F G H I J K L  
M N O P Q R S T U V W X Y Z

---

fabric, polyester. *See* Trevira polyester fabric

fabric adhesive: Pemco 3011, 10:52



Fabrication Specialties: diversification, 56:40

fabric cleaner: Super Clean, 38:55

fabric flotation collars: Wing Inflatables, 65:97

fabric impregnators (wet-pregs): air-powered impregnating machine/New England Boatworks, 81:110; at Boston Boat Works, 99:52, 99:66, 157:50; automated and overhead systems 62:26, 99:66; compact (Tape Machine), 14:59; controlling resin content, 59:30, 61:34; for high-performance (epoxy/vinyl ester) resins, 39:30, 42:52, 58:36; for Kevlar, 56:61; for one-off construction, 55:58, 55:61, 99:52; for panel layup (fiberglass megayachts), 2:42; photocuring resins with, 18:8; for plug/tooling applications, 59:76, 99:66; for polyester resins, 7:5; portable, 21:60; portable plywood box for, 119:58; for repair laminating, 17:11, 97:174; resin shrinkage with, 32:18; rewinder for, 82:22, 99:52; serrated rollers, 46:16; seven-roller, 10:52; simple/shop-built, 59:76; state-of-the-art impregnator at Boston BoatWorks, 157:50; structural taping with, 55:58; types/applications/techniques, 5:34, 55:58, 61:66; VOC emissions reduction, 5:34. *See also* pre-pregs

fabrics, fiberglass. *See* fiberglass

fabrics/reinforcements

fabrics, marine/upholstery: design mock-ups, 9:28; Nautolex vinyls, 6:52; photorealistic studies, 40:48; performance boat seats/Outerlimits Offshore Powerboats, 133:84; Stamoid Super Light, 34:28, 34:32; Sunbrella, 32:15; UltraSuede, 3:60, 6:34, 6:39. *See also* upholstery/cushions

fabrics, release. *See* Peel Ply/peel ply

fabrics, sailcloth: Vectran, 41:58

fabrics, self-adhesive: Saerfix, 129:8

fabrics, specialty (laminating). *See* carbon fiber; Kevlar; Spectra (polyethylene)

fibers/fabric; Trevira polyester fabric

fabrics, tent: Facilon reinforced-vinyl tent fabric, 19:25

face shields: 3M W-8100 Whitecap II, 7:64; review/sources, 3:19

Facilon: reinforced-vinyl tent fabric, 19:25

Fairey Marine (UK): profile of, 147:64, 151:6; Finn boat, 151:6; Firefly dinghy/Uffa Fox design/hotmolded hull, 147:64, 150:4, 151:6 powerboats, 147:64, 151:6

fairing batten: for compound curves, 28:10

fairing compound: Awl-Fair, 23:54

fairing putties. *See* putties, fairing

fairing problems, prevention of: 67:49

fairing software. *See* computer software, hull design/fairing

fairing techniques: aluminum battens and angle-iron screeds, 77:52; "concurrent" fairing at De Vries Scheepsbouw, 77:52; parametric surface equation/Fairline/1 CAD, 79:8, defensive painting, 52:55. *See also* putties, fairing

fairing tools: foam pad, 60:27; PowerBoard, 24:62; 3M Hookit Rigid Fairing Board, 102:14

Fairline: hull-design software, 7:18, 8:35, 17:58, 79:8; Targa 62 GTO design/Alberto Mancini, 163:14; Version 2.85, 12:60

Fairport Yachts (Fairport, OH): and C&C Yachts, 92:60, 138:6; mold set for semicustom C&C 51, 92:60

fair market value: appraisal of, 85:30; pre-loss value, 85:30

- Falcao, Francisco A.M.: on metric conversions, 69:5
- Falcon Marine/Falcon Maritime Ventures: aluminum fabrication system/convex-curved plating, 24:39; demise/420-passenger catamaran, 57:15
- Falcon Safety Products, Inc.: Push-Button Signal Horn, 7:64
- Falls, Bruce, author: "The Basics of Engine-Control Technology," 17:52
- Falzarana, Jeffrey, author: "What We Know About Porpoising," 31:28
- Family Boatbuilding Week: Alexandria Seaport Foundation and *WoodenBoat* Magazine event, 83:14
- fan: Air Cyclone, 25:59
- Fanello, Guiseppe: C24 metal boat, 133:40; Design Challenge, 129:18. 133:40; *Piero M*, mini-trawler yacht, 129:18;. See *also* Xanthakis, Jannis.
- fans, circulating: operation in high temperature conditions, 81:110
- Faria Marine Instruments: Battery-Condition Monitor, 21:60; Chinese counterfeits, 103:128; "Dress White" instruments/control panel, 11:52
- Farinholt, Ned: on Champion Marine's use of Efusion electric outboard/test boat run, 145:4. See *also* Caouiette, Pierre.
- Faro Arm, computerized measuring device: 78:94; 81:42
- Farr, Bruce (designer): cored Kevlar/S-glass laminate/Baltic 60 yacht, 85:46; Millennium 65, 59:10, 71:70; profile, 61:66; and computer modeling technology, 61:66
- Farr Yacht Design: and *Young America* hull failure, 65:66; boat design for Oracle Racing Inc., 69:13; and finite element analysis (FEA) modeling, 78:29
- Farrell, Barrie: *Boats In My Blood*, autobiography, 164:12
- Farrell, David, Jr., author: "Rules of Evidence for Expert Witnesses," 50:25
- Farrier, Ian: affiliation with Corsair Marine, 172:12; F27 trimaran with folding amas, 172:12; obit for, 172:12; latest work on F22 multihull, 172:12
- Farrow, Paul: Walden Paddlers/kayak market/outsourcing, 37:16
- fasteners: APMHexseal self-sealing fasteners with O-rings, 104:22; bedding/controlling water ingress (flotation foam-filled compartments), 37:48, 69:70, 82:104, 97:130; bedding fasteners and flanges, 86:62; Bolt Fast fatigue analysis software, 104:22; for canvas/Stayput, 11:52; for canvas/Perfix fix and release, 104:22; for carbon fiber laminates/galvanic blistering, 57:30; Click Bond pad mounted units, 104:22; epoxy-potted, 15:21, 32:44, 36:78, 51:36; fine-tuning pilot holes/bores, 86:62; galvanic corrosion/prevention (coatings), 33:28, 60:104, 65:38; for hull-to-deck joints, 60:104, 63:123; INVIS "Invisible" connectors, 104:22; mechanical/joint strength, 51:36; for metal boats, 33:28; Organic Products/torque seal, 113:10; Spiralock's 30-degree wedge ramp, 104:22; Stage 8 retainers for fastener heads, 104:22; structural adhesives for, 18:4, 32:52, 41:44, 69:70, 97:130; Tenax self-locking canvas fasteners, 141:6; thermoplastic materials, 86:62; Threadsize Calculator application, 151:12. See *also specific fastener types*; nails; rivets/riveting; screws *entries*
- fasteners, acrylic-adhesive-mounted: Click Bonds/X-Serts

(adhesives/applications/installation), 18:4, 32:52

fasteners, nuts: Nylok elastic stopnuts/keel fasteners, 38:20; Southco captive nuts/electronics, 41:62

fasteners, removal, tools for: Drill-Out bolt/stud extractor, 46:65; Fuller plug cutter/wood screws, 23:20; Invis magnetic field device for fastening and detaching parts/panels, 79:10; Pivex pivot driver, 44:54; T & L extractor/wood screws, 24:58

fasteners, stainless steel: bolt head markings, 118:52; corrosion of, 15:23, 32:36, 32:41, 38:20, 39:4, 127:84; corrosion prevention/potting in epoxy, 15:21, 32:21, 32:44, 36:78; graphite lubricant for, 39:4; keelbolts/installation, 15:23, 38:20, 39:4, 40:4; keelbolt fasteners/backing plates for, 127:84; and pressure-treated lumber, 91:20; self-tapping screw penetrations and water intrusion, 97:130; stopnuts for, 38:20; thread-locking compounds, 38:20, 39:4, 40:4; titanium, 40:4, 57:30. See *also* fasteners, removal, tools for; fasteners, through-bolts; screws, square-drive; screws, wood, removing/extracting

fasteners, synthetic: nylon nails, 51:36; plastic nails, 9:57, 31:68

fasteners, through-bolts: alternative to (blind fastening/epoxy annulus), 15:21, 118:52; and electrolytic corrosion, 88:46; epoxy-potted (keelbolts), 51:36; epoxy-potted (plywood-cored transoms), 32:44. See *also* fasteners, removal, tools for

fastenings. See fasteners

FastCats Ferry Service: advanced-composite SES high-speed ferry, 75:78

Fast Forward Composites: *Caliente* racing catamaran for wing research, 170:48173:18; development of hybrid wing sail, 170:48; *Eagle* foiling-capable carbon composite catamaran, 173:18; start-up business, 173:18; *Sizzor* ultralight trimaran/ Everglades Challenge, 173:18

Fastmount Ltd.: panel-mounting systems, 104:22; expanded line of concealed attachment systems, 133:12

FastShip: Proteus Engineering surface modeling program, 61:66

fathometer/speed indicator: Bruntons Propellers/ IonGuard sacrificial anode, 115:128; fatigue resistance, of laminates: resin toughness, 28:18, 49:54; resin quality/knitted reinforcements, 29:38; secondary bonding/skin-to-core bonds, 49:54, 70:92, 75:58; standardized testing, 2:42, 4:22, 4:64, 34:42. See *also* carbon fiber, strength/loading/stiffness/impact tolerance; ductile material; laminates, marine

fatigue limits of steel and aluminum, 137:56

Fatula, George: on HVLP spray equipment, 29:8; on respirator use and safety, 16:4

Fatula, George, author: "Increasing Transfer Efficiency with HVLP," 34:35

faucets, marine: Scanmix, 30:60

faux bois finish: John Alden schooner *Summerwind*/GMT Composites, 146:40

FB Design: 66:11; Interceptor 70, 69:13; memoirs (*Progetarre per Vincerre*), 134:36; Jason's Cradle net, 164:34; profile of, 133:84; Nighthawk/stepped hull prototype, 133:84; patented safety rudders, 164:34; Red EPTCesa powerboat, 133:84; 134:36; SAR 60

search and rescue boat, 164:34; STAB hull/inflatable sponsons/guards, 133:84, 134:36; start-up of High-Speed Research Facility, 93:10; Tecno G10/G12 modular seat, 70:66; 3Tab System, 134:36

Fazekas, Amy: on *Young America's* structural design, 64:5

FE 241: Halon replacement, 30:60

Federal Boat Safety Act: vessel defects/safety standards, 39:12; 117:18

Feadship (First Export Association of Dutch Shipbuilders): 63:123; De Vlijt yard, 77:70; and New York Boat Show 1953, 77:70; anti-roll tanks, 93:30; ship motion simulator, 67:13, 77:70, 93:30; stabilizing systems/*Heather II*, 77:70

Feadship motoryacht: restoration/repair of, 63:123

Fearn, Bob: on 100 knots yacht speed prediction, 104:4

Feigenbaum, Stanley: on Whisperprop propulsion system and additional weight, 101:4

Fein Power Tools: angle grinder, 36:78; auto-reversing tapping head, 60:104; dust collectors/extractors, 28:38, 28:46, 28:47; Mini Angle Grinder, 21:60; oscilating caulking cutter, 45:105; portable vacuums, 84:10; triangular sander, 6:52

Felkay, Thomas: on Podcat Catamarans, 133:6

Felker Boat Company: rowing shells, 4:30

Femenia, Jose: licensure exam, 47:24, 86:4

Fenner Manheim: PowerTwist V-belt, 5:58

ferries: advanced composite high-speed, 75:78; aluminum/Hargrave, 43:36; aluminum high-speed, 65:84; fast/catamarans, 45:120, 47:5, 53:12,

57:15, 59:10, 63:106; Madras Ferry test model, 34:45; marine trade association, 4:9; NC cutting applications, 42:74; *Lake Empress*/Austal USA, 90:13; NQEA's high-speed ferries, 63:106; Panamanian passenger ferries/Joe Kitchell, 153:8; *Ranger* and *Patriot* aluminum catamaran ferries/Bruce Marek, 106:22; resistance/power options, 58:26; solar-driven ferry/Alternatives Energies (Alt.En), 144:10; small/T-boats, 36:22; stability, 42:26, 65:102; transport, 36:33; trimaran ferry hull/North West Bay Ships, 95:6; 48' water taxi, 4:30; yacht hull, 40:24. See also catamarans, power; commercial vessels; excursion boat market

ferrocement boatbuilding: Allan Vaitses, 71:99; *Boatbuilding With Steel*/Gilbert Klingel, 83:3

Ferro Corporation/Industries: Crystic CopperClad, 2:12, 7:42, 7:48, 17:58; Glas Coat, 103:186; low-VOC gelcoats/SuperShield, 55:99; Marine PrepPen, 33:75; Ultra Tie Coat, 49:59

Fexas, Tom: Aleutian Class 64, 69:13; aluminum-fiberglass megayacht/shoebox joint design, 17:19; classic 125' fiberglass motoryacht, 65:11; Core-Cell cored motoryacht, 35:58; on cored bottoms, 51:22; on design process, 49:8; expedition class steel yacht, 67:13; Midnight Lace retro express motoryachts, 106:10; on model testing/megayachts, 56:26; on wet balsa core, 98:4; obit, 106:10

Fexas, Tom, author: "The Race for the Ultimate Sportfisherman," 1:22; "The Ideal Fexas Boat," 1:28

Fiat Powertrain Technologies: and Fabio Buzzi, 134:36, 141:6  
 fiber and resin high-tech parts, 130:52  
 fiberglass, recycled: disposal of and two processes, 160:40; GLS products, 37:66; hull-recycling programs/U.S. and Europe, 60:82  
 fiberglass-aluminum hybrid construction: applications/construction, 17:19, 19:4  
 fiberglass (FRP) construction: vs. aluminum/metal, 21:26, 48:35, 67:90, 88:62; bucket-and-roller laminating techniques, 45:76; carbon footprint analysis/construction/The Landing School, 16(;88; Chemold/Lamitex process, 134:62; chines, strakes, steps, and transom corners, 58:79, 60:5; classification process/standards, 39:80, 48:8, 71:38; composite membrane construction method, 150:22; copper sheathing/coatings, 7:42; damage tolerance/vs. advanced composites, 43:54; development/history of, 38:30, 39:4, 53:12, 60:116, 88:62, 103:186, 105:4, 56, 115:100, 134:62; diversification/sidelines, 33:36, 33:40, 46:72, 47:34, 54:18, 60:116; dust control/air quality, 28:38, 28:48, 29:4; Early Glass Exhibition, 134:62; fabric impregnators used in, 5:34; fasteners, 38:20; first fiberglass auxiliary sailboat built/*Arion*/Sidney Herreshoff, 157:14; first polyester-fiberglass boat, 134:62; flotation foam/water saturation, 37:48, 37:58; fuel/water tanks, 52:18; galvanic corrosion/bonding systems, 33:28; hardness testing (Barcol hardness tester), 5:12; in racing yachts, 61:77; laminate testing/degradation, 4:64; laminate testing/in-house program, 48:16, 48:17, 48:28, 48:30, 67:90;

largest fiberglass motoryacht/*Silverado*/Willard Boat Works, 153:58; moisture content/detection of, 60:48, 96:16, 97:4; molded integral structural grid/liner, 46:28, 46:35, 46:37, 58:54, 125:54; noise/vibration reduction, 5:42, 32:4, 150:22; OSHA regulations/chemical hazards reduction, 1:30, 27:8, 28:38, 34:59; paints/coatings, 52:54, 52:55; panel stiffness/strength, 51:22, 51:24, 51:26, 51:85, 53:20, 55:5, 72:10, 88:62, 125:54; pollution-prevention/waste-reduction manuals, 20:8, 27:8, 27:17, 28:48, 28:52; pollution-prevention/waste-reduction studies, 55:26, 55:27; polyester putties/applications, 58:54; pre-release/instability problems, 31:20, 50:46; recycling programs/processes, 54:43, 60:82, 111:12; rigid-hull-not-inflatable, 52:12; specialty tools, 18:54, 20:8, 20:56, 25:59; static charge, 22:12; Super Mistral, early French fiberglass boat/Henri Amel, 144:48; tools for, 61:102; unidirectional fiberglass for barge cpvers. 169:44; versatility, 14:2; vocational training, 20:18, 20:21, 47:34. *See also* composites testing; laminates, marine  
 fiberglass (FRP) construction, damage assessment/survey techniques: moisture content/water intrusion, 60:48, 96:16, 97:4; non-destructive, 25:18, 35:42, 88:62, 164:40; survey haulout, 30:72; test coupons/repair patches, 36:34. *See also* moisture meters; surveying techniques/tools equipment; surveying techniques/tools/equipment, non-destructive

fiberglass (FRP) construction, repairs:  
 financial management, 57:74, 57:76,  
 57:80, 97:174; at Irish Boat Shop, Inc.,  
 97:174; patching techniques/materials,  
 36:34, 50:18; at Precision Shapes of  
 Virginia, 66:110; tooling for one-offs,  
 66:110; tools, 23:20, 66:110; at Westerly  
 Marine, 61:52. *See also* fiberglass  
 (FRP) construction, damage  
 assessment/survey techniques;  
 laminates, marine, repair techniques

fiberglass construction, cored/sandwich:  
 Boston Whaler, 2:24, 2:38; bottoms,  
 51:22, 53:20, 55:5; bucket-and-roller  
 laminating techniques, 45:76; vs. carbon  
 fiber/Kevlar, 47:40, 58:36, 61:34;  
 checkerboarding (print-through), 7:50,  
 9:38, 31:34, 50:46; chines, strakes,  
 steps, and transom corners, 58:79, 60:5;  
 core bonding/installation, 9:36, 9:38,  
 9:42, 9:44, 9:47; 82:104; core-  
 bonding/skin-delamination problems,  
 13:36, 25:18, 31:34, 34:5, 37:48, 43:96,  
 52:40, 56:5, 59:104, 96:16, 97:4; core  
 performance vs. workmanship/training,  
 59:104; core shear failure/contour-cut  
 vs. sheet foam, 55:5; core shear  
 failure/waterlogged laminate, 31:34,  
 31:39, 34:42, 60:48, 96:16, 82:104;  
 cruiser replica, 18:20; engineering  
 course, 58:13;  
 fastenings/fittings/through-hulls, 10:4,  
 15:21, 31:34, 34:52, 36:78, 38:20,  
 82:104; foam cores, 51:22, 51:24,  
 51:26, 55:5, 56:5, 59:104; foam  
 cores/Kelsall Swiftbuild Sandwich  
 system, 50:11; framing/scantlings,  
 34:42, 51:22; framing/structural core  
 materials, 52:30, 120:18; grinding box  
 for, 75:14; hand layup/resin and fabric  
 options, 58:36; hardware

bonding/bedding, 15:21, 31:34, 36:78;  
 hull-to-deck joint, 47:40, 49:54; in-the-  
 water FRP repairs, 75:14; knitted  
 reinforcements for, 29:38; laminate  
 quality/workmanship, 17:64, 112:88;  
 laminate thickness/shear strength,  
 52:30, 53:20, 54:62, 55:5, 99:4, 112:88,  
 120:18; limitations, 53:28; megayachts,  
 2:42, 3:5, 53:28, 62:78; moisture  
 content/detection of, 60:48;  
 noise/vibration, 5:42, 32:4;  
 oilcanning/waterlogged laminate, 31:34,  
 31:39; paints/coatings, 52:54, 52:55;  
 panel strength/stiffness/offshore  
 powerboats, 49:54, 52:30, 54:62; panel  
 strength/stiffness/sailboats, 52:30; panel  
 stiffness/strength/sportfishermen, 51:22,  
 51:24, 51:26, 55:5; in racing yachts,  
 61:66; seacocks/systems installation,  
 57:99; vs. solid fiberglass/single-skin  
 laminates, 3:5, 29:38, 32:4, 51:22,  
 51:24, 53:20, 99:104;  
 sportfishermen/Tom Fexas, 1:22, 1:28,  
 51:22; standardized strength/load  
 testing, 4:2, 8:4, 34:42, 48:16, 71:20;  
 Subchapter T boats, 36:22;  
 surveying/design specifications, 34:52;  
 tooling (epoxy syntactic foam), 6:52;  
 tooling for one-offs, 10:42; vacuum-  
 bagging  
 applications/techniques/cautions, 1:58,  
 1:64, 29:22, 30:18, 53:20, 69:132,  
 85:46; waterlogging/weight gain, 31:34,  
 31:39, 82:80; wood laminate  
 strength/stiffness, 51:36. *See also* balsa  
 core; core bonding,  
 materials/techniques; carbon fiber  
 laminates; core materials; foam cores,  
 PVC; honeycomb cores; hull-to-deck  
 joint

fiberglass construction, cored/sandwich,  
damage assessment/survey techniques:  
decks, 27:61; non-destructive, 25:18,  
35:42, 43:54; survey haulout, 30:72; tap-  
testing, 43:54; test coupons/repair  
patches, 36:34, 49:24, 49:27. *See also*  
core bonding, materials/techniques;  
delamination; surveying  
techniques/tools/equipment, non-  
destructive

fiberglass construction, cored/sandwich,  
flat-panel: applications/techniques, 2:42,  
45:54, 45:68, 48:4, 54:44, 54:62,  
91:178; corrugated cores, 91:178; fabric  
impregnator applications, 5:34, 54:44;  
knitted heavyweight reinforcements,  
29:38; for megayachts, 2:42

fiberglass construction, cored/sandwich,  
repairs: hull-drying techniques, 9:36;  
patching techniques/materials, 36:34,  
108:100, 111:82, 113:4; plate glass  
tests for skincoats, 111:82; Sea Ray  
Boats, 96:16. *See also* fiberglass  
construction, cored/sandwich, damage  
assessment/survey techniques

Fiberglass Fabrication Association (FFA):  
training programs, 13:54, 13:65

Fiberglass Fabrications: hull plug  
construction, 16:7

fiberglass fabrics/reinforcements:  
binders/coupling agents (blister  
potential), 3:54, 4:5, 15:13, 15:60,  
17:11, 33:46, 50:46; boat cloth vs.  
woven roving, 58:36, 71:38; for bottom  
panel laminates/single-skin vs. cored,  
51:26, 51:85; bulkier plies, 51:85,  
107:70; comingled with resin/Twintex,  
54:112; computerized cutting, 57:88; for  
controlling resin content, 59:30, 107:70;  
critical factor in shell design, 106:112;  
for DCPD laminate repairs, 52:67, 55:5;

development of, 38:30, 41:58, 60:116,  
60:120; E-glass/costs and properties,  
59:30, 59:34, 71:38; E-glass/moisture  
detection, 23:42; E-glass-Kevlar hybrid,  
56:61, 57:110, 58:6; E-glass vs.  
Kevlar/carbon fiber, 28:18, 45:54, 56:64,  
58:36; epoxy-compatible, 37:48, 42:62;  
fiber orientation/strength/thickness,  
28:18, 29:38, 31:68, 34:42, 45:54,  
47:66, 51:85, 51:88, 53:20, 55:5, 71:38,  
106:112, 107:70, 120:18; fiber-to-resin  
ratio/pre-pregs, 24:18, 99:66; filleted  
inside corners, 90:84; interply  
nesting/laminate stacking, 51:85, 51:88,  
53:4, 53:20, 57:88, 59:30; lab  
testing/defects/moisture problems,  
50:46; and laminate strength/stiffness,  
29:38, 32:4, 51:26, 51:85, 53:4, 53:20,  
55:5, 107:70; osnaburg cotton, 60:120;  
S-glass vs. Kevlar/carbon fiber, 28:18,  
56:64, 58:36; pre-cut laminate material  
kits, 142:40; for reducing print-through,  
34:18, 34:21, 50:46; storage/blister  
prevention, 15:13;  
strength/breakage/stress  
concentrations, 13:3, 13:36; for  
thermoplastics, 11:20; thickness/resin  
content, 51:85, 55:26; use of peel-ply  
between steps of multiple-packet  
laminates, 107:70; VectorFusion fabrics,  
114:10; for vinyl ester resins, 42:62;  
weighing fabrics/quality assurance  
procedures, 142:40; wetout/back-  
wetting/blister prevention, 15:13,  
119:58. *See also* fabrics, specialty  
(laminating)

fiberglass fabrics/reinforcements,  
binderless/Z-axis stitched: for blister  
prevention/repairs, 15:13, 17:11, 60:27;  
end of secondary bonding, 57:88;  
epoxy-compatible/deck repairs, 37:48;

heavyweight, 18:54, 21:18; 3408, 21:18; VOCs reduction, 21:18

fiberglass fabrics/reinforcements, chopped-strand (chop, roll mat): binderless/CO-FIL Z-axis-stitched, 17:11, 36:34, 37:48, 42:62, 55:5; binders/osmotic blistering, 3:54, 4:5, 15:13, 15:60, 17:11, 33:46, 42:62, 50:46; controlling resin content, 59:30; eliminating/high-performance resins, 42:52; with epoxies/blister repairs, 17:11; with epoxies/DCPD laminate repairs, 55:5, 71:38; nesting/controlling drainout, 33:46, 51:85, 51:88, 59:30; for print-through/puddle control, 59:30; recycled, 37:66, 134:6; secondary bond lines, 20:32, 114:52; for single-skin bottom laminates, 51:26, 51:85, 71:38,, 120:18; spray chop vs. infused bi-axial, 119:50. See *also* chopper gun

fiberglass fabrics/reinforcements, knitted directional: applications, 29:38, 31:4; DBM 2408, 2:42; fiber orientation/taping and tabbing, 29:38, 29:45, 39:19, 114:52; nesting/drainout control, 33:46, 51:85, 51:88, 59:30; plus-minus 45 fabrics/shear coupling, 29:45; as pre-pregs, 24:18; taping and tabbing, 29:38, 29:43, 29:45, 39:19, 119:58; VOC reductions with, 1:30, 29:38. See *also* fiberglass fabrics/reinforcements, taping and tabbing

fiberglass fabrics/reinforcements, knitted heavyweight multiaxial (biaxial/triaxial/quadraxial) stitched: applications, 29:38, 114:52, 119:50; for BLIP/resin infusion, 29:38; for controlling resin content, 59:30; Fabmat, 150:22; fatigue/stress resistance, 32:4, 47:66; membrane-designed boats, 32:4, 150:22; *Miss Delson*/deflection

membrane panel/impact absorption, 150:22; photo-curing/pre-preg applications, 18:8; quadraxial/"boat on a roll," 18:8, 18:54, 31:68, 32:4; for repair patches, 36:34, 114:52; for single-skin bottom laminates, 51:26, 51:85; types/applications, 18:54

fiberglass fabrics/reinforcements, repair patches: biaxial vs. mat/DCPD laminates, 52:67, 55:5, 107:70, 114:52; for composite hulls, 36:34, 39:19, 39:27, 42:5; concentric layers, 36:34; defect testing/extensometer, 114:52; secondary bonding, 36:34, 50:18; X-patches, 36:34, 37:71. See *also* patches/patching techniques/materials; repair techniques

fiberglass fabrics/reinforcements, taping and tabbing: bondline preparation/contamination, 39:19, 42:5; bottom reinforcements using "fish-scale" pattern, 83:4; fiber orientation, 29:38, 29:45, 39:19; filleted inside corners/fillet radius, 29:43, 29:45, 39:19, 58:79; with impregnator/wet-pregs, 55:58; laminate schedules, 39:19; overbonding of molded integral structural grid/liner, 46:28, 103:26; thrust-bearing support trusses, 120:42; woven vs. stitched tapes, 29:38, 29:43, 29:45

fiberglass fabrics/reinforcements, woven: Ancaref/polymer, 1:68; vs. boat cloth, 58:36; fiber orientation/taping and tabbing, 29:38, 29:45, 39:19; panel stiffness, 51:22; as pre-pregs, 24:18; vs. recycled, 37:66; vs. stitched/knitted, 29:38, 31:4, 32:4, 51:85, 58:36; stitched vs. knitted/fiber-to-resin ratios, 59:30; Super 317 Woven Roving, 25:59, 107:70; ZPREG/resin-inserted



material/Advanced Composites Group, 80:12

fiberglass fabrics/reinforcements, woven  
bidirectional/hollow core: Parabeam, 19:59

Fiberglass Industries: development of  
woven roving, 38:30; Super 317 Woven Roving, 25:59

fiberglass tapes: chopped-strand  
alternative/secondary bonding, 20:32;  
fiber orientation/laminate  
schedules/taping and tabbing, 39:19.  
*See also* fiberglass  
fabrics/reinforcements, taping and  
tabbing

fiberoptic borescope: for non-destructive  
surveying/visual inspection, 35:42,  
35:50; rentals/sources, 35:42, 35:50

fiberoptics: BritePak Fiber Tubing, 34:28;  
for interior lighting, 34:28, 34:32;  
sensors/"smart" composites, 46:45

fiber orientation. *See* carbon fiber;  
fiberglass fabrics/reinforcements; Kevlar

fiberscope. *See* fiberoptic borescope

FiberSim software: for fabric  
cutting/stitching, 57:88; 85:10

fiber-to-resin ratios: 66:78

Fibertron, spray-on carpet" 77:10

fibre Bragg gratings (FBGs): deflection-  
induced loads/optical fiber sensing,  
97:10

*Fibreglass Boats*: author Hugo du  
Plessis/emergency repairs, 79:8

Fibre Mechanics: custom boatbuiding,  
169:6

Fielden, Barney: Sea Sled restoration,  
51:11

Fife, Alyn: on Nautor's Sawn and fuel  
systems for pleasure craft, 86:4; on  
hawsepipes in composite construction,  
107:4

fighting chairs: aftermarket niche  
(Rybovich), 14:26, 14:32

*Fighting Lady* sportfishermen boat,  
139:128, 140:4

filament winder: for axi-symmetric  
structures/Entec, 58:36

file, flat: diamond-coated sharpener, 19:59

filing: pneumatic Super Hand 100 A tool,  
10:52

fillers: blister repair, 48:86; delivery/fairing  
system (Extender), 27:70; impact-  
resistant (SeaWolf), 12:60;  
microspheres, 11:52, 15:13; polyester  
(Quick Fill), 18:54; mold-release, 12:27,  
12:28; storage of, 15:13. *See also*  
microspheres/microballoons; resin  
thixotropes

fillets/filleting: inside corners/chines,  
strakes, steps, and transom corners,  
58:79. 60:5; inside corners/fillet radius,  
29:43, 29:45; putties/taping and  
tabbing/secondary bondlines, 39:19,  
42:5, 68:64

Fillippone, Claudia: on *Registro Italiano  
Navale* and Green Star standard and  
Green Passport, 119:3

film, drag-reduction (DRF): applications,  
57:88, 60:5

film, masking. *See* masking film/paper

film, plastic. *See* plastic film

film, prismatic/light: Scotch Brand Parallel  
Light Film, 34:28, 34:32

film, vacuum. *See* vacuum bags/film

film adhesive: for carbon-fiber pre-pregs,  
39:30

films. *See* video production; videos

films, adhesive: replacement for  
spraypaint, 57:88

films, engineering, textured high-  
temperature: Quick Draw (VARTM),  
32:28

Film Technology Inc.: Quick Draw film (VARTM), 32:28

financial planning. *See* accounting; economics, financing resources; impact on marine industry; inventory/parts; production boatbuilding, financial management/planning

financing resources: 63:29

Findon, Ed: and large scale projects at Baltic Yachts, 85:46

SP Systems and SPRINT products, 79:114

Findon, Ed, author: "Building A Curing Oven," 82:22

Finestkind Boatyard: depthsounder installation/drag reduction, 45:29

finishing resin: air inhibition/secondary bonding, 19:48, 20:32; wax migration, 21:4

finite element analysis (FEA): ANSYS at Delta Marine Industries, 94:32; additive guess-and-check/foiling beach catamaran hull, 166:22; application for composite-built Schumacher 77, 106:62; assessing Gunboat's G4 foiling catamaran, 156:40; building a finite element model, 133:46; computer software for, 78:26, 133:46, 159:60, 163:14; core-to-skin defect/core installation, 94:48, 133:46; Det Norske Veritas (DNV) High Speed Light Craft Rule for patrol boats, 133:46; global loads, 156:40; independent consultants, 80:4; definition of, 78:26; for *Destriero* model, 109:100; for U.S. Coast Guard Motor Lifeboat (MLB)47, 117:44; measuring laminates without using FEA, 166:31; methodology of, 78:38, 80:4, 106:62, 133:46, 137:56; at High Modulus, 78:28; on high-speed aluminum boat, 137:56; Matrix Applied Computing, 78:26' at NQEA, 63:106; at

Outer Limits Offshore Powerboats, 133:46, 60; at Owen Clarke Design, 159:60; at Van Peteghem Lauriot-Prevost (VPLP), 91:154; in Paul Bieker designs, 74:68; load prediction in FRP motoryachts, 71:20; Scan&Solve software vs. Dassault Systems Solidworks, 163:14; software/Materials Sciences Corporation, 148:26; 3D solid modelers, 66:90; Tsai-Wu evaluation, 156:40; at X3Yacht, Manchuria, 163:14

Finland: aluminum-fiberglass hybrids, 19:4; boat disposal initiative, 160:40

Finn boat: Fairey Marine/1952 Helsinki games, 151:6; Kuuaskoski Oy/boat disposal initiative, 160:40

Finot, Jean-Marie: infusion-molded 50' raceboat, 44:36; profile, 64:64

Finot Open-60s (raceboats): 64:64, 65:120

Fiorentino, Norberto, author: "The Runner-Up," 109:30

Fireboy-Xintex: carbon-monoxide alarms, 45:32; carbon-monoxide meter, 45:32; FE 241-based marine fire extinguishers, 30:60. *See also* fire extinguishers/firefighting systems

fire dampers: for closing engine vent ducts, 110:104; Delta "T" Systems/electric and pneumatic activated, 137:12; fire department, local: pre-planning/boatyard fire emergency, 39:44, 44:18, 44:25

fire extinguishers/firefighting systems: ABS/LR classification, 39:80; ABYC safety standards, 36:46, 117:18; audible/visual discharge alarm, 125:24; automatic-shutdown relay systems, 125:24; carbon dioxide FFE systems, 125:24; dry chemical fire-suppression system at New England Boatworks, 81:110; engineroom layout, 37:26, 125:24, 137:22; environmental

- concerns, 17:4, 60:27; FAST ATTACK foam rig, 69:13; Fireboy-Xintex, 30:60; Halon phaseout/replacements, 125:24; intumescent coatings, 62:78; Halon phaseout/replacements, 21:12, 26:3, 30:60, 60:27; overlook of fixed fire-extinguishing system and surveyors' reports, 153:80; placement/location, 39:44, 44:18; 125:24, 153:80; pre-engineered systems, 125:24; remote-controlled water cannons/Unifire AB, 120:38
- fire performance of composite materials: 62:78, 65:84
- fire regulations: for Subchapter H and I FRP vessels, 62:78; for Subchapter K FRP vessels, 62:41, 62:78
- fire/rescue/patrol boats: Boston Whaler, 2:40; Munson Manufacturing, 3:11; SeaArk Marine, 2:12
- fire retardants: Fibertron epoxy and nylon bristles gun, 77:10; Gurit/SP epoxy resins and ancillary products, 120:38; isopolyester resin, 84:82
- fire testing: cone calorimeter test, 62:83
- fires, boat: aluminum hulls, 53:31; carbon sandwich/*PlayStation*, 60:11; fire protection regulations, 51:11, 53:31; and engineroom ventilation/safety, 137:12; fire protection and FRP construction, 62:78.; protective investigative procedures for, 71:27. See *also* fires, electrical; lightning protection systems; National Fire Protection Association (NFPA) standards/compliance
- fires, boatyard: fire detection systems, 44:18, 44:22; firefighting procedures, 1:50, 7:28, 39:44; first aid supplies, 8:54; "the hot hut" fireproof disposal site/Viking Yachts, 131:54; insurance/claims, 1:50, 7:28, 29:54, 44:18, 44:22; planning/local fire department, 39:44, 44:18, 44:25; planning/preparedness/training, 1:50, 7:28, 17:34, 26:18, 35:25, 39:44, 44:18, 44:22, 44:25; plant layout/prevention, 17:34, 28:48, 39:44, 44:18
- fires, dock: FAST ATTACK foam rig, 69:13
- fires, electrical, causes/prevention: electrical cables, 35:18, 55:99; overcurrent protection, 36:41, 36:45, 57:48; wiring/DC systems, 20:50. See *also* electrical systems; wiring, marine
- first aid: burn dressings/supplies, 8:54. See *also* accidents/injuries; worker safety/occupational health
- Firth, Keith: on usefulness of technology offered in *Professional BoatBuilder* magazine, 23:4
- Fischer, John: comment on ZDDP oil additive/aluminum piston vs. steel piston, 144:4; on RIB on the Gota all and low-sulfur diesel fuel unavailability/OptiMax diesel outboard, 168:4
- Fischer Panda: *Aziprop*, diesel-electric sailboat, 109:140; Bavaris 49 diesel-electric sailboat; DC-AC Power System (DAPS), 92:12; integrated serial hybrid system, 164:58
- Fischer, Robert: boatbuilder/performance composites/France, 103:142
- Fisher 17' flats boat, 2:12
- Fisher, Richard T. (Dick): Boston Whaler designer/founder, 2:34, 2:37, 2:28, 38:3; inverse planing hullform, 49:42; obituary, 38:3
- fishing boats, commercial, construction: aluminum-fiberglass hybrids, 17:19, 17:31; changeover/luxury yachts, 40:24; fiberglass lobsterboats, 45:76; propeller matching, 46:61; welded aluminum,

21:26, 58:66, 59:71. *See also* powerboats, sportfishermen; powerboats, offshore sportfishing yachts

fishing rod holders: backing plates for, 127:84, 139:96; GEM Products “Bluewater” rod holder, 139:96

fishing skiff: Dive Tender 14/Reuel B. Parker design, 172:52. *See also* dive boat

fittings. *See* deck hardware/fittings; rigging, stainless steel

Fitz, Frank, 143:3

Fitzgerald, John, author: “The Case for the Customer Service Rep,” 148:38

Fitzgerald, Mark: designer/model testing, 55:32; prototype for Fitzgerald 36 design, 71:6

Fitzgerald, Mark, author: “The Case for Classifying and Standardizing Product Specs,” 49:96; “Patrol Yacht,” 51:96

Flacksenhae, John J., Jr.: on marine common-rail systems fuel leaks, 89:4

Flagler, David: Cape Fear Community College program, 20:18; catalyst mixing system, 20:18, 29:51, 30:57; Clean Marine Solutions/wastewater treatment, 120:4, 134:6; Marine Education and Training Center, 46:10, 105:12

Flagler, David, author: “A Foolproof Catalyzation System,” 29:51; “Getting Resin Samples Right,” 113:22

Flanders, Scott: Egret flats skiff, 47:40

flat-bar: vs. T-bar/framing systems/aluminum boats, 24:34, 26:4

flat-panel construction. *See* composite flat-panel construction; fiberglass construction, cored/sandwich, flat-panel

flats skiffs/flats-boat market: Consolidated/Egret flats skiff, 47:40; Fisher, 2:12; hull-to-deck joints, 60:104; Maverick/market niche, 29:3, 30:4

Fleenor, Bill: on cored panel penetrations, 101:4

Fleming, Tim: RIB market/Zodiac-Hurricane Technologies, 48:50

Fleming, Tony: on Aquadrive engine vibration isolator, 35:4; founder of Fleming Yachts/career/profile, 151:96; on Internal Combustion’s Backside and water injection hole diameters, 171:4

Fleming Yachts: MAN 6-cylinder diesel engines/65 series repower, 157:26

Fletcher, Grant: Modular Marine/aluminum kit boats, 43:83

Fleming Yachts: Fleming 55 line/build list, 151:96; owner’s manual/eFit iPad, 159:22; profile, 151:96

Fleury, Paul: on battery cables/terminals, 22:4; on crimped vs. soldered terminal connections, 13:4, 2:4; on galvanic isolators/stray-current corrosion, 33:4, 41:21, 43:5; on marine wiring, 8:12, 9:5; on Wet Wiring Autopsy and crimping wires vs. soldering, 147:6

Flevo Jachtbouw: deck first build process, 132:18

Flexible Products Company: The Eliminator self-clearing foam gun, 11:52; HFC-134a flotation foam, 24:62

Flexi-resin: in minehunters, 65:84

Flexiteek, sandable PVC composite, 125:50; vs. PlasTEACK/PlasDECK, 126:6. *See also* NuTeak.

FlexSys: flying flexible control surfaces/morphing wings, 163:106

float switch: Rule non-mercury switch, 107:30

floating city ship: *FreedomShip*, 71:6; ResidenSea, 68:11

floating restaurant: *Celestial*, 62:12

flock, fibrous: for bonding polyester gelcoat to epoxy laminate, 49:59

floor coverings/mats: anti-fatigue, 23:54;  
     anti-slip, 23:54; fire-retardant protector,  
     14:57  
 floor structure: for RIB raceboat, 46:38.  
     *See also* framing/framing  
     systems/structure  
 flopper-stoppers. *See* stabilizer system  
 Florida Board of Professional Engineers:  
     professional engineer (p.e.) licensure  
     decision, 114:4, 115:6, 116:4, 117:88  
 Florida: Keys ecology/fishery, 29:3, 30:4;  
     environmental stewardship  
     program/Tampa BayWatch, 44:49;  
     manatee protection efforts, 4:18, 5:7; St.  
     Lucie County manufacturer incentive  
     program, 32:48; sales tax/10 to 90,  
     37:66; subcontractors in boatyard, 54:5.  
     *See also* heat/hot-weather boatbuilding  
 Florida Dynamics, Inc.: Sea Torque  
     enclosed propeller-shafting system,  
     36:78  
 Florida Institute of Technology:  
     boatbuilding vocational training  
     program, 46:10  
 Florida Keys Community College:  
     vocational training program, 23:50  
 Flo-Scan Instrument Co.: fuel-flow meters,  
     26:54  
 flotation: design considerations/sinkability,  
     23:24, 23:26, 65:24; Ping-Pong balls as,  
     59:5  
 flotation foam, CFC/HCFC: EPA  
     rule/exemptions, 28:54  
 flotation foam, guns/dispensing equipment:  
     solvent-free, 2:28, 11:52  
 flotation foam, non-CFC: BASF/PRISMA  
     stringer preforms, 41:62, 48:48; CO2-  
     blown, 24:62; HFC-134a-blown, 24:62,  
     25:52; performance/testing, 2:28, 2:31,  
     3:9; sources, 2:30, 24:65;  
     types/development, 24:62; water-blown,  
     24:62, 25:52, 26:51; Zone3, 34:59  
 flotation foam, urethane, block:  
     installation/protecting, 57:42; water  
     absorption/testing/compliance, 57:41,  
     57:42  
 flotation foam, urethane, blown-in:  
     alternative to/rigid board stock, 37:48; in  
     Boston Whaler construction, 2:38,  
     37:48; closed-cell/cell structure, 37:58;  
     density, 37:48; foaming techniques,  
     37:48; installation/protecting, 57:41,  
     57:42; water  
     absorption/testing/compliance, 57:41;  
     water-saturated/diagnosis/repairs,  
     37:48, 37:58; water-saturated/drying  
     process, 37:48  
 flotation system, emergency: Yachtsaver II,  
     13:70  
 flow coaters: Glas-Craft, 27:70; Little Willie,  
     27:70; MACT point values, 60:39;  
     sources, 27:70;  
     types/technology/applications, 25:58,  
     55:26; waste reduction, 55:26  
 flow detector. *See* raw-water  
     pumps/systems  
 Flowers, Richard and Rosa: owners of  
     Custom Steel Boats (Stonewall, NC)  
     murdered, 82:8  
 Fluke Corporation: brochure series, 36:78;  
     brochure/multimeter testing for  
     corrosion, 36:78; Fluke 23 multimeter,  
     44:54; Fluke 867 multimeter, 44:54  
 fluorescent lighting: 87:80  
 Flyak: hydrofoil kayak, 98:12  
 fly-by-wire: analog vs. digital, 73:120;  
     integrating basic engine functions with  
     systems management, 73:120; flying  
     bridge: safety/liability, 15:50;  
     *MicroCommander*, 73:120; railing height

allowance, 69:92; *SmartCraft*, 73:120, *MagicBus*, 73:120.

flying boat: configuration of foils, 166:22; Gunboat's G4 catamaran, 156:88; foiling beach catamaran/Steve and Dave Clark, designers, 166:22; futuristic results, 156:88; Moth foil performance, 166:22; wing in ground (WIGS, 154:12. See also DIAB

"flying I-beam": Goetz Marine Technology, 61:11

flying inflatable boat (FIB): introduction of, 59:10

foam. See flotation foam; foam, syntactic; foam cores; polyurethane foam; soy-based foam, 143:52; urethane flotation foam

foam, closed-cell: Ductile, 10:52; for icebox insulation/R value of, 90:64; on SAR 60 search and rescue boat/FB Design, 164:34; Softlite/ionomer plastic, 40:66; SeaDek, 125:20; use in Hy-Lite Powerboat construction, 66:11

foam, syntactic. See epoxy syntactic tooling foam/slurries/putties; polyester syntactic foam; putties, syntactic

foam barrier, composite: for sound insulation, 5:42, 12:60

foam cores, PVC: blackened, diagnosis/survey/repair, 31:34, 34:5, 69:70, 97:130; bonding/installation, PVC foam cores, 9:36, 9:38, 9:42, 9:44, 9:47, 25:18, 31:34, 31:39, 33:46, 43:96, 45:54, 47:57; 48:8, 51:22, 51:26, 53:4, 54:5, 58:36, 69:70, 69:156, 70:44, 70:92, 72:5, 94:48, 97:130, 115:142, 131:28, 138:48; for bottom laminates, 51:22, 51:26, 52:30, 53:4, 54:5, 54:62; for carbon/Kevlar laminate, 47:40, 54:62, 58:36; in composite flat-panel construction, 45:54, 45:68, 54:44, 54:62; contour-cut, 9:47, 30:22, 51:22, 55:5, 94:48; contour-cut/grid-scored, filling/bedding, 31:34, 31:39, 33:4, 34:5, 34:42, 51:22, 51:29, 52:30, 55:5, 70:92, 111:82; contour cut, 142:40; contour-cut/knife vs. saw, 55:5; core-bonding problems/skin delamination, 13:36, 43:96, 64:22, 94:48, 131:28, 155:20; cross-linked/thermoset (Divinycell, Klegecell, Herex), 3:5, 9:36, 23:54, 25:18, 33:4, 34:42, 35:4, 43:96, 52:30, 53:40, 54:62, 55:79, 56:5, 58:36, 70:44, 72:5; damage assessment, 25:18, 70:92, 97:130, 120:18; for deck repair/waterlogged flotation foam, 37:48, 52:40; density/loading/compressive strength/shock tolerance, 52:30, 52:40, 53:40, 54:5, 58:36, 99:104, 149:56, 155:20; ; in fiberglass megayachts, 2:42, 3:5; heat distortion, 52:30; Herex foam core/X43 Flybridge Express motoryacht, 163:14; high-density polyurethane (Last-a-Foam), 54:5, 58:36; hourglassing, 9:38; Kelsall Swiftbuild Sandwich system, 50:11; linear/thermoplastic (Airex), 3:5, 9:36, 25:18, 34:42, 35:4, 35:58, 51:6, 51:22, 52:30, 53:40, 54:62, 56:5, 58:36, 91:154; low elongation to failure vs. linear foam cores, 149:56; microperf'd foam, 110:12; in navy minehunters, 53:40; in offshore racing yachts/core-bonding problems, 43:96, 70:3, 70:44, 72:5; for one-off hull, 52:30, 69:156, 70:3; for one-off tooling, 10:42; outgassing, 47:57, 48:8, 63:145, 64:64, 70:3, 70:44, 90:64; and post-curing, 14:45, 70:44; with pre-pregs, 43:96, 58:36, 70:3; priming and sealing, 9:44; semi-rigid, 35:4; shaping/cutting tools for, 25:59; shear strength/elastic limit/hysteresis/failure, 31:34, 56:5,

- 58:36; shock tolerance, 155:20; solid vs. scored/vacuum-bagging, 30:18; in sportfishermen, 1:22, 1:28, 54:62, 94:48; standardized testing/safety factors, 34:42, 35:4; storage, 15:13; strip planking/foam-cored one-offs, 35:58; as substitution for SAN foam core, 111:82; weight and density variations, 142:40. See *also* Airex foam, FRP cored/sandwich construction; core bonding, materials/techniques; Divinycell foam; fiberglass (FRP) construction, cored/sandwich; Klegecell foam
- foam cores, SAN (styrene acrylonitrile): for bottom laminates, 51:22, 51:26; contour-cut/drilled holes, 55:16, 142:40; contour-cut/grid-scored, filling/bedding, 51:22, 51:29, 52:30, 55:5, 99:52; Core-Cell, 35:58, 45:86, 49:74, 51:6, 51:22, 52:30, 53:4, 55:16, 58:36, 111:82; Core-Cell vs. Airex, 35:58, 51:6, 51:22, 52:30, 53:4, 133:114; PVC or balsa core substitution for, 111:82; for sport fishermen/sole/cabin/transverse frames/Bandy Boats, 170: 20; structural core material, 52:30, 53:4 , 99:52, 149:56; weight and density variations, 142:40
- foam cores, syntactic phenolic: Albacore HS-9, 58:36
- foam cushioning: EZ-Dri reticulated, fungicidal foam, 82:8; Crest foam cushions/*Antonisa*, 82:8; for shock-mitigating seats, 70:66
- Foam Enterprises: water-blown (CFC-free) foam system, 24:62;
- Foamtek/IPI: environmentally friendly flotation foam systems, 25:52; E-Z Froth foam gun, 2:28
- foam wedges: for stringer and bulkhead landings, 65:84
- foghorn: CFC-free, 7:64
- foil-thickness form dimensions, 98:76
- Folkboat, Nordic: fiberglass boats, 96:6, 99:4; Svend Svendsen, builder, 144:10
- Follansbee, D.B., Inc.: Raske three-way valve, 7:64
- Fontaine, Ted, Design Group: purchase of Ted Hood Design Group, 78:12
- Footprint Boats: glued together catamaran/camper hybrid boat, 137:12, 139:5
- Force 10 Marine Ltd.: galley stoves/oxygen-depletion sensors, 45:32
- Ford, Benjamin, author: "Are Your Dealers Franchisees?" 150:26; "Secure Your Training Investments," 143:80; "Splash Protection in Practice," 138:64
- Ford, Bruce: on LeClercq Marine/transition to yachts, 40:24
- Foresight Products: Duckbill cable anchor, 36:4
- Forespar Products: Forespar Sea Valve, 33:75; Lightning Master dissipator, 43:64
- forklift: Mariner F65, 19:59
- Formica: facing for foam plug/*Cogito*, 39:30; facing for Styrofoam plug/plastic-faced-plaster (PFP) tool, 60:96, 60:103
- Formica Corporation: development of plastic laminates, 38:30; Granulon, 34:28, 34:34; Nuvel, 34:28, 34:32
- Formula Cruisers (New Zealand): switch from polyester to new epoxy laminate, 71:6
- formula for inclining experiment, 165:4
- formula for sizing zincs, 34:5
- Formula 40 catamaran and carbon unidirectional reinforcements used in, 61:34; spectator appeal of, 72:84

*Formulas for Stress and Strain:*

engineering handbook, 72:22

Fornaro, Dave, author: "Fine-tuning with FEA," 133:46

Forpak Ltd.: plastic fastenings, 9:57

Forster, Bob: on survey reports, 30:26

Fortson, Charles Baird: on ultrariverine and mitigation of wave impact/hull delamination, 148:4

*45 Degrees South*: Bruce Farr design, 61:66

Fosset, Steve: round-the-world race/mega-catamaran, 58:13

foundries/foundrywork:  
patternmaking/custom castings, 42:46, 42:48

Fountain, Reggie: Fountain  
Powerboats/plant layout, 17:34

Fountain Power Boats: epoxy syntactic foam-cored tooling, 6:52; *Fidelity* sportfisherman/George Bush, 54:18; fire insurance/preparedness, 1:50, 26:18; plant layout/rebuilding after a fire, 17:34, 26:18; waste reduction/management, 28:48

Four Winns: Armorcote In-Mold Coating, 13:70; Posi-Turner applications, 10:52; shrink-wrapping (transport/storage), 18:28; switch to non-CFC foams, 2:28; videos production/marketing applications, 16:22, 22:42, 22:45, 22:49

Fournier, Bob ("Boston Bob"): advanced composites expert/obit for 168:14

Fowler, Glen: on negative aspects of reduced gelcoat, 21:4

Fox, David: propeller-matching program/analysis, 46:62

Fox, John: on epoxy resins, 42:52, 42:59; on SI units, 55:5; on structural core materials, 54:5

Fox, John, author: "Designing and Building in Wood/Composite Construction," 69:156; "Engineering Laminates for High-Performance Resins," 53:20, 55:5; "Selecting Structural Core Material," 52:30; "3D Solid Modeling for Boat Design," 66:90, 68:5; "Tracking Production and Labor by Computer," 50:59

Fox, Uffa, designer: Firefly dinghy/hotmolded hull/Fairey Marine, 147:64, 151:5. *See also* Industrial Shipping Co.

Foye, Lenny: on turnaround at Chris-Craft, 82:4

FP Diesel: diesel replacement parts, 22:56

fractional rig, 171:46. *See also* sailing rigs

Frahm tank: 67:90

Fram, Mori: spray gun development, 38:30

frame-and-fabric shelters, 80:12

frames/framing systems/structure: for aluminum construction, 24:34, 24:39, 26:4, 36:22, 48:9, 50:5, 52:4; balsa core, 32:21, 91:178; biaxial glass full-length structural grid/Bertram35 sportfisherman, 171:18; carbon-fiber/box-section stringers/racing shells, 41:28, 41:30; carbon-fiber/flat-panel construction, 45:54, 45:62, 54:44; composite stringers/PRISMA preforms, 41:62, 48:48, 57:88, 61:10, 68:64; for cored/sandwich fiberglass construction, 40:42, 51:22, 58:79, 68:64, 91:178; damage to, 63:123, 103:26, 129:54; dual element, 68:64; evolution of, 46:28; fiberglass, 40:54, 41:5, 41:62, 58:79, 68:64; Finite Element Analysis (FEA)/loading, 45:62; floating frames/end fixity, 48:9, 50:5, 52:4; floor structure for RIB raceboat, 46:38; hat-section, 46:28, 68:64, 104:42, 119:50;



- laminating/adjustable jigs for, 13:8;  
intrinsic fracture toughness  
measurement/spiral-notched torsional  
test (SNTT), 125:36; molded integral  
structural grid systems, 46:28, 46:35,  
46:37, 48:4, 58:54, 68:64; plywood vs.  
fiberglass, 40:54, 41:5, 42:5, 46:28;  
plywood/Omega, 40:54, 42:5;  
outsourcing/NC-cut kits, 37:16, 37:18;  
single-element, 68:64;  
strength/stiffness/offshore powerboats,  
49:54, 120:18;  
strength/stiffness/offshore sailing  
yachts, 49:9, 50:5, 61:66;  
stringers/engine bed, 37:26, 40:54, 41:5,  
104:42, 120:18; stringers/setting in  
strakes/FRP construction, 58:79, 75:58,  
104:42; structural preforms, 41:63,  
46:28, 61:10, 75:58; transverse/for cold-  
molded cruising yachts, 51:36;  
transverse framing/Ermis2 motoryacht,  
120:18; web frames, 40:54. *See also*  
bulkheads/compartments;  
oilcanning/deflection
- framing jig: four-way Bessey K clamps,  
5:58
- franchises: choice of law provisions and  
franchise statute, 150:20; dealer-builder  
relationship, 150:20; license and  
community of interest, 150:20
- Franklin, Ian (New Zealand boatbuilder):  
profile, 71:73
- Franzen, Iver C. (author): "Rescuing a  
Feadship," 63:123
- Franzen, Iver C.: *Pride of Baltimore*  
II/Thomas C. Gillmer, 126:8; *USS*  
*Constitution*, 126:8
- Fraser, Aime Ontario, author: "Making the  
Most of Varnish Work," 19:36; "The  
Marriage of Aluminum and Fiberglass,"  
17:19; "No Train, No Gain," 13:54;
- "Plastic Media Blasting," 7:8; "Taking the  
Bite out of Boat Noise," 5:42
- Fred's Boat Shop: wheeled crane, 36:20
- Frederickson, Paul: on T-bar strength, 29:4  
freeboard. *See* draft marks/freeboard
- Freedom Opportunities, L.L.C.: 4,320'  
*Freedom*, 51:11
- FreedomShip*: floating city vessel, 71:6
- Freedom Yachts: advertising, 31:80;  
carbon fiber masts, 57:7; *Freedom*  
36/38 bow redesign, 45:86; *Freedom*  
40/early FRP, 60:116; *Freedom* 44/free-  
standing rigs, 55:46, 57:7; interior  
design, 6:34; sailboat market, 30:48
- Free Enterprise Systems, Inc.: Barrel  
Harness, 8:54
- Frees Inc.: air quality management  
systems, 87:10
- Freeman Marine Equipment Inc.:  
profile/aluminum marine closures  
(hatches/portlights/doors/windows),  
41:62
- Freeman, Rolland S. "Bud": on surveyors  
in the boatyard, 71:5
- French & Webb: restoration of three  
Herreshoff Buzzards Bay 30 sloops,  
115:184; *Zogo* diesel-electric  
launch/Stephens, Waring, & White,  
124:12, 127:30
- Freon. *See* R-12 refrigerant (Freon)
- Frers, German (Argentina): Swab  
sailboats, 84:52
- freshwater systems: systems technician  
training/certification, 57:99. *See also*  
pumps; water tanks
- Friedman, Norman: *U.S. Small*  
*Gunboats*/review, 52:3
- Friedman, Phil, author: "Large Yachts,  
Light Construction," 24:34
- Frigast: 12-volt dimmer switch, 55:99
- frog: vacuum inlet part, 79:114

Fronius welder, 116:52  
 Front Street Shipyard: profile of, 143:3, 28  
 Frost, Will: designer of Jonesport Island (Maine) lobsterboat, 73:3; great grandsons/Even Keel Marine, 79:10  
 Froude, William: early hydrodynamicist/performance prediction, 60:66; 169:62  
 Froude number: drag/performance/speed prediction, 60:5, 60:66, 65:102, 113:32, 115:18, 169:62; *Ned 70* motoryacht, 147:18  
 FRP. See fiberglass (FRP) construction  
 FRP Supply: diacetone alcohol acetone replacement (DAA-FRP), 25:59; *Health, Safety, and Environmental Manual*, 20:8  
 FTZ Industries: Crimp'N Seal connections, 10:52  
 fuel capacity: design analysis, 49:8. See also engines, marine, fuel efficiency  
 fuel cell generator: 69:38  
 fuel cells: 69:38; direct methanol fuel cell/Smart Fuel Cell AG, 98:12; marine fuel cell, 98:12; Max Power MT-C100 fuel cell for sailboats, 98:12; water taxi powered by fuel cells/DCH Technology, 75:14  
 fuel consumption: and barnacle-fouled propeller, 124:54; boat speed, 124:54, 144:4; comparisons for conventional diesel propulsion/battery-powered hybrid diesel-electric, 142:26; comparisons for three power boats/Neo 41, 151:44; data for mid-size powerboats, 117:54; and design efficiency for passagemakers, sportfishermen, and other deep-water motoryachts, 118:22, 129:18; with oversized propeller, 150:50  
 fuel efficiency: of electrical generators, 113:56; 114:4; Elling E4 motoryacht, 156:12; of inboard performance system (IPS) units, 115:32, 150:34; in LDL yachts, 147:18; Outerlimits Offshore Powerboats, 133:60; pilot boats and pod systems, 150:34; sequential planing hullform/Jerry Burkett, 115:18; Shearwater pocket-cruiser/Eric Jolley/Paul Bieker, 115:162; single-engine, single-outrigger powerboat/Russell Brown, 130:52  
 fuel-fill systems: bonding wire/soldering, 94:104; marine hose installation, 51:6; threaded fittings for, 94:103; flaws in, 94:104  
 fuel filters: Duplex fuel filters, 85:130; ethanol-compatible, water separating filters, 102:26; in-line/plastic vs. metal, 51:6; specifications/high-pressure common rail (HPCR) system, 158:64  
 fuel-flow meters: FloScan, 26:54  
 fuel hose: EC (EU) certification, 41:38; EPA-compliant low-permeation hose, 121:72; hose clamps, 85:130, 94:104; Parker Hannifin 221FR, 33:75; types/standards, 49:16, 85:130, 94:104  
 fuel injection, electronic (EFI): ABYC safety standards, 36:46; diesel engine fuel injection pressures, 158:64; -diesel engines, 14:34, 108:82, 158:64; gas engines, 11:52, 12:4, 17:44, 17:52, 36:46  
 fuel leaks, detecting: Safe-T-Alert gas sniffer, 7:64; Spectroline detection system, 8:54  
 fuel pump: Walbro Series 6000, 26:54.  
 fuel spills. See spills, fuel/chemical, cleanup/containment kits  
 fuel system: antisiphoning protection, 85:130; Code of Federal Regulations (CFR) and gas engine vessels, 84:82, 85:4, 130; description in owner's manual,

27:54; EPA carbon canister proposal, 97:200; fittings/galvanic corrosion, 52:18; fuel polishing systems, 112:100, 113:4; legal requirements, 84:82; open-to-shut vall valve/German Toplicht Catalog, 156:4; remote fuel shut-off valves, 85:14, 154:56, 156:4, 159:4; Vetus Splash-Stop, 85:130

fuel tanks: aluminum, 52:18, 54:5; back-up transfer pump, 84:82; baffles, 84:82, 159:10; baffles/cleaning out, 172:36; Belzone coating for tank bottoms, 165:56; EC (EU) certification/ISO standards, 41:38, 52:18; composite integral tanks, 74:20; ethanol and MTBE fuel additive/corrosion of aluminum fuel system parts, 102:26, 30, 107:46, 109:6; fasteners/patch kits, 32:52; fiberglass/foamed-in, 37:48, 52:18, 84:82, 102:26, 30, 104:100; fire safety standards, 5:64; flexible bag tank for interior of existing tank structure, 111:4; FloScan fuel flow meters, 84:82; foamed-in/problems/installation, 37:48, 37:58; 124:32; for twin-engine inboard vessels with twin tanks/gas and diesel, 84:82; fuel separator, 16:52; independent vs. built-in, 52:18, 54:5, 74:20; installation/access, 52:18, 111:4, 159:10; materials/construction/corrosion prevention, 52:18, 52:67, 74:20, 84:82; metallic and non-metallic tanks/evaporative emissions/EPA, 121:72; monel tanks, 84:82; polyethylene, 12:60, 52:18, 84:82; pull-out plate for tank sensors and fuel lines, 172:36\*; remote fuel shut-offs, 84:82; 85:4, 156:4; Safe-T-Foil energy-absorption device, 15:70; side-access ports/ISO & ABYC standards, 159:10; sounding sticks, 84:82; stability

testing/free-surface effect, 42:26; stainless steel, 52:18, 54:5, 84:82; tank sentries, 31:52; twin tanks, efficiencies of, 84:82; tank pressures ratings, 84:82; venting, 74:20; 85:130, 87:4, 102:26, 127:30; vinyl ester coatings, 6:10, 52:67; water and asphaltine corrosion in diesel fuel, 112:100. *See also* SeaBuilt aluminum inspection port kits, 172:36

fuels. *See* compressed natural gas (CNG); diesel fuel, soy-based; gasoline; marine engines, diesel; marine engines, gas; propane

fuel-surge protector: in-line/Attwood, 44:54

*Fuji Color* (60' trimaran): 63:86

Fuji Electric: process-control unit/vacuum-bagging, 39:30

Fuji 40: water weeping from rudder, 151:12, 153:8, 154:4

Full-foiling keelboat: Quant 23 with T-foil rudder, 157:14

Full, Giffy: on survey reports, 30:26

Full, Giffy, author: "The Pros and Cons of Bonding," 65:49

Fuller, W.L., Inc.: Fuller plug cutter, 23:20

fumed silica: for controlling resin drainout, 33:46, 42:62, 59:30

fumes, removal: Worbst vacuums, 87:10; charcoal absorption system for small shop, 73:26, 28. *See also* emissions.

Funny Car, pre-preg fiber racing car body, 133:60

furling systems: GMT Composites PowerFuel booms, 141:6; Hydraulic Sea Furl, 2:70

furnace. *See* heaters/heating systems, boatshop

furniture, interior: design updates/weight-saving techniques, 6:39, 34:28, 92:76; divinycell foam-cored/Gunboat International boat, 144:58; Lazzara

Yachts/American Quality Furniture Co., 90:13; RTA (ready-to-assemble) applications, 40:42. *See also* interiors, arrangements/decoration; interior joinerwork/cabinetry

fuses: current ratings, 37:4; for high-capacity DC systems, 38:55; ignition-protected, 38:55, 41:38; labeling/documentation, 132:80; sources, 36:45, 37:4; types, 36:41

Fusion Sailcraft: bonding hardware/fastenings, 18:4

Futura Coatings, Inc.: Ultrachrome instrument panels, 9:56; Ultrachrome 4005, 49:59, 49:60

---

**A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z**

---

GAF Chemicals Corporation: ShipShape Resin Cleaner (acetone replacement), 4:58

Galaxy Boat: builder's liability lawsuit, 15:50

Galpin, Dave, author: "Selecting Structural Adhesives," 41:44

Galva Foam Marine Industries: houseboat lift, 16:52

galvanic isolators: ABYC Standard A-28/status monitoring requirement elimination, 118:64; applications/installation/location, 30:38, 31:4, 33:4, 41:21, 43:5, 45:105, 82:80, 100:56; fail-safe, 117:18; field-testing, 41:25; freshwater and saltwater conduction, 108:114; GFCI circuit breakers and, 43:5; vs. isolation transformers, 45:105, 82:80, 103:174, 138:18; placement of special galvanic isolator into boat's grounding system, 123:22; vs. polarization type, 108:114;

safety standards/performance/capacitor vs. non-capacitor, 41:21, 43:5, 60:27, 117:18

galvanic series. *See* corrosion, galvanic galvanizing: of steel, 33:28

Game, E. Charles (Charlie): on handrail safety, 15:50; International Marine Consulting Associates (IMCA), 33:3, 40:62, 59:21; on isolation transformers, 45:105; "Systems (1990s Retrospective)," 60:27; systems audits, 59:21

Gandino, Gino, yacht designer, 108:16

gangplanks: manufactured by NEB, 81:90

Gannon, Tom, author: "Workable Safety Gear," 3:19

gantry system, temporary: for one-off megayacht, 32:18

Garden, William: Askov trawler-yacht/Waterline Yachts, 83:72; on designing for production, 2:60; on survey disclaimers, 32:4; trawler yacht designs/Willard Marine, 153:58; and Vic Franck Boat Company, 64:96; *Yacht Designs III*/review, 21:68

Gardiner, Ginger, author: "Building the Big Gun," 144:58; "Compatibility Attained," 139:30; "Diagnosing the Dark Composite, Part 1," 123:58; "Diagnosing the Dark Composite, Part 2," 124:26; "Integral Tanks," 74:20; "IYRS Composites Technology Program," 136:10; "Keeping Liquids Liquid," 132:50; "Taking the Heat," 136:56; "The Unknowable Lightness of Composites," 142:40

Gardiner, Jim, author: "Why Some Dark Boats Blister," 64:22

Gardiner, Jim: builder profile/Consolidated Yacht, 47:34; and Egret Boat, 71:6; and Gougeon Brothers Inc., 125:36

Gardner, Dick: Glas-Craft/early spray equipment, 38:30

Gardner, Paul N., Company: battery-operated tensile tester, 131:54; resin scales/mixing equipment, 30:57; scratch testers (gelcoat hardness), 5:23

Gardner, William: Ventnor Boat Works, 76:10

Garalick Manufacturing: double-hooked boarding ladder, 81:10; fighting chairs and coaming bolsters, 81:10

Gartside, Paul, author: "Next Steps for Effective Industry Training," 169:136

Gar Wood: first FRP production boat, 38:30; wooden runabout replicas/restorations, 18:20

Garzke, William: on professional engineering licensure, 47:24

Gasiorek, Chris: on U.S. Naval Academy and U.S. Merchant Marine Academy confusion/boat *Hercules*, 108:6; Gaska Tape Inc.: polymeric foam tape, 48:86

gasoline: alcohol-to-fuel law, proposal for revocation, 161:3; benefits of biodiesel vs, ethanol, 160:54; ethanol (E15) and ban on use in marine engines, 160:54; ethanol usage in Brazil, 109:6, 160:54; oxygenated/tank corrosion, 37:48; phase separation/galvanic corrosion, 160:54; reformulated gas (ethanol/E10), problems of in marine engines, 107:46, 160:54; Renewable Fuel Standard (RFS) and renewable volume obligations (RVOs), 160:54; storage of ethanol blended gasoline, 160:54

gas sniffers: Matheson-Kitagawa Toxic Gas Sampler, 7:64; Safe-T-Alert, 7:64

gate valves: problems with, 38:4

gauges, engine. See instruments/instrument panel; navigation instruments/systems

gauges, strain: used in "smart" composites, 46:45

Geer, Abbot M.: on ABYC history/development, 37:4

Gaussmeter: less expensive iPhone app, 171:34; measuring electrical interference/compass and control station electronics, 171:34;

Gazelle: computer modeling program, 63:10

"G-code" (numeric control code): "Breaking the Code," 61:104

gearbox: Fabio Buzzi's gearbox design, 71:123; multi-ratio gearboxes, 71:123; two-speed gearboxes, 71:123; 80:76

Geared Up Systems: single engine, twin drives, 122:12

Geary, E.S., Capt.: letter on hurricane damage on island of Grenada, 92:4

gelcoat, application/shop practices/troubleshooting: alligatoring/spiderwebbing, 5:12, 7:50, 11:42, 50:46, 58:79, 84:52; blister prevention, 15:13, 19:44, 33:46, 33:57, 50:46; brush application vs. spray/Nautor, 84:52; catalyst/ratios/gel times, 1:6, 2:6, 7:50, 11:42, 45:76, 50:46, 171:18; chines, strakes, steps, and transom corners, 58:79, 60:5; clear gelcoat use for vessel interiors, 80:40; cracking/crazing, 13:36, 33:57, 48:16, 58:79, 90:94, 108:100; cracking/sample cutout edges, 49:24; cure/exotherms/"green," 15:13, 33:46, 33:57, 50:46; delamination, 5:23; defensive painting, 52:54, 90:94; dust caveats, 15:13, 52:54; fisheyes, 33:46, 41:50, 52:54; hardness development/testing, 1:6, 5:12, 5:23, 11:42, 11:50, 15:13, 48:16, 50:46, 83:22; in-mold coatings/adhesion/epoxy laminates, 49:59, 51:6, 79:114;

mixing/metering, 1:6, 2:6, 11:42, 15:13, 33:46, 33:57, 90:94; with molded integral structural grid system, 46:28, 46:35; nonskid stripe/lobsterboat work deck, 45:80; patch repair, 64:112, 90:94, 108:100, 111:82; with photo-curing resins, 18:8; print-through (causes/controlling), 7:50, 11:42, 18:33, 50:46, 108:100; quality/small shop, 45:76, 50:46, 64:112; secondary bonding/skincoat, 19:44, 23:4, 33:46, 33:57, 45:76, 50:46; spray equipment, 11:42, 21:18, 23:4, 33:46, 45:76; spraying/thinning, 19:44, 64:112. 90:94; styrene/softening, 41:50; temperature fluctuations/condensation, 33:46, 33:57, 50:46; thickness, 15:13, 21:18, 23:4, 90:94; 3M Sun Gun for color matching, 108:16; training video, 23:54, 64:112. See *also* blistering, gelcoat/osmotic; spraying equipment/systems/techniques

gelcoat,

formulations/applications/performance: alternative to/acrylics, 11:20; Armorcote IMC (In-Mold Coating), 13:70, 45:76; blister resistance, 13:70, 15:13, 23:4, 83:22; bondcoats/tiecoats for epoxy laminates, 49:59, 49:60, 51:6, 139:30; ECT 120, 139:30; epoxy (POX-E-GEL), 2:72; epoxy compatible gelcoat, 139:30; invention/development of, 38:30, 60:1126, 60:120; iso-NPG (neopentyl glycol) formulations, 7:50, 13:70, 15:13; isophthalic, 23:4, 83:22; low-VOC, 55:99; mold-release additives, 13:11, 60:124; polyester gelcoat/epoxy laminate, 42:52, 43:5; polyester gelcoat/vinyl ester laminate, 42:52; 83:22; polyurethane gelcoat/epoxy pre-pregs, 43:5; replaced by adhesive film, 57:88; resin ratio/VOC emissions

reduction, 20:40, 21:18; sag resistance, 13:70; shrinkage, 7:50, 11:42; styrene emission estimates, 53:73; vs. thermoplastic finish, 10:34; urethane gelcoat/epoxy laminates, 49:59, 49:60; virtual engineered composites (VEC) manufacturing technology, 101:62. See *also* epoxy gelcoat; polyester gelcoat; polyurethane gelcoat; urethane gelcoat

gelcoat, granite: GWIL Industries, 34:28, 34:32

gelcoat, tooling. See tooling gelcoat

gelcoat, weathered/deteriorated, causes/caveats/restoration: chalking, 13:70, 15:44, 15:49, 103:26; cleaning/cleaners, 15:44; compounding/polishing/finishes, 15:44, 15:49; fading, 15:44, 15:49, 18:33; 64:112; shrink-wrapping and, 18:33; yellowing, 15:49, 64:112

gelcoat blistering. See blistering, gelcoat/osmotic; blister repairs

gelcoat cleaners: types/applications, 15:34, 15:44

gelcoat finishes: Awlgrip, 15:44, 19:12, 19:20; compounds (polish/rouge), 15:44; copolymer wax, 15:44; Crystal TopCoat, 15:44; polishing paste, 20:56

Gelcoat Peeler Ltd.: robotic peeler, 3:60

gelcoat peelers/planers/shavers: applications/techniques/concerns, 3:60, 12:4, 13:4, 16:42, 22:51; Gelcoat Peeler, 3:60; Gel-Pac planing system, 10:52; Marine Shaver, 16:52, 27:70; micro-cracking and, 22:51; Turbo Shear, 27:70, 31:10. See *also* blister repairs, gelcoat/laminate removal

gelcoat removal. See blister repairs, gelcoat/laminate removal

Gel-Pac Ltd.: Gel-Pac gelcoat planing system, 10:52

GelPlane: gelcoat planer, 150:72;  
     ProScraper, 150:72  
 Gel-Strip, Inc.: gelcoat-stripping services,  
     22:51  
 gel-time retarder: 2,4-pentadione  
     (acetylacetone), 44:30  
 geltimer: determination of working time for,  
     95:16; for testing catalyst ratios, 1:6;  
     Skyodo geltimer, 95:16; source, 1:18  
 gel times: blister prevention, 15:13; catalyst  
     ratios/temperature/testing, 1:6, 2:6,  
     29:51, 33:46, 50:46; core bonding, 9:36,  
     33:46; gel-time retarder (2,4-  
     pentadione), 44:30; inhibitors, 113:22;  
     initiator ratios, 113:22; metric mixing to  
     accurately catalyze resin, 113:22;  
     promoters/accelerators (vinyl esters),  
     6:16, 35:4, 44:30; retarding gelation  
     (polyester, with impregnators), 7:5;  
     styrene emissions/reduction, 20:40,  
     40:17, 40:22; temperature/hot weather,  
     33:46, 35:4, 50:46. *See also* catalyst;  
     exotherms; resins, exotherms/curing  
     cycles  
 Gem Products: Gemlux electrochemical  
     polishing process/stainless steel, 49:79  
 GenCorp Polymer Products: Nautolex  
     marine vinyls, 6:52  
 General Automotive Specialty Co.:  
     Rotoswitch, 27:70  
 General Hydrostatics System: hydrostatics  
     software, 17:58  
 General Plastics Manufacturing: Last-a-  
     Foam, 54:5  
 generator, DC: Polar Power 22-kW  
     permanent magnet DC generator,  
     148:58; rewinding stator for voltages at  
     slower engine speeds, 148:58  
 generator, wind. *See* wind  
     turbines/generators/blades  
 generators/gensets, AC: carbon-monoxide,  
     77:28; carbon-monoxide protection,  
     45:5, 45:32; cogeneration, 77:28; with  
     DC-to-AC inverters, 25:30, 77:28,  
     112:74; energy cost for 1.5-kW  
     generator, 148:58; Entec West plug-in,  
     7:64; generator testing by Victron  
     Energy, 113:56; integrated  
     systems/wind/solar/water, 80:22; load-  
     sensing and starting capabilities, 77:28,  
     112:74; location/engine room layout,  
     37:26; paralleling/split-bus switchboard,  
     37:26; noise/vibration control, 5:42,  
     34:26; shoreside/grounding, 30:38,  
     30:44, 70:35, 77:28; Soot Trap and  
     Regeneration System, 29:58; Sine  
     Wave inverter/Charger, 77:28; transom-  
     mounted hydro generator/Watt & Sea,  
     130:10; water/DuoGen/taffrail generator,  
     120:52; wind generators, 80:22, 120:52;  
     WhisperGen/Stirling external  
     combustion engine, 77:28, 115:136; with  
     DC-to-AC inverters, 144:4  
 GENLAM: laminate analysis software,  
     47:53  
 Genmar Holdings: Virtual Engineered  
     Composites (VEC) infusion process,  
     69:3, 101:62  
 Genmar Industries: aluminum boats, 4:42;  
     sailboats, 6:34. *See also* Crestliner, Inc.;  
     Hatteras Yachts; Triumph Yachts  
 Genoud, Alexandre, boatbuilder, 127:8  
 Georgia-Pacific: FiberStrate-MR  
     hardboard, 35:58; SeaFrame laminated  
     Southern pine panels, 23:54  
 German Lloyd's (Germanischer Lloyd):  
     safety standards/testing cored  
     composites, 34:42  
 Germany: recycling movement/FRP  
     recycling programs, 60:82

Gerr, Dave, author: "A Designer's Perspective," 74:89, 102:26; "Drivetrain Fundamentals," 72:46; "The Dry Exhaust, Part 1," 111:66; "The Dry Exhaust, Part II," 112:48; "Exhaust System Fundamentals, Part One,," 89:66; "Exhaust System Fundamentals, Part Two," 90:34; "Fuel Systems for Pleasure Craft, Part One," 84:82; "Fuel Systems for Pleasure Craft, Part Two," 85:130; "More on the Fundamentals of Steering Systems," 99:34; "Rudder Control," 100:92; "Rudders—Rare to Medium Rare, 102:60; "Steering System Fundamentals," 98:76; "Under Metric Pressure," 90:112; "Venting the Boat, Part 1" 109:128; "Venting the Boat, Part 2," 110:104

Gerr, Dave: calculation formula, scantling methods vs. ABS formula, 105:32; on surfboat dynamic stability, 33:4; on air cushion in-tank venting, 87:4; on drivetrain fundamentals/aligning couplings, 73:5; response on fundamentals of steering systems, 101:4, 102:4; on fuel systems for pleasure craft/stainless steel tanks approved for diesel, 89:4; on keel and rudder engineering and construction, 98:4; on laminate thickness tolerances, 107:4; on metric units for pressure consistency, 95:4; *Nancy Lakin* shoal-draft cruiser, 100:36; on professional engineer licensure, 74:5; Solar Sal 44 solar-powered ferry, 169:6; on standards for powerboat stability, 113:4

Gerrard Design (Ancaster, Ontario): styling and design for Southport Boat Works, 95:38

Gessford, James D. (Jim): on honeycomb cores, 24:4; on paper honeycombs, 32:52

G.F. Equipment, Inc.: Capsizer rotating unit, 17:58

Gibbens, Andrew: on Ping-Pong balls as flotation, 59:5

Gibbs & Cox: acquisition of Donald L. Blount and Associates firm, 160:8

Gibbs & Cox's *Marine Design Manual for Fiberglass Reinforced Plastics*, 108:6

Gibco Flex-Mold: obit for Gibs Slaughter, founder, 146:10; RTV silicone nonskid covering, 37:48, 62:12

Gibson, Jason, author: "Process Control," 74:30

Gideon, Tony: on water pH in blistering, 17:17

Gilbert, Alan: engineer/on Sparkman & Stephens, 59:48; on Palmer Johnson, 53:28

Gilbert, Alan, author: "Speed Predictions," 59:56

Gilbert, John, Associates: NC lofting/cutting, 7:18

Gilding, Tim: Design Challenge, 129:18

Giles Ollier Design Team: large racing multihulls, 90:50; 91:154

Gillmer, Thomas C., naval architect and marine historian: obit., 126:8

Gilman, Lew (Old Town Canoe Co.): roto-molding, 4:40; thermoplastics development, 11:20

Gilman Corporation, The: Softlite closed-cell plastic ionomer foam, 40:66

*Guiana*: de Rothschild raceboats, 78:12

Glacier Bay Catamarans: diesel-electric powered moorings, 108:82; Ossa Powerlite generators, 108:82

Glacier Bay Refrigeration Systems: HFC-134a-compatible marine refrigeration,



- 16:35, 17:4, 26:8, 90:64; Barrier Ultra-R panels, 90:64; brushless DC motor (BLDC), 92:12; holding plate heat absorption capability, 91:34; permanent-magnet AC generators, 92:12
- Gladding-Hearn Shipbuilding: first H/G-H pilot boat/steel and aluminum structure, 150:34, 151:52; passenger boats/T-boats, 36:22; pilot boats/collaboration with C. Raymond Hunt Associates, 150:34
- Glas-Craft, Inc.: FRP specialty tools/accessories catalog, 18:54, 20:8; lightweight internal-mix flow coater, 27:70; LI Series FRP (spraying) System, 6:52; Spartan II PLC automatic touch screen control, 108:26
- Glasply: hullform with hydro-sponsons, 120:4
- glass: and deck profiles/designs in boats, 109:180; Durashield marine glass/Whispershield acoustic-rated glass, 129:8; I-Shades, 84:18; electrochromatic glass, 81:42; mineral glass/history and processing of, 81:42; roll-up Strataglass/motoryacht MJM34Z, 99:52; tempered glass for boats, 81:42; structural adhesives for, 41:44
- Glass Boat Works: boatyard fires/insurance, 1:50
- glass fiber. *See* fiberglass
- Glass Marine: boatyard fires, 1:50
- Glasshape Ltd.: wraparound windshield/motoryacht *Bliss*, 129:8
- Glasspar: early fiberglass, 41:58, 60:116, 60:120; 132:6;
- Glen-L Marine: affiliation with Ken Hankinson/design plans, 150:10; obit for Glen L. Witt, 169:6; profile of/Glen L. Witt, 150:10
- global economy and sustainability, 123:26
- global positioning system (GPS): placement for system, 152:58
- globalization: boatbuilding in advanced economies vs. economically undeveloped nations, 102:120, 103:6
- Globe Marine Products: replacement impellers/raw-water pumps, 53:89
- Glover, James, author: "Duty of Care Afloat," 144:80
- gloves: fitted with LED lights, 158:48; importance of, 60:5; review/sources, 3:19
- Glowacki, Edmund: on admeasurement/aluminum construction, 26:4
- GLS Corporation: environmental services, 33:69; recycled fiberglass, 37:66
- glue gun, hot-melt: Maximatic, 20:56
- gluing. *See* adhesives *entries*; secondary bonding
- gluing, edge-to-edge: clamp for, 2:70
- GMT Composites: ballast tanks for *Alvin*, research submersible vessel, 141:6; carbon composite rudder, 119:6; carbon fiber rig for *Lark* (daysailer)/Brooklin Boat Yard, 141:6; carbon fiber spars for *Summerwind* schooner/John Alden design, 146:40; furling booms, 141:6; PowerFurl Boom, 146:40
- GMT Decking Systems: teak decking, 5:26
- Goad, Dean: on Peel Ply/polyester resins/secondary bonding, 19:48
- Godfrey Marine: use of PT industrial plywood, 27:42
- Godwin, Chad: on Whisperprop diesel electric propulsion system and Solomon Technologies system "Electric Wheel," 102:4
- Goeb, John: on soldering terminal connections, 14:4

- Goeb, Capt. John H.: on surveyors and boatyards, conflict of interest, 70:5; recollection of Bob Derecktor, 77:5
- Goetz, Eric: on building *America's* Cup contenders, 53:50; on computer lofting, 24:26; on honeycomb cores, 22:20; on post-curing, 14:55; on pre-pregs, 24:18, 24:25; on vocational programs, 22:51
- Goetz, Eric, author: "Custom Boatbuilding (1990s Retrospective)," 60:27
- Goetz, Eric, co-author (with Jonathan Patton): "Medic!" 72:38
- Goetz, Eric and Patton, Jonathan: properties of resin systems/WESTSYSTEM® and Adhesive Technologies Ltd, 73:5
- Goetz Custom Sailboats: Ark technical library, 50:11; Child series, 53:50, 53:61; collaboration with Bruce Farr, 61:66; fabric impregnator applications, 5:34, 39:3; history and start-up of, 73:54; honeycomb cores, 2:20; one-off tooling, 10:42; post-curing, 14:55; pre-pregs, 24:25, 89:78, 95:16; recycle of Goetz facility/Vinnie ard/Fast Forward Composites, 173:18; facility/Vinnie Pard/Fast Forward Composites, 173:18; repairing *Young America*, 65:66, 72:38, 173:18; Resolute rowing shells, 54:18, 61:34; and Vincent E. ("Vinnie") Pard, shop foreman, 173:18;
- Goetz Marine Technologies: carbon fiber laminates/galvanic blistering/isolation from metal fittings, 57:30; carbon fiber masts/spars, 3:42, 10:52, 47:44, 66:11; carbon fiber shower stalls, 66:11; carbon-fiber yacht wheels, 6:52; fabric impregnator applications, 5:34, 39:3; and Derecktor Shipyards, 73:54; "flying I-beam," 61:11; post-curing, 14:45, 14:55; pre-pregs, 24:18, 64:82; 73:54
- goggles, safety: for blister repairs, 19:8; importance of, 60:5; review/sources, 3:19
- Gold Coast Yachts: and closed-molded composites, 124:42; composite wing masts, 14:8, 119:28; excursion catamarans, 3:11, 22:64; *Fujin*, infused carbon catamaran, 155:10; outsourcing, 37:16, 37:18, 74:54; *Spirit of Kauai* sailing catamaran, 124:42; passenger-carrying powercat, 124:42
- Golden Delicious*, Jack Sarin design: 62:26
- Goldhirsch, Douglas: on VOC emissions in small shops, 71:5
- Goldring, Jeff: on biodiesel's primary weakness vs. distillate fuels, 118:4; on dry exhaust/resilient mounts/noise isolation, 114:4; on limited stability of biodiesel for most boats, 118:4; on M80 Stiletto/Dept. of Defense Office of Force Transition, 129:3; on propeller nut installation/Never-Seez/thread-locking compounds, 126:6; on stepped laminate repair, 113:4
- Goldsworthy, Brandt: father of pultrusion process, 122:12
- Goodrich, B.F.: MA 429 film adhesive, 39:30
- Goodwin, John D.: on solution in checking short-circuit current, 104:4
- Good Turns: Turncouple firtting for easy connect and disconnect, 93:10
- Goodwin, John: on nano particles problem, 108:4
- Gorski, Dick: Letters Etc. obit, 73:5
- Goss Challenger*: wave-piercer catamaran renamed *Team Phillips*, 61:10, 62:46; abandonment of, 69:13
- Gordon, Mitchell, author: "American Marine," 19:28

- Gota alv River (Sweden): RIBS/fast boats trials/High Speed Boat Operations forum, May 2016, 166:64
- Goudy and Stevens Shipyard: 70:58. See also Hodgdon Brothers/Hodgdon Yachts.
- Gougeon, Jan C.: and DN iceboats, 170:10; obit, 142:8
- Gougeon, Meade: building DN iceboats, 170:10; and Dept. of Energy NASA Study/wood/epoxy composite material/wind turbine blades, 173:76; on DuraKore, 15:34, obit, 170:10
- Gougeon, Meade, author: "The Aging of the (Fiberglass) Fleet," 4:64; "Next Generation Composite Boatbuilding," 68:26
- Gougeon Brothers: anniversary, 30:54; blister repair manual/video, 21:60; cold-molding innovations, 51:3, 51:36, 125:36, 142:8; composites testing, 4:22, 4:64, 34:2, 60:27; composites testing/Hydromat test fixture, 34:42, 35:4, 36:4, 45:62, 55:79, 64:11, 68:26, 68:30, 149:56; on deck repair/replacement of waterlogged flotation foam, 37:48; and Dept. of Energy NASA Study, 173:76; on epoxies/secondary bonding/air inhibition, 19:44, 20:4; epoxy casting (fittings/hatch), 21:58; epoxy handling/application manuals/video, 21:60, 45:105; epoxy vs. vinyl ester/carbon laminates, 55:5; *Epoxyworks* newsletter now online, 166:16; FRP repair/maintenance manual, 21:60; gelcoat blisters diagnosis/repair/prevention manual, 21:60; G/5 five-minute adhesive, 27:70; G-32 catamaran, 42:52, 49:59, 68:26, 125:36; hardware bonding (epoxy annulus), 15:21, 15:32; on health hazards/shop safety, 1:30; impregnators/applications, 5:34; in-mold coatings/epoxy laminates, 49:59; post-curing epoxy/print-through prevention, 14:45, 34:18, 34:21; on repair of delaminated core bond, 9:36; Stresform tortured-plywood spars, 14:8; technical manual *The Gougeon Brothers on Boat Construction*, 173:76; technical publishing program (WEST System), 61:116; vacuum-bagging techniques/manual, 1:58, 30:24; vacuum-drying blistered hulls, 9:50; wind-turbine blades/stud bonds, 15:21; 125:36, 173:76. See also WEST SYSTEM products
- Gould, David F. III: response to In Search of Remediation for a Bad Rap, 94:4
- government regulations. See Environmental Protection Agency (EPA); environmental regulations, government; OSHA (Occupational Safety and Health Administration), regulations
- Gowens, Bob: on management/customer service, 29:8
- grab bars. 171:34
- Graco, Inc.: *Compliant Finishing Guide*, 15:70; Optimiser HVLP spray gun, 26:54; variable-mix ratio-proportioning system, 28:60
- Grady-White Boats: air-assisted airless spray equipment, 28:48, 28:52; cross-training/team-building/productivity, 13:54, 29:29; and C. Raymond Hunt Associates, 139:18; power catamaran/F-26b Tigercat, 45:120
- Grainger, W.W.: modular shelves, 17:34
- gram scale. See resin (gram) scale

Granata, Peter: deck design/plug construction, 28:10; interior design/Cobalt, 28:32; on product safety/liability, 15:50; on retrofit program, 18:4; runabout design/Marine Design Resource Alliance, 51:11

Granata, Peter, author: "Beating the Look-Alike, Perform-Alike Syndrome," 17:8

Granata Design. See Granata, Peter

Grand Banks Yachts (American Marine Ltd.): builder profile/mid-'70s financial crisis, 19:28, 19:32; hatch design/safety/liability, 15:50

Grand-Craft, Inc.: wooden runabout replicas, 18:20

Granholm, Lars: on EC (EU) certification, 41:38

granite coatings: Granite Coat, 34:28, 34:32; granite gelcoat, 34:28, 34:32; Granulon, 34:28, 34:32

graphics, computer. See computer software, 3-D modeling/graphics

graphics, decals/stripping tapes: Graphics 2000 video, 23:54; Mark IV cutting-and-assembly system, 13:70; removal (Scotch-Brite discs), 16:52

graphics, inlaid: for interior laminate surfaces, 34:28, 34:32

graphics, painted-on: Cigarette Racing Team, 12:18

Graphics 2000, Inc.: graphics video, 23:54; Mark IV cutting-and-assembly system, 13:70

graphite hulls: 32'6" hydroplane, 2:12

graphite lubricants: for stainless steel fasteners/corrosion potential, 39:20, 39:4

Graul, Timothy (Tim): on ABS rules, 38:4; on bilge pumps and tunnels, 46:5; on drivetrain fundamentals, 74:5; on hose regulations, 78:7; profile of, 110:68

gravity, longitudinal center of (LCG). See longitudinal center of gravity (LCG)

Gray, Ben: globe circumnavigation in custom trawler, 111:12

Gray, Lysle: on galvanic corrosion/bonding, 8:44; on safety standards, 8:24; on through-hulls/sea valves, 8:42

Green, Bill: founder of Green Marine/obit, 153:8

Green, Geoff, author: "FEA," 78:26' "Down to Cases: Five Examples of FEA," 78:29

Green, Jeff: on design mock-ups, 9:28

Green Marine (U.K.): carbon composite sailboats, 123:32; ex-aerospace autoclave for large components, 162:14; high-temperature tooling, 136:56; obit for founder, Bill Green, 153:8; *RAN //Judel/Vrolijk*-designed IRC72, 123:32, 153:3

Green, Robert: on professional Engineer licensure, 86:4

Greene, Eric: on SOLAS (Safety of Life at Sea) requirements, 78:7

Greene, Eric, author: "Fire Protection in Marine Composites," 62:78

Greene, Eric: *Marine Composites* book, 59:10; on fire-restrictive ceramic coatings, 64:5

Greene, Ray: builder of first fiberglass-polyester boat, 134:62; development of FRP construction, 38:30, 134:62

Greenline Powerboats: parallel hybrid cruisers, 164:58

Greenwood, Dana: builder profile/Consolidated, 47:34

Greenwood Forest Products: Select Boat Panels (custom industrial plywood), 9:56, 16:12; XL10 pressure-treated panels, 27:42; XL50 marine decking panels, 11:52, 27:42

- Greiner, Capt. Kurt: on seaworthiness, 34:55
- grid systems, structural: molded integral, 46:28, 46:35, 46:37, 48:4, 58:54, 143:10
- Griffin, Nancy, author: "Marine Trade Associations," 4:9
- Griffon Hovercraft Ltd: passenger-carrying hovercraft, 96:52
- Grimes, Paul: on bonding fastenings, 18:4
- Grimnes, Martin: on heavyweight reinforcements, 18:54
- Grimnes, Martin, author: "Fast Forward," 54:112
- grinders, disc: for blister repair, 16:42; Cyclone, 14:57; Fein angle grinder, 36:78; Festo (DiaTrim) air-driven, 5:26; Makita, 15:44, 27:70; Mini Angle Grinder, 21:60; Tercoo/rubber disc tipped with tungsten carbide studs, 141:30
- grinders/polishers, discs for: aluminum oxide, 26:54; diamond abrasive, 12:60, 20:56, 25:59; Rx-Cut depressed-center, 40:66
- grinding laminates: carbon-fiber, 28:18; dust control/air quality, 28:38, 28:48; Kevlar, 28:18; moisture/blister detection, 23:42; secondary bond lines/repairs, 19:46, 19:48, 20:32, 20:37, 25:25, 39:19, 39:27, 42:5
- grinding pads: lubricant for, 37:36
- Grinnacle Import Export Pte. Ltd.: teak supplier, 54:18
- Grob, John: on repair contracts/deadbeats, 27:61
- GROCO (Gross Mechanical Laboratories): Hydromatic sea strainer, 61:115; as emergency bilge pump, 61:115; SSA (Strainer Service Advice) alarm system, 131:12
- Grogin, Scott: on marketing/advertising, 6:42
- grounded vessel: damage/keel repairs, 38:20, 39:4, 82:80; litigation, 50:20
- ground effect vehicle(GEVs): Tupelov A-3 aerosledge, 165:10
- grounding: AC/shore-power systems, 30:38, 30:44, 33:4, 41:21, 66:38, 103:174; galvanic isolators, 30:38, 33:4, 41:21, 41:25, 43:5, 100:56, 103:174; galvanic and stray current tests, 100:56; ground plate, 66:38, 82:80; Ideal SureTest Model 61-164, 102:4; marine wiring, 8:12, 9:5, 23:4, 32:36, 33:28, 82:80, 94:84; radio frequency (RF) ground, 82:80; silicone rubber for sealing electrical connections, 104:4; silver/silver chloride half-cell, 100:56; testing grounding circuits, 30:38, 30:44, 41:25, 94:84, 100:56. 102:4
- Group, Gregory G.: on wet balsa core, 97:6
- Group, Gregory G., author: "Uncertain About Certification," 170:88
- Groupe Finot: profile, 64:64; and Giles Ollier, designer, 90:50; Quest 30/Zach de Beer, 83:50
- Grove, Stephen, Dr.: on SP Systems Resin Infusion Technology and heated tooling, 81:6
- Grow Group: Stop-Katt catalyzer neutralizers, 7:64
- GS Manufacturing: dispensing systems, 31:68; early days/FRP development, 38:30; Gemini-VR chopper gun/proportioner system, 10:52, 31:68; Gemini-VR variable-ratio pumps, 31:68; Little Willie Extrusion System, 31:68; Little Willie RTM system/slave pump, 17:58
- Guardian Marine International: 85' Fast Patrol Craft, 60:11

Guertin, Jed, author: "Inadequate Standards?" 114:120  
 Guest: lighting manufacturer, 87:97  
 Guetat. Gerald, author: "Classic Runabouts from Switzerland," 143:10; "Donald Healey: Sports Cars and Sport Boats,": 173:6; "Heart Transplant," 159:10; "The Last Big Steam-Powered Yacht," 163:14; "Pedrazinni at 101," 155:10; "Two Steps Ahead," 149:10  
 Guilford, Charles, author: "Case History of an OSHA Inspection," 92:30  
 Gulbrandsen, Oyvind: on hybrid propulsion/matched propeller/fuel efficiency rules, 144:4  
 Gulfstar boats, 169:44  
 Gulfstar Yachts, 169:44; bought out by Viking, 169:44; Dynamic Loading Analysis/loading measurement, 169:44  
 Gump, Roger: Bluffton Millworks/CAD/CAM for interior joinerwork, 40:42. *See also* Cornelius & Gump Woodworks  
 Gun Boats International: conditions and costs/boatbuilding/South Africa, 144:58, 146:4; daggerboard reconfigurations, 173:18; G4 foiling catamaran, 156:3, 156:40; Gunboat 55/infused carbon fiber hull, 144:58; racing technology cruising catamarans, 144:58; refit of production catamarans/Vinnie Pard/Newport Ship Yard, 173:18  
 Gunert Refrigeration: HFC-134a air conditioners, 21:12  
 Gunnell, Skip: aluminum-fiberglass hybrids, 17:19  
 Gupton, Ginger, author: "A Fast, Lightweight, Custom Cruiser," 45:62  
 Gurit: formerly SP Systems, 169:6  
 Gurney, Alan: obit for, 140:7; book *Below the Convergence*/Antarctic Continent,

140:7; book *The Search for the White Continent*, 140:7; book *The Compass*, 140:7; *Great Britain III* /Derek Kelsall, 154:4; IOR disillusion/Polar Pursuits, 151:40; *Nepenthe*/Erich Bruckmann/Bruckmann Manufacturing, 152:4; profile/designs of, 151:24, 154:4; rowing tank model of 5.5 meter, 151:24; *Windward Passage*, 151:23, 154:4  
 Gustafson, Neil William: on honoring those who build and repair boats, 83:4  
 GWIL Industries: granite gelcoat, 34:28, 34:32  
 gypsum cement: for plastic-faced-plaster (PFP) tool, 60:96, 60:103; for RTM tooling, 27:34  
 gyro stabilizers: Seakeeper gyro, 113:72, 120:4, 146:10; Sperry Gyroscope Co., 113:72; Mitsubishi Anti-Roll Gyro, 113:72

---

A B C D E F G **H** I J K L M N  
 O P Q R S T U V W X Y Z

---

Habersetzer, Gary: on surveyors according to a surveyor's association, 164:4  
 Hacker Boat Company: wooden runabout replicas, 18:20  
 Hacker, John L.: Fairline Strut, 46:5  
 hacksaw, air-driven: Super-Saw, 25:59  
 Hadley, Robert O. (Bob): profile/Sea Hydro hydroplanes, 59:10  
 Haesche, Steve: on marine advertising/marketing, 6:42  
 Haft, Jay Sturat, Co.: Lavac Zenith marine toilet, 8:54  
 Haines, Drew B.: on professional engineer licensure, 86:4  
 Hakanson, Petter, designer: amphibious assault craft, combat boat (CB-90),

- 167:28; IC-16 M11R Interceptor craft/Dockstavarvet AB, 167:28
- Hale, Phillip: on hurricane damage/planning/insurance, 27:18
- Hale, Thomas (Tom), author: "Point Counterpoint," 69:95
- Hale, Thomas (Tom): on ABYC standard/galvanic isolators, 33:4; on ABYC standards development, 36:46, 36:48, 36:50; on carbon-monoxide alarms, 45:32; on flotation foam, 37:58; on NFPA standard/fire protection, 44:18
- half models, carved: N.G. Herreshoff, 54:3, 54:82; Sonny Hines, 54:3, 54:62
- Hall, Eric: rig/spar design innovations, 6:20, 47:44
- Hall, Frank, Boat Yard: advanced-composite repairs, 43:54; fire protection, 44:18
- Hall, J.T.: on Placid Boatworks and high-performance recreational canoes, 99:4
- Hall, J.T., author: "Advanced Composites in the Adirondacks," 97:60; "Plastic Kayak Construction," 29:33
- Hall, Jack: Pantawee Marine/profile, 128:62
- Hall, John: on fire protection, 44:18. See *also* Hall, Frank, Boat Yard
- Hall, Peggie: on holding tanks/sanitation system design, 52:4
- Hall Spars: carbon fiber beams/spars/*Cogito*, 39:30, 134:42; carbon fiber spars, 47:44; carbon mast, 65' Park Avenue boom, 124:12; fabrication of carbon gooseneck fitting in rigging application, 61:34; pre-pregs, 24:18; seamless carbon rigging/SCR 35, 119:6
- Hall, Thomas: boatshed covered with Dura-Skrim, fiber reinforced polyethylene, 155:4
- Hallberg, Carl: on propeller nut sequence variations/Never-Seeze, 124:6
- Hallberg-Rassy Yard (Orust, Sweden), profile of, 82:58; and distributed power systems, 131:46
- halocarbons: phaseout/restriction, 2:31. See *also* Halon; Halon, replacements for
- halogen lighting: 87:80; Dr. LED replacement for common marine halogen lights, 115:74; Lopolight LEDs, 115:74; replacement 1-amp halogen bulbs, 99:20
- Halon: phaseout/restriction/replacements, 2:31, 17:4, 26:3, 30:60, 60:27
- Halon, replacements for: FE 241, 30:60; inergen, 21:12
- Halvorsen, Nils (loftsmann)L Sparkman & Stephens designed 12-meter *Intrepid*, 88:46
- Hamberger, Sylvan "Ham": Tracker Marine/obit for, 158:8
- Hamilton, John G.: on carbon fiber, 26:4
- Hamilton Ferris Company: electrical supplier/Creative Energy Challenge, 28:54
- Hamlin, Cyrus: Elderyacht 30, 20:8; model testing, 55:32; Outward Bound Boats/Rodger Martin, 108:16l
- Preliminary Design of Boats and Ships*/review, 12:24
- Hamlin, Frank: on marine wiring, 8:12
- hammer, air-impact: applications, 33:58, 64
- Hampton boat model: Dick Pulsifer/Charles Gomes, 108:6
- Hancock, Brian, author: "A Dream and Variations," 141:24; "Vendee Evolution," 162:52
- hand cleaner: RC Hand Cleaner, 21:60
- Hand, William (designer): Handy Billy fiberglass version/Southport Island Marine, 109:17

Handcraft Mattress Co.: marine mattress, 6:52

handcapped-accessible boats: power catamaran/Multimarine Composites, 119:6; enAble trade show, 119:6; Surf/C.Raymond Hunt Associates, 81:90

handholds: in control station, 48:66, 48:79; design/occupant protection, 34:13; placement of, 50:20

handcapped-accessible yacht: John Anderson/Tim Nolan design, 57:15

hand layup. *See* laminating techniques, hand layup/open-molding

handrails: safety/liability, 15:50

hand tools. *See* tools, power, hand-held/portable

Hankins, Mike: team-building seminar, 24:58

Hankinson, Ken: small boat plans/affiliation with Glen-L Marine, 150:20

Hankinson, Ken, Associates: 46' tunnel-slot speedboat, 4:30

Hankinson, Ken, author: "Beached Whales, Droop Snoots," 39:67

Hanna, Tom: on acetone replacements, 33:20, 33:26

Hannifin, Parker. *See* Parker Hannifin

Hansen, Mark: on RIB market/Zodiac-Hurricane Technologies, 48:50

Hanson, Bill: utility design/SAFE Boat, 52:12

Hanse Yachtzentrum: repurposing two existing molds, 163:114; profile, 91:136; increasing production output, 106:10, 163:114

Harbor Boat Company: 28'3: pocket cruiser, 2:12

Harbor Wing Technologies: unmanned sailing drone/Stiletto 30 catamaran, 133:96; X-1 Concept vessel, 133:96; X-2 Concept, 136:10

hardboard substrate: FiberStrate-MR, 35:58

hard-chine hulls: Hard-Chine BoatDesign software/online access, 33:69. *See also* chines

Hardcore Composites: SCRIMP, 31:42

hardeners: high-temperature, 33:57; ratios for epoxies, 1:6, 33:57

hardness testers, for checking fairing layers: 67:49

hardware, marine: aftermarket niche, 12:18; 14:26, 14:32; bonding/bedding, 15:21, 18:4, 28:27, 29:4, 30:8, 31:34, 32:44, 32:52, 36:78, 69:70, 139:96; Cigarette Racing Team, 12:18; custom castings/patternmaking, 42:46; Paul E. Luke, 14:26, 14:32; mounting, marine hardware, 139:96; quality control, 34:72, 54:79; Rybovich, 14:26, 14:32; stainless steel/corrosion, 54:70, 54:70, 139:96; stainless steel/electrochemical polishing process, 49:79; watertight deck hatch latch, 150:72. *See also* deck hardware/fittings

Hardwood Plywood & Veneer Association (HPVA): plywood buyer's guide, 23:54

hardwood-veneer laminates: Oberflex, 35:58

Hardy, Kevin: on through-hull/underwater lights, 117:4

Harford, Ken: on components/catalogs/specifications, 49:4

Hargrave, Jack: on designing for production, 2:60; Hatteras/river patrol boat design, 57:7; Hargrave 41 convertible/GlasCoat, 103:183; induction to North American Designers Hall of Fame, 113:10; motoryacht *Alexis* refit, 85:96; obituary, 41:5, 43:36; profile/design career, 43:3, 43:36;



- book/biography/*American Classic: The Yachts and Ships of Jack Hargrave*, 99:30
- Harken: Black Magic Air Blocks, 45:105; custom turning blocks/outhaul cars for Pedrick 65 yawl, 168:44; Ratchamatic block, 45:105; traveler-car, 3:60
- Harken, Peter and Olaf: 12-Meter Regatta, 50:11
- Harken's Air Winches, for solid wing sails, 162:12
- Harley, Howard: SES hullform/sportfisherman, 48:6
- Harley Boat Corporation: SES hullform, 48:6
- Harman, Anthony: Design Challenge, 122:24
- Harmon, Geoff: on galvanic corrosion/oxidation/tinned copper wire, 60:5
- harness boards: for wire-harness manufacture, 35:58
- harnesses: safety/Ronstan genoa track-fitted with shackle cars, 150:72; 3-D CAD model, 40:50
- Harper, John K., author: "A Business Lesson From Europe," 74:96
- Harper, Dr. Virginia, author: "Surveyors According to One Surveyor's Association," 163:132
- Harper, Dr. Virginia: on Show Your Work, Not Your Business Card and bias of article, 162:6; on Uncertain About Certification, 171:4
- Harrell, Neal, author: "Waging a War for Talent," 149:84
- Harrigan Hoists: electric chain hoists, 26:54
- Harris, Brian, author: "The Pit-Crew Perspective," 65:120
- Harris, Brian: on bottom prep/environmental compliance, 31:10, 31:16, 31:18
- Harris, John: and Chesapeake Light Craft, 152:24
- Harrison, John, Sr.: Harrison Maritime Collection/antique outboard motors, 119:66
- Harrow, Ed: on *Machinery's Handbook* and lack of propeller nuts topic, 122:6
- Hart, Kevin: *Professional BoatBuilder* magazine as lifeline reference source for island isolation, 91:10
- Hastings Marine: stern-gear tools, 48:86
- hat section stiffeners, 77:9; 78:7
- hatch cover: four-way hatch hardware, 64:11; production/open-molding vs. RTM, 27:34
- Hatch, Jack: on odor-removing efficiency of HeadBuster head cleaner and BilgeBuster, 90:4
- hatches: aluminum/Freeman Marine 2200 Series, 41:62; Beckson HT series plastic utility hatch, 122:12; EC (EU) certification, 41:38; composites, fabrication of, using aluminum mold pieces/De Vries Scheepsbouw, 132:24; flush balsa-cored hatch/FB Design, 134:36; Flushline low-profile, 34:59; FRP/pre-molded boss (deck/trunk cabin), 42:71; leakproof installation, 21:58, 113:4; Lewmar Flush Hatch, 122:12; liability/safety considerations, 15:50, 113:4, 118:30; Moonlight/solar vent, 30:60; Opal quick-hinge system, 107:14; placement/carbon-monoxide back-drafting, 45:32; recessed hatch latches, 171:34; RTM-molded, 46:16
- Hatfield, Roger: on composite wing masts, 14:8; economic downturn/Gold Coast

Yachts, 124:42; *Nube Volante* charter cat, 124:42

Hatteras boat, 61:5

Hatteras Yachts: CAD/CAM applications, 9:28; design mock-ups, 9:28, 37:26; early days/FRP development, 38:30, 103:186, 154:12; development of PropSmith, 62:12; handrail safety, 15:50; Hargrave designs, 43:36, 99:30, 104:100; and Howard Abbey, 104:100; *Knit Wits* Hatteras 41/largest U.S.-built recreational powerboat, 160:8; lightning protection systems, 43:64; obit for co-founder David Parker, 154:12; plant layout/management tools, 17:34, 28:48; 72-footer motoryacht, 106:10; structural adhesives, 28:27; vocational training, 20:18; waste management, 28:48; yacht repairs/retrofits, 57:76

hauling and launching: boat lifting and blocking, 50:3, 50:38, 52:4, 53:4, 99:20; contracts, 37:61; decommissioning inspections, 44:49, 50:38; haulouts for surveys, 30:72; launching traditions, 51:11; safety issues, 50:38, 53:4. *See also* boat lifts/hoists; boat stands/jackstands; boat storage; boatyards/marinas, management

Havilland Mosquito fighter/bomber: balsa core material, 150:4, 151:6

Havsted, Jim: software designer/fabric flotation collars, 65:97

Hawkes, Grahame: deep-diving probes/small subs, 55:16

Hawkes Ocean Technologies Inc.: deep-diving probes/small subs, 55:16

Hawkeye Industries: Duratec polyester epoxy bondcoat, 49:59; Duratec vinyl ester primer, 34:21

Hawk Marine Power: supercharged gas inboards, 17:44

Hawksley, Graeme: "Beyond Efficiency Criteria Alone," 109:140; "Hybrid Marine Power, Part I: Efficiency Theory," (Nigel Calder) 107:82; "Hybrid Marine Power, Part 2," (Nigel Calder), 108:82; hybrid propulsion work, 127:30, 164:58. *See also* Hybrid Marine (UK).

Hawley, Chuck: on ozone-clean marine refrigeration/service, 26:17

hawsepipes: anchor-stowage systems, 22:28, 22:29; cutting and choosing fittings, 105:26; hawseholes, 106:4; water intrusion and structural failures of, 105:26;

Hayash, Edward: on strength testing of cored laminates, 8:4

Hayden, Sterling: on saloons, 57:15

Hanes, H.W.: anti-Coanda effect system, 91:10; on plum hulls, bubbly flows, and drag reduction techniques, 91:12

Hays, Bruce N.: on FastShip surface modeler, 68:5

Hayter, Rebecca, author: "Factory Tour," 94:70

Hazard Communication Standard: chemical hazards/workers' rights, 1:30

hazardous materials: hurricane protection/preparations, 27:21; management systems/strategies, 27:8, 140:18; OSHA regulations/1989, 1:30. *See also* chemical sensitivities/allergies; spills, fuel/chemical, cleanup/containment kits

hazardous waste. *See* boatyard waste disposal/reduction/compliance

Hazelett, Bill: Hazelett Corp./bungee mooring anchor rod, 30:8, 16, 111:30; boat leveler, 111:30

Hazelett Corp.: bungee mooring anchor rode, 30:8, 30:16, 111:30

Hazouri, Charles J., author: "Thermal Imaging G-10 Laminates," 164:40

HBI (Hard Bottom Inflatables): RIB designs/product line, 47:16

H-boats: diesel fuel systems/Code of Federal Regulations for, 84:52

HCFCs (hydrochlorofluorocarbons): in non-CFC flotation foams, 2:28, 2:31, 24:62; phaseout/impact on marine industry, 26:51; phaseout/restriction (refrigerants), 26:8

head, arrangements/design:  
     Dometic/Sealand VacuFlush and holding tank system, 104:12, 132:6; holding tanks, 50:69, 52:4; layout/cruising boats, 5:50; layout/small power cruisers, 39:67; systems technician training/certification, 57:99. *See also* holding tanks; plumbing; toilets, marine

Headhunter, Inc.: Royal Flush marine toilet, 27:70; tank sentries, 31:68

headliners: mock-ups for tooling, 9:28. *See also* liners

Healey, Bill: builder profile/Viking Yacht, 46:16, 46:26

Healey, Bob: builder profile/Viking Yacht, 46:16

Healey, Donald: founder of Austin Healey sports car and Healey 55 Sport Boat, 173:6

health, occupational. *See* Occupational Safety and Health Administration (OSHA), regulations; worker safety/occupational health

hearing: anti-noise headsets, 36:78; noise perception/physiology, 5:42, 78:104

hearing protection: Aden QT-100, 8:54; anti-noise headsets, 36:78, 78:104; ear plugs and earmuffs, 78:104; shop safety/practices, 3:19. *See also* noise/vibration control

Heart Interface Corp.: inverter supplier, 25:30, 25:34, 25:40

Heart Inverter: AC/DC grounding conductor, 82:80

heat, specific: laminating table/exotherm cycle/panel warping, 45:68

heat/hot-weather boatbuilding: catalyst formulations/alternatives, 2:6, 15:13, 33:46, 33:57, 42:62, 44:30, 50:46; compressed-air spray systems, 33:36; epoxy/two-part/tropical formulation, 42:62, 43:5; FRP laminating techniques, 33:46, 33:57; resin systems, 35:4, 42:62, 43:5, 50:46, 64:22. *See also* temperature, of boatshop

heat-cured composites: oven/temperature-control system for, 39:30. *See also* ovens/autoclaves

heat distortion temperatures (HDTs): paper thermometers, 8:54; post-curing (epoxy), 14:45, 14:48, 64:22, 109:170, 136:22; and print-through, 2:6, 7:50, 14:45, 14:48, 14:55, 18:3, 29:8, 42:52, 45:76, 136:22; PVC cores/print-through/checkboarding, 9:38; shop temperature/humidity, 33:46, 42:52, 109:170; tooling construction, 21:50. *See also* print-through, control/prevention; thermocouples, electronic

heat gun: Mark IV, 12:60

heat lamps: for drying water-saturated flotation foam, 37:48; quartz/infrared thermography, 35:42

heaters, cabin: carbon monoxide protection, 45:32; fire protection/prevention, 44:18, 44:22; Paul E. Luke, 14:26, 14:32; systems technician training/certification, 57:99

heaters/heating systems, boatshop: belly-band, 15:13; for blister repairs, 17:11; catalytic heaters/blister repairs, 8:54, 16:42, 17:11; for gelcoat, 11:42; heat recovery/ventilation system, 2:67; Heat-Triever air-rotation system, 5:26; infrared/blister repairs, 17:11; infrared/thermoforming plastics, 10:34; kerosene, 19:25; Master Mark Boat Heater, 6:52; for painting/aluminum boats, 37:42; for painting/repair tent, 19:25; for post-curing epoxy, 14:45, 42:52, 136:22; for resin drums, 15:13; and secondary bonding, 20:32; shop-built post-cure heater panel/Brooklin Boat Yard, 136:22. *See also* ovens/autoclaves; temperature, of boatshop

Heat-Triever Systems: air-rotation and heating system, 5:26

Hebert, Paul: Corsair Marine/production efficiency, 29:22

Hebert, Susan: on gelcoat maintenance/restoration, 15:44

Heesen Yachts (The Netherlands): enviable order book, 125:8; superyacht with Fast Displacement Hull Form/van Oossanen & Associates, 134:6

Helgeson, David A: on designer Dave Martin and the "Sparkman & Stephens school" of naval architecture, 107:4

Heli-Coil: Drill-Out bolt/stud extractor, 46:65

Helix Mooring Systems: screw anchors, 30:8, 30:16, 38:4

Hella Inc./Hellamarine: halogen reflector deck light, 40:66; 87:97

Helleberg, Niels: on gallaing, 38:20; Interkeel interchangeable keel, 37:66, 38:20

Hell's Bay Boatworks: ultra lightweight 16' Whipray model, 139:30. *See also* Chittum, Hal.

Hellyar-Brook, Roger, author: "Thirty-Eight Weeks (Marine Systems Technician course)," 57:99

Hellyar-Brook, Roger: and Landing School curriculum, 75:112

helm. *See* control station

helm pump: Kobelt, 6:52

Hemingway's boat: *Pilar*, 1:27, 137:3

hemp: for plastic-faced-plaster (PFP) tool, 60:96, 60:103

Hemp, Patrick: on Navigating a Sea of Standards, 156:4; RINA Services, 156:4

Hendricks, W. Kern: on expanding epoxy foam, 140:4; on potted fastenings, 15:21; on market downturn, 12:4; on post-curing epoxy, 14:45; on water permeation/osmosis, 15:60. *See also* System Three Resins

Hendrickson, Ray: on dragging hose/cable, 30:4

Hendrickson, Ray, author: "Tents Make Storage-Shed Space More Usable," 19:25

Henriksen Group (Norway): REBS (Rapid Entering and Boarding System), 166:64

Henwood, William: on boatbuilding/boat handling skills, 34:5

Herex foam: cross-linked/high-density, 23:54, 74:68

Herion Inc.: solenoid-operated valves, 3:63

Heritage Industries: Sanding Sticks, 35:58

Hermans, Bob: on linear polyurethane paints/techniques, 21:26

Herreshoff, L. Francis: Buzzard's Bay 14 sloop/Northwest School of Wooden Boatbuilding, 137:44; on yacht-construction equipment/techniques,

- 45:76, 69:156, 104:3; Marco Polo design, 81:58
- Herreshoff, N.G.: on ballast keel bolting, 40:4; half models, 54:82; metal construction pioneer, 53:31; model testing, 55:32; Buzzards Bay 30 sloops/restoration by French & Webb, 115:184; P-Class sloop conversion/Tern Boatworks, 171:60; universal rule/J-Class yachts, 141:50
- Herreshoff Manufacturing Company: aluminum construction/*America's* Cup boats, 53:31; conversion of boats from wood to fiberglass/Paul Coble, 88:46; diagonal strapping, 51:36; half models/design process, 54:82; references/plans, 54:82, 54:92; refinement of *Alerion* sailboat/Carl Schumacher, 139:18; restoration of Buzzards Bay 30 sloops/French & Web, 115:184
- Herreshoff Marine Museum: half-model room, 54:82
- Herreshoff, Sidney: *Arion*/first fiberglass auxiliary sailboat built, 157:14
- Hertzler, Sharon: on custom castings/patternmaking, 42:46
- Hewson, Roger: profile/growth of Sabre Yachts, 11:34, 11:39
- Heydenrych, Albertus, author: "The Madoff Effect," 119:84
- Heydenrych, Albertus: on conditions and costs of boatbuilding in South Africa/Gunboats International, 146:4
- Heyman, Gabriel: Design Challenge, 133:40; *Celeste Neo* sailing yacht, 133:40
- Hexel Corp.: Kevlar-fiberglass fabric, 32:21; on post-curing epoxy, 14:45, 14:48; Hexel, France/Axson Technologies, 128:8; Axson SVB20 two-part sprayable silicone, 128:8
- HFC-134a: blowing agent/flotation foam, 24:62; recovery/recycling, 26:8, 26:17; replacement for R-12 refrigerant, 16:35, 26:8, 26:17, 30:54, 31:4, 154:28. See also air conditioners; marine refrigeration
- HF Interiors: and Knight & Carver Yacht Center, 127:42
- Hi Build Systems: Extender putty-delivery/fairing system, 27:70
- Hi Tech Marine Systems: gelcoat compound/polisher, 15:44
- Hickman, Albert: Hickman Sea Sled, 49:42, 51:11, 119:66; New England Boatworks, 81:90
- Hickman Sea Sled: design, 49:42, 119:66; restoration, 51:11
- high density foam plugs, 162:14
- High Modulus: advanced composites/engineering/New Zealand, 54:43, 54:44, 55:58, 62:12, 68:11, 71:6, 119:50, 121:100, 131:28, 142:40, 153:20; B3 Smart Pac box kits, 121:100, 133:114, 142:40; core kits/SmartPacs for Sunbird Yachts (China), 103:104; impact testing various single-skin and sandwich options, 120:18, 121:100; repair of *Play Station*, 63:10; repair of *Team Adventure*, 72:38; setup of office in U.S., 153:20; XSR48 stepped hull superboat/Fabio Buzzi, 110:12; weighing fabrics, 142:40
- High Seas Yacht Service: founding of Straight Line Marine, 159:36; mobile marine-repair, 159:36
- High Speed Boat Operations (HSBO) Forum: speed at sea for search-and-rescue crews and fast patrol boats, 150:10, 166:64; trials on Gota all River,

166:64; introduction of DSI (diesel spark ignition as spec unit at IBEX 2015, 166:54; motion simulator for high-speed boat training/Crudén (Amsterdam), 166:64; REBS Rapid Entering and Boarding System (Norway), 166:64

high-speed craft:

accelerations/injuries/problems, 140:34, 141:3, 142:52, 149:48, 150:10; axe-bow boats/reduction in vertical acceleration reductions, 150:14; designing consoles for speed, 141:62, 142:4, 159:56; Dyena's Acceleration Recorder device, 142:8; handlebar-equipped helm station, 159:56, 160:4; High-Speed Boat Operations forum, 138:6, 142:50; high-speed craft and related human-factors design/MacDonald Marine Consultants/Armstrong Marine, 152:36; hull bottom deflection/impact absorption using composite membrane panels, 150:22; human impact exposure data/debate, 149:48; Hysucat hydrofoil-supported catamaran, 150:10; method for plotting vertical accelerations vs. craft displacement, 141:36; steering and intuitive control system, 159:56; straddle seat/helm chair, 159:56; structural calculations, 67:31, 68:32, 109:100

hiking seats, articulated: 65:11

Hile, Theodore: on Last-a-Foam, 54:5

Hill, Bob: on NC lofting/cutting, 7:18

Hill, Ruth, author: "DragonFlyer 3.2," 148:18; "One Jig to Build Them All," 162:66

Hilliard, Gary: Rybovich/builder profile, 25:42; on weight reduction, 29:8;

Hillis, Dave: studies on FRP waste reduction, 55:26, 55:30

Hinckley Company, The: air tool system, 33:58, 33:64; bedding contour-cut foams, 31:34, 31:42; Bermuda 40/Bill Tripp, 105:56; canvas bag storage for shrouds and headstay furler, 127:8; color-coded telltales winterization idea, 127:8; CopperClad applications, 7:42; design mock-ups, 9:28; drying techniques/blister repairs, 16:42; Hinckley DS42 diesel-electric sailing sloop, 92:12; JetStick/36' Picnic Boat, 57:110, 113:72, 146:10; joystick controls, 146:10; Kevlar reinforcements, 28:18; mold-release systems, 12:27; Picnic Boat design/Vicem Yachts, 102:34; pulling engine to extract shaft, 150:4; repairing severely damaged boats, 25:18, 25:25; resin infusion/SCRIMP/emissions reduction, 31:42, 38:3; Turbo Shear/blister repairs, 27:70; vacuum-bagging, 30:22; varnishwork, 19:36; workers' comp premiums/safety program, 23:13, 24:11; worker training, 13:54

Hines, Lyn, author: "Alt.En Ferries," 122:12; "Rhinophoto," 132:6; "Low Impact for a Tall Ship," 157:14

Hines, Sonny: on cored bottoms, 51:22; profile, 54:3, 54:56, 54:62

Hines-Farley Offshore Yachts: closing of, 145:12; cored bottoms, 51:22; *Double Dog* sportfishermen, 101:38; longest and fastest 63 Sportfishermen extension build, 145:12; "number one sportfishing boat" by *Robb Report*, 65:11; profile, 54:3, 54:56, 54:62; *Reel Steel* sportfisherman/Refit Excellence Award, 168:14. See also Jarrett Bay Boatworks hinges: stainless steel/electrochemical polishing process, 49:79

- Hinterhoeller, George: and C&C Yachts, 92:48
- Hinterhoeller Yachts: Niagara 35/Niagara 42/Mark Ellis designs, 138:32, 139:74; Nonsuch series/free-standing rigs, 55:46
- Hitachi Power Tools: electronically controlled routers, 1:68
- Hi-Tech Hose, Inc.: Techflex HTR hose, 45:105
- Hi-Tek Chemical Corporation: Epco-Tek 2000 epoxy antifouling coating, 9:56
- Hledin, Peter, designer-builder: profile of/Douglas Marine, 109:80
- Hobbs, Bob: stepped powerboat designs, 5:52
- Hobie Cat-Hobie Outback: Hobie beach cat, 149:10; obit for Hobart Laidlaw Alter, inventor/designer, 149:10; pedal-powered kayak, 54:18
- Hoch, Wes: on mold-release systems, 12:27, 13:11; on Polylite Profile tooling resin system, 16:52
- Hodgdon, Tim: hatch installation, 21:58; and Hodgdon Yachts' transition to carbon prepreg construction, 153:20; profile/management of Hodgdon Yachts, 51:52, 70:58, 153:20
- Hodgdon Brothers/Hodgdon Yachts: all-carbon prepreg and tooling preparations for 100' *Commanche* sloop, 153:20; business excellence award, 70:58; *Commanche*, sloop/tooling and build, 153:20; expansion and diversification, 153:20; hatch installation, 21:58; infrastructure and attention to details, 153:20; large cold-molded sloop/*Antonisa*, 51:52, 63:70, 70:58; *Liberty*, barrel-backed commuter, 51:52, 70:58; post-curing/print-through prevention, 34:18; profile, 70:58; resin-infused superyacht tenders/Michael Peters design, 153:20; *Yorel*, traditional motoryacht, 70:58; *Scheherazade*, ketch, 70:58.
- Hoechst Celanese: Marco method, 32:28, 26:44, 38:30; Trevira polyester fabric, 7:50, 7:62, 22:8, 22:20, 32:4
- hoists. See boat lifts/hoists
- Hoke, Michael J. (Mike): Abaris Training, 47:57, 52:67; on impact tolerance/aramid (Kevlar) vs. carbon fiber, 45:5; on ply orientations/scarf ratios/advanced-composite laminate repairs, 45:5, 52:67; on ultrasonic inspection/survey techniques, 35:42; on working with Kevlar, 56:61
- Hoke, Michael J. (Mike), author: "Repairing Heavily Loaded, Advanced-Composite, Single-Skin Laminates," 43:54
- holding tanks: aluminum/stainless steel, 54:5, 162:38; anti-siphon vent, 52:4, 162:38; baffles/fittings/venting, 162:38; discharge hose, 50:60, 52:4; Dometic SailVac single compact unit, 132:6; Dometic/SeaLand 28HTS-VG system, 104:12; joker valves, 52:4, 72:73; polyethylene (PE) tanks, linear vs. cross-linked, 162:38; Raske three-way valve, 7:64; simplified design, 50:69, 52:4; steel/flexible bladders/polyethylene (PE)/fiberglass-reinforced plastic (FRP), 162:38; systems technician training/certification, 57:99; tank sentries, 31:68; treat-and-discharge system, 52:4, 72:73; vacuum/three-in-one, 55:99; venting, 49:16
- hole punch: hydraulic, 2:70
- holesaws: cutting techniques for samples/coupons, 49:24, 49:25, 49:27; 69:70; for rodholder installation, 86:62

Holland, Brian (designer): Signature Series/Sunbird Yachts (China), 103, 72, 94; 128:38

Holland (Netherlands): Maritime Research Institute of the Netherlands (MARIN) model testing facility, 49:42, 58:26; Royal Huisman Shipyard, 42:20, 42:24, 45:47; Vitters Shipyard, 58:13

Holland Composites: Gunboat and G4 builder, 156:40

Holland, Glenn: Holland's Boat Shop/fast lobsterboats, 45:76

Holland, Ron (New Zealand boat designer): 71:70; and Cheoy Lee, 103:112, 107:14; and global finite element analysis (FEA), 78:29; sailing yacht *BooToo* refit/Holland Jachtbouw, 143:40; Swan scullboats, 84:52; Transocean Explorer Yachts/*Marco Polo*, 107:14

Holland Jachtbouw: general contractor, 143:40; outsourcing/efficiency and profitability at, 143:40; sailing yacht *BooToo* refit, 143:40; workbenches on wheels, 143:40

Holland's Boat Shop: fast lobsterboats, 45:76

Hollister, Stephen: on CAD systems, 7:18, 8:35, 9:5; on computer modeling/fairing, 9:5

Holseberg, Fred: builder profile/Consolidated, 47:34

Homeland Security Response Boat: 87:4

Homelite. See Textron Inc.

Homewood Products Corp.: prototype permanent-magnet DC generator, 142:26

Honda Marine: CNG-fueled engine, 44:49; four-stroke fuel-injected outboard, 22:56

honeycomb cores: Advantage racing shells, 106:112; aerospace-

grade/Rybovich, 25:42; aluminum, 22:20, 45:54, 56:40, 59:5, 106:62; aramid/Nomex, 22:20, 32:21, 39:30, 45:54, 45:62, 56:40, 56:61, 81:93, 91:154; aramid/Nomex Decore, 51:114, 52:4, 81:110, 131:28; carbon pre-preg panels/Nautor, 84:52; contour-cut, 36:78; cutting/joining/lamination techniques, 22:8, 58:13, 64:82; engineering course, 58:13; facings/reinforcing webs, 52:30; flat-panel construction, 45:54, 45:62; for hydroplanes, 56:40; for interiors/techniques for working with, 51:114, 81:110; 85:46, 92:76; kiteboat hull, 162:12; kraft paper/Nomex, 22:20, 32:21, 39:30, 45:54, 45:62, 133:46; kraft paper/Tricel, 22:20, 24:4, 32:52; kraft paper vs. end-grain balsa/PVC foam, 32:52, 72:38; kraft paper vs. polypropylene, 36:78; laser shearography, 155:38; new stacking sequence for structural strength, 106:62; the Panel Pin, 169:44; photo-curing resins with, 21:4; polypropylene/Nida-Core, 21:4, 22:20, 36:78, 52:30, 115:18; polyurethane-foam-filled/Weskor, 52:30, 54:5; pre-skinned, 45:54; resin fillets/strength, 45:54; shaping/cutting tools for, 25:59; sheet adhesive for, 36:78; skin-to-core adhesion, 36:78, 45:54; for soundproofing insulation, 36:78; sources, 22:26; types/manufacturing/applications, 22:20, 32:52, 61:52, 62:46, 85:46; University of California Los Angeles course on, 76:10; use in wing mast, 61:34

Hood, Bob: on Little Harbor paint booth, 42:20



Hood, Richard B. (Rick): builder profile/diversification, 33:36

Hood, Ted: builder profile/diversification, 33:36, 33:40, 145:12; autobiography *Ted Hood: Through Hand and Eye*, 103:14, 145:12

Hood, Ted, Design Group: *Geronimo* expedition yacht, 81:90; megayacht *Anakena*, 45:47; *Nomad* high latitude cruising yacht, 81:90; profile, 33:36; purchase of by Ted Fontaine Design Group, 78:12; St. Roque pilothouse ketch, 81:90

Hood, Ted, Yacht Builders: outsourcing/quality control, 35:4; profile, 33:36

Hood Enterprises, Inc.: diversification, 33:36, 33:40; Navy contracts, 30:18, 33:36; production vacuum-bagging, 30:18

Hood Ocean Systems: tracked crane, 36:20

Hood Sailmakers: Vectran mainsail/*Endeavour*, 41:58

Hood, Ted: obit, 145:12

Hood Yacht Systems: builder profile, 33:36; Hydraulic Sea Furl, 2:70

Hook Appropriate Technology, The: Pintite stainless-steel hose clamp, 35:58

Hopf, Kurtis A., author: "A Comparison of FRP Tooling Processes," 71:106

Hoquiam Boat Shop: transition/fishing boats to yachts, 40:28; vocational training, 20:21

Horizon Yachts of Taiwan: infusion and transportation of two 130' hulls, 107:14

Horn, Kevin A.: on blistering/vinyl esters, 12:4

Hornbeck Boats: profile, 97:60; lightweight canoes, 97:60

Hornell Speedglas Inc.: Speedglas auto-darkening welding lens, 39:98

Horner, John C., "Jack": ABYC board chairman, boat reviewer, obit, 148:10

Horvath, Paul, author: "Posi-Turner," 10:52

hose: ABS/LR classification, 39:80; chases/dragging tools, 28:14, 30:4; Hi-Tech Techflex HTR/polypropylene, 45:105; Nyaflow high-pressure, 4:58; Nylobrade/bilge pumps, 44:26; sources, 49:21; types/standards, 49:16. *See also* sanitation/discharge hose; exhaust hose; fuel hose

hose, exhaust. *See* exhaust hose

hose, fuel. *See* fuel hose

hose, sanitation/discharge. *See* sanitation/discharge hose

hose clamps, stainless steel: Clamp Key/Murray Corporation, 150:72; double-clamping, 51:6; Dual Bead Super Sealing Clamp/Murray Corporation, 150:72; Pintite, 35:58; T-bolt bands, 46:5, 49:16, 51:6; for wet-exhaust systems, 43:44, 46:5, 49:16, 51:6

hose reel: manual-rewind/Rapid Reel, 48:86

hose: Good Turns Turncouple fitting for easy connect and disconnect, 93:10

HotVac Hull Cure Ltd.: 69:13

Houghton, Charles G.: on growth of electric boat companies, 78:7

houseboats: re-defining term "vessel"/houseboat vs. floating home, 145:120; Sharpe Houseboats (KY), 105:12. *See also* Lozman v. City of Riviera Beach, Florida.

hovercraft: commercial hovercraft/Aluminum Marine Consultants, 168:68; 50-mph, 2:12; heavy duty ramp for/C. Raymond Hunt

Associates, 139:18; Neoteric Hovercraft, Inc., 66:11; passenger-carrying hovercraft/Griffon Hovercraft Ltd, 96:52; SES hullform/catamaran hybrid, 48:6; inventor, Sir Christopher Cockerell, obituary, 61:10

HoverDynamics: 50-mph hovercraft, 2:12

Howarth, Michael: Cat Harbor Boats, 20:8; Pacific Seacraft, 10:20, 25:8

Howell, John: on restoration renaissance on early fiberglass boats, 136:4

Hoyt, Garry: Freedom Yachts/advertising, 31:80; Freedom Yachts/early FRP, 60:116; on sailboat design/market, 6:20; on spar design/technology, 3:42; Waterbug/pedal powered boat, 153:8

Hoyt, John G. III, author: "On Becoming Savitsky," 126:64

Hoyt offset rig, 126:8

H2ube: extruded aluminum tubes for holding canvas enclosures, 103:14

Hubbard, Mark: depthsounder installation/drag reduction, 45:29

Hubbard, Ron: Marco Polo series/*Mazu*/Cheoy Lee Yard, 128:38

Hubble, E. Nadine: propeller research, 46:52, 46:62

Huber, J.M., Corp.: alumina trihydrate (ATH) plastic/polymer filler, 25:59

Huckins Boat: vintage Huckins Corinthian motoryacht retrofitted with pod drives, 129:54

Huckins Yacht Corp.: cored bottoms, 53:4; recession business strategies, 121:62; Sportsman 40 cruiser/replica market, 18:20, 20:4

Hudson Marine Plywood: marine decking panel, 27:42

Hudson River excursion boats: Scarano Boatbuilding, 164:22

Hugger, Ted, author: "Catalogs: The Boatbuilder's Front-Line Salesmen," 4:50; "Changing Over to High-Performance Resins," 42:52; "Effective Public Relations," 2:17; "Inexpensive Roller-based Coating Tools," 8:52; "Looking for a Few Good Boatbuilders," 34:59; "The Marketing Partnership," 6:42; "A New Source of Marine Marketing Data," 23:64; "Shooting Boat Videos on Location," 22:42; "Vacuum Bagging," 1:58; "The Video Game," 16:22; "Wing Masts," 14:8; "Working the Boat Show," 36:60; "Writing a Good Press Release," 2:20

Hughes, Homer: on designing efficient boats, 17:4; on hoeshot hulls, 113:4

Hughes, Ken: on propane as refrigerant, 28:6

Huisman Shipyard. See Royal Huisman Shipyard

hull, turning/rolling: 64' schooner, 58:13. See *also* boat lifts/hoists; hull lifting/rolling/turning systems

hull color. See color, hull; color, interior

hull vane: Van Oossanen & Associates, 154:12

Hullform: design/fairing software, 17:58

hullforms. See design/engineering considerations/parameters

Hull Identification Numbers (HIN): affixing, 59:5, addresses of manufacturers, 60:5; displaying, 61:5; European Certification rules for, 63:38; fraud and criminal misdirection of, 71:27; and hidden HIN, 69:70, 71:6; implementation and changes in, 71:27; legality of, 69:70; Mighty DataDot, alphanumeric identification code, 71:6; reverse-label makers, 60:5; U.S. Coast Guard

requirements, 31:62, 35:52; use in damage assessment repairs, 97:174

hull lifting/rolling/turning systems: *Antonisa*, 63:70; Capsizer, 17:58; Posi-Turner, 10:52; rotating units/West Marine Products and Services, 60:11; rotating unit/Delta Marine Industries, 94:32; shop-built/C-shaped jigs, 58:13. See *also* boat lifts/hoists; roto-molding

hull liners: flexible Impact liner, 109:17

hull-to-keel joint: keel attachment/fasteners, 38:20, 39:4, 40:4; leaks/capsize, 23:24; structural adhesive for, 20:32, 26:56

hull-to-deck joint, aluminum-fiberglass hybrid construction: extruded aluminum gunwales, 17:31; shoebox joint/Tom Fexas, 17:19; structural adhesives, 41:44

hull-to-deck joint, fiberglass/composite construction: adhesives/sealants, 60:104; bolted/flanged, 33:19, 86:62, 91:96; design options, 27:66; flanged/Pacific Seacraft, 10:31; flex/loose or torn-out fasteners, 60:104, 63:123; offshore powerboats/structural strength, 49:54; part fit/fiber-to-resin ratios, 59:30; plywood reinforcement, 40:54, 41:5; rolled flange joint, 47:40; shoebox joint, 35:34, 47:40, 60:104; structural adhesives, 20:32, 26:56, 29:8, 41:44, 42:5, 91:96; taping, 60:104; untapered cored edge in, 70:92

hull-to-deck joint, polycarbonate acrylic alloy: structural adhesive/Plexus methacrylate, 60:11; two-part adhesive/no fasteners, 115:142

hull tool: at Lazzara Yacht shop, 67:110

humidity: and blistering, 4:22, 4:27, 15:13, 15:60; and core bonding, 9:36, 33:46, 42:52; and laminate quality, 3:27, 33:46,

75:78; and secondary bonding, 15:13; shrink-wrapping caveats, 18:28; and static discharge, 22:12. See *also* condensation; moisture

Humphrey, John: on Hobie Alter obit photo correction, 149:12, 150:4

Hunt, C. Raymond: Boston Whaler, 2:34, 2:38, 50:32, 100:120; Concordia yawl, 50:32; deep-V hullform, 47:16, 50:32, 69:52, 95:38, 100:120, 111:12; 135:26, 139:18, 147:64, 150:34; on designing high-speed planing powerboats, 31:20; and Fairey Powerboats/deep V hull/license to hotmold, 147:64; heavy-duty hovercraft ramp, 139:18; *Mopie*/designs and refinements, 162:76; profile/retrospective, 50:32; *Thunderbolt* powerboat/1961 Cowes-Torquay Race, 111:12. See *also* Hunt, C. Raymond, Associates

Hunt, C. Raymond, Associates: Baltic custom motoryachts, 85:46; Black Watch Boats, 33:36, 81:26 composite/thermoplastic airboat, 44:35; deep-V hullform, 47:16, 50:32, 69:52, 95:38, 150:34; deep-V pilot boats/collaboration with Gladding-Hearn, 150:34; diversified services, 139:18; F-26 Tigercat, 45:120; and Grady White Boats/Sea Ark, 139:18; high deadrise monohedron hull, 150:34; Hunt 90 project at New England Boatworks, 81:110; Husky Airboat, 53:12; Rapid Response Boat, 139:18; 33' express cruiser, 58:13; ; 27' guide fisherman design, 3:11; motoryacht *Mostro*, 62:12; motoryacht *Starlight*, 64:82; motoryacht *Tumblehome*, 97:82; traditional RIB-design RAM24, 61:10; wheelchair adaptive motoryacht, 73:82, 81:90. See *also* Hunt, C. Raymond

- Hunt, Jim: on Boston Whaler, 2:38
- Hunter Marine Corporation: CruisePac marketing program, 6:42; lightning protection systems, 43:64; marine batteries, 18:44, 20:50; molded integral grid/liner, 46:28; profile/Child series, 53:50, 62:46; sailboat market, 30:48; theEdge, trailerable planing motorsailer, 116:10
- Hurley, James: on Misbehavioral Analysis, 165:4
- hurricanes/major storms: damage assessment/repairs, 25:18, 27:18, 66:64; preparations/insurance, 27:18; preparedness/moorings, 30:8, 38:4; recovery/rebuilding, 20:8, 25:18, 27:18; salvage operations, 20:6, 66:64; structural plywood/survivability, 42:5
- Hurst, Andrew, author: "Greener Grass on the Other Side of the Pond," 167:72
- Husick, Charles (Chuck), author: "Boat Glass," 81:42; "A Modest Proposal," 68:81; "Biodiesel," 77:21; "Designing for an Electrical Emergency," 62:7; "Designing an Instrument Panel," 65:33; "Heads," 72:73; "A Laser Measurement System," 66:113; "Running on 100% Biodiesel: A Case Study," 77:22;
- Husick, Charles (Chuck): builder of prototype sea strainer, 61:115, 106:10; on advanced technologies and research composites engineering, 68:5; on heat and UV radiation/halogen lamp vs. incandescent lamps, 90:4; mechanical stop control for engine, 64:5; on simple, effective 24-volt power bus, 77:5
- Huss, Rowland: on secondary bonding preparation/problems/troubleshooting, 39:19; on taping and tabbing/laminate schedules, 39:19
- Hutchins, Al: inventor, Hutchins Manufacturing, 87:10
- Hutchins Manufacturing: random orbit sander, 87:10
- HVLP spraying equipment. See spraying systems/equipment, high-volume, low-pressure (HVLP)
- Hybri-Chem: polyester-urethane hybrid resins, 21:60, 28:60
- hybrid diesel electric boats: experimental HD-X power core/Jack McCoy, 118:40, 127:30; *MDV-1 Immanuel* Dutch fishing vessel/Kramer Marine Engineering, 170:10; Mochi Long Range 23, 127:36; Zogo launch/Stephens, Waring & White, 127:30; serial and parallel applications, 142:26; serial and parallel categories/ZF/Beneteau, 127:30, 127:30
- Hybrid Marine (UK): external electric machine/hybrid propulsion/Graeme Hawksley, 127:30, 164:58
- Hydra: Hard-Hull, 29:33; roto-molded polyethylene kayaks, 29:33
- HydraPower Systems: retractable thrusters, 6:52
- HydraTech Boats: epoxy/vacuum-bagging, 53:20
- hydraulic dinghy lift, 130:44
- hydraulic fin stabilizers, 122:52
- hydraulic mini jack: 63:10
- hydraulic launches: U-shaped, sling, and hydraulic lift trailers, 72:10. hydraulic power systems: 68:81
- hydraulic press: at Baltic Yachts, 85:46
- hydrochlorofluorocarbons. See HCFCs
- HydroComp, Inc.: EasyProp 1.0 propeller software, 5:58; NavCad propulsion design software, 17:58, 26:54, 46:62; SmartEngine engine-monitoring software, 45:105
- hydrodynamic peeling, 80:40

hydrodynamics: dimensionless speeds, 128:18; hydrodynamic lift/hull vane/Van Oossanen & Associates, 154:12; interaction of waterjets with hulls/*Destriero* model, 109:100; model testing/resistance, 55:32, 56:26, 58:26, 68:32, 74:54, 78:46; performance prediction, 141:36, 145:30; powering improvement using stern flaps, 70:81; sponson performance in Bladerunner design, 72:10; tank-testing/Carderock, 42:39, 49:42, 56:26, 58:13, 58:26; tank-testing/David Taylor Model Basin/Series 62, 128:18; trihedral/stepped-cavity/tunnel hullform, 49:42, 59:10, 72:10. *See also* computational fluid dynamics (CFD); computer software, hydrodynamics/performance prediction; computer software, hydrostatics/stability/weight; model testing; stability, dynamic

hydrofoil: Boeing PHM missile vessels, 172:22; Candela speed boat prototype and electric propulsion/foils, 173:34; Dynamic Stability Systems (DSS) advantages of, 157:68; classifications of, 157:68; design mistakes in, 157:68; Edorado Marine/runabout with retractable foils, 173:34; Elektrofoil/foiltwister, 173:34; Eplee 817 foil, 160:32; early foiling craft, 172:22; foil materials, 157:68, 160:32; immersed foils with mechanical controls, 173:34; T-foil rudder/shifts lift to leeward, 157:14; foil configurations, 139:108, 160:32, 172:22, 173:34; foil considerations, 160:32, 161:3, 173:34, 54; foiling missile patrol boats, 173:34; global rights/Hull Vane BV, 161:3; foil layup, 160:32; high-speed trimaran ferry/Japan/Naiad Dynamics, 173:34;

hydrofoil-supported catamarans/fabrication and structural design, 157:68; Hysucat hydrofoils/Mamba 350, 124:12; HYSWAS (Hybrid Hydrofoil Small Waterplane Area Ship), 49:45; kayak/Flyak, 98:12; *Krilo* Eclipse/Croatia, 173:34; lift-to-drag ratio, 157:68; patents/Peter van Oossanen, 161:3; performance prediction program, future of, 139:108; positioning, 160:32; sailing (Trifoiler), 6:20; Seabubbles/prototype with electronic foil controls, 173:34; *Sea Legs* Chris-Craft cabin cruiser with fully submerged foils, 172:22; Slovenian Quadrofoil, 173:34; surfboards/eFoil and Jetfoiler, 173:34; Edorado Marine/Swedish Foiltwister/mechanically controlled foils, 172:22; Swiss and United Arab Emirates HY-X prototype with retractable foils, 173:34; *Valaria* IV/Bayliner Monterey/retractable foils, 172:22; T-flap hydrofoils, 133:96, 139:108, 172:22; titanium hydrofoils/Bugatti/yacht tender, 132:62; *USS Hayes*, hydrographic survey ship, 157:68; *USS High Point* patrol vessel, 172:22; ventilation and cavitation, 160:32; *Viktoria*, gift to Richard Nixon, 63:10

hydrogen fuel cell system: study of/Alternatives Energies (Alt.En), 144:10

Hydrohelm Marine Systems: hydraulic engine-control systems, 28:60

Hydrolite: proprietary hot-molded process, 151:6. *See also* Minchen, Rod; Duramold; *Spruce Goose*/wood airplane/Howard Hughes

Hydromat test fixture: for laminates with off-axis fiber, 72:22; panel testing machine/Gougeon Brothers, 149:56; for

standardized composites testing, 34:42, 35:4, 36:4, 45:62, 55:79, 69:156; 149:56

Hydromatic, sea strainer: 61:115, 106:10; as emergency bilge pump, 61:115

Hydronautics Research Incorporated: model testing, 56:26, 56:28

HydroNova Boatworks: development of The Clam, folding-rigid inflatable boat (FRIB), 71:6

hydroplanes: C-class hydroplane hull and deck infusion/North Idaho College/composites program, 148:10; evolution/development of, 56:40, 59:10; dihedral tunnel hull/Bob Hadley/Sea Hydro, 59:10; fighter-jet style boat, 77:10; 32'6"/Ron Jones, 2:12; *Miss Budweiser*, 125:8, 130:44; *Miss Spokane*, Unlimited-class hydroplane replica/Murdo Cameron, 128:8; "pickle fork" hydroplane mold, 148:10; stitch-and-glue MiniMax Sea Flea hydroplane, 142:8; Unlimited/Fabrication Specialties/Ron Jones, 56:40

Hy-Lite Power Boats Inc.: welded aluminum builder/Ontario, 51:11; *Green Wing II*, designed by Michael Peters Yacht Design, 66:11

HYMAR (Hybrid MARine) project: BluWav Systems electric propulsion motor, 142:26; optimum propeller analysis for Volvo Penta D2-75 diesel engine, 150:50; performance data on conventional hull and performance of hybrid systems, 124:54, 127:30; 132:6; ICOMIA technologies assessment, 132:6, 142:26, 143:6

Hypalon: RIB construction, 48:50

HyperVent Marine: air circulation product for reducing condensation under berths, 72:10

Hysol Engineering Adhesives: Maximatic hot-melt glue gun, 20:56

Hysucat Marine (South Africa): high speed craft/hydrofoil supported catamaran, 150:10, 157:68

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

IBEX (International BoatBuilders' Exhibition & Conference): attendance compilation for, 76:104; Innovation Awards, 128:80; interactive online exhibits, 69:13; informational session on licensure, 76:104; parallels between first show in 1992 and latest show, 122:3; 2005 seminar on titanium, 132:62; SNAME's special session on stability/2014 show, 150:88

IBEX U: introduction of region specific seminars, 76:10

ice-class ships: *MS Endeavour* ice-class ship, 89:16; tank-testing/Canada, 56:26, 56:38. *See also* polar voyage

Itchiban Yacht Painters: and Vinnie Pard/Newport Shipyard, 173:18

ICI (Imperial Chemical Industries): refrigerant market, 16:35, 26:8

ICI Advanced Materials: Verton RF nylon composite, 12:60

ICOMIA (International Council of Marine Industry Associations): and HyMar Project, 127:30; and worldwide superyacht code/ISO standards, 91:192, 104:96, 111:12

I-Core Composites: structural core materials/PlyScrim 100/Armor/corrite, 110:12

i Float: marine leisure affiliate marketing website, 133:12

Iguana 29 amphibious: topside opening panels deploy tank treas, 157:14  
*iLAN Voyager* (70' trimaran): 63:86  
 ILC Dover: Drumroll, 26:54  
 ILC 40, construction of by Westerly Marine, 61:52  
 Illinois Tool Works (ITW): purchase of DeVilbiss, 37:71  
 Imagenocean Yacht Design: Design Challenge/Silver monomaran, 129:18;  
 Imbert, Laurent: on sprayable lightweight core/Euromere's barrier coat products vs. Spraycore barrier coat products, 113:4  
 IMCA. See International Marine Consulting Associates  
 IMCI. See International Marine Certification Institute (IMCI)  
 IMOCA. See *also* International Monohull Open Class Association  
 impact injuries: data/terms/units for, 149:48; linking exposure levels to injury risk, 149:48; measuring impacts, 149:48, 150:10; whole body vibration, 149:48, 150:10  
 impregnators (wet-pregs). See fabric impregnators (wet-pregs)  
 impulse suppressors: lightning protection/electronics/PolyPhaser, 43:64  
 IMREX. See International Marine Repair & Refit Exhibition & Conference (IMREX)  
 Imron (LP paint): spraying tips/performance, 19:12  
 IMS. See International Measurement System  
 Imtra Corporation: DC-to-DC converters, 115:74; Frigast 12-volt dimmer switch, 55:99; Frensch Resolux fluorescents and TouchLEDs, 87:97  
 Inboard-powered boats: rudders and steering systems for, 98:76

Inboard Propulsion System (IPS): Volvo Penta 400 and 500 IPS, 93:20  
 Incat: 298' high-speed ferry, 53:12; wingcraft ferry prototype, 64:11  
 Indmar Products Co., Inc.: gasoline inboard engines, 17:44; 285 V-8 engine, 14:57  
 Industrial design: need for in marine industry, 92:88, 103:14, 109:180  
 Industrial Finishing Technologies: GEO RDA HVLP spray system, 32:52  
 industrial plywood. See plywood, custom industrial  
 Industrial Quality Inc. (IQI): infrared thermography/thermal-imaging systems, 25:18, 35:42  
 Industrial Shipping Company (Nova Scotia): hotmolded runabout hulls, 147:64; International 14/Charlie Bourke-design/51 Bourke, 150:4; Yellow Jacket Boat Company purchase of hull shells, 147:64  
 inergen: Halon replacement, 21:12  
 Infinity Yachts: 50' raceboat/DuraKore strip-planked construction, 15:34  
 inflatables. See rigid inflatable boats (RIBs)  
 information exchange:  
   design/engineering/construction, 6:5, 17:11, 33:88; environmental compliance/benchmarking, 20:40, 27:61; pricing/profit, 9:13, 33:88; surveying, 37:80. See *also* computer applications, online (Internet)  
 infrared thermography: challenges of, 161:36; for non-destructive surveying/composites testing, 25:18, 35:42, 43:54, 85:22, 123:58, 126:18, 139:5, 161:36, 164:40; vs. ultrasonic methods, 124:26; flash thermography/Thermal Wave Imaging, 124:26

Ingalls Shipbuilding: VARTM fabrication, 48:35

Ingersoll-Rand Co.: Cyclone grinders, 14:57; stitching machine/laminate stacks, 57:88

inhibitors, resin. *See* resin inhibitors

injection molding: with Luran S, 34:59; and production increase, 65:11. *See also* Resin Injection Recirculation Method (RIRM)

injuries, workplace: prevention/safety programs, 17:2, 23:13, 23:14, 24:62, 28:54; response to/workers' comp, 23:13, 24:11. *See also* first aid; worker safety/occupational health

Inland Plywood Company: custom industrial plywood/Special Boat Panel, 28:8

Inlet, Inc.: Original English E-Clamp, 10:52

Innovative Composite Engineering: carbon masts/tubes, 165:10

Innovative Lighting Inc.: 87:97

Innovative Technologies Group: low-polluting engines, 27:61

instability, dynamic: causes/cures/high-speed planing boats, 31:20, 31:28, 33:4, 34:5, 44:38, 64:64; 84:26, 93:62; end-swapping/misbehavioral analysis, 163:68, 166:6; Texas flats boats tests, 163:68. *See also* stability, dynamic/positive

instability, yaw (bow steering): bow drop in turn and yawing/Coanda effect, 166:6; tuning/twin-screw rudder installation, 45:96

Insta-Foam Products: Insta-Flo solvent-free foam gun, 11:52

installations: systems-installation errors, 152:58

International 505 racing dinghy: Mark Lindsay/Boston BoatWorks, 157:50

International Yacht Restoration School: Composites Technology Program, 136:10; marine systems certification program, 120:34

Institute for Marine Dynamics: Offshore Engineering Basin/model testing, 56:26, 56:38

Instrumental Sensor Technology: black box sensor-recorder, 52:43

instruments/instrument panel: ABS/LR classification, 39:80; access for maintenance, 48:66; assembly station, 54:43; DICKEY-john modular system, 21:60; engine-mounted instrument panel for Caterpillar 3500C series, 95:6; ergonomic design, 65:33; Faria Battery-Condition Monitor, 21:60; Faria "Dress White," 11:52; Gaffrig gauges, 36:78; Link, 21:60; mounting/wiring/installation, 11:9, 34:22, 48:66, 48:79; Ultrachrome, 9:56; VDO Vanguard, 21:60. *See also* dashboards

insulation, soundproofing. *See* soundproofing insulation

insurance, boat/marine: coverage/contract negotiation, 35:72, 44:72, 63:54, 81:146; damage assessment/repairs, 25:18, 44:72, 57:74, 59:89; damage claims/expert witness, 56:53, 59:89; damage claims/inflated, 50:80; damage claims/subrogation, 35:72, 44:72, 50:18, 50:20, 50:80; engineering standards/composites testing, 34:42, 48:8; ethanol and vulnerable fuel tanks/system components/exclusion of, 102:33; Knox Marine consultants' Yacht Claims Conference Workshop, 74:9; maintaining to class, 48:8; major damage/"total loss" classification, 25:18, 57:74, 81:146; program/Envision Marine, 30:54; safety standards, 5:64;



- surveyor's ethics/integrity/role, 5:64, 24:72, 30:26, 44:72, 50:80. *See also* accidents, boat/marine; surveyors/surveying, profession/judgment
- insurance, liability, product/builder:  
abandoned property responsibility, 81:146; coverage/selection, 36:13, 81:146; ; coverage of designer, 40:12; litigation/forensic engineering, 50:18, 50:20, 50:25
- insurance, liability, surveyor:  
coverage/selection, 59:89
- insurance, property/fire/builder's risk:  
ABBAGARD program, 29:54; coverage selection/negotiations, 1:50, 7:28, 12:4, 29:54, 37:60; fire protection compliance/claims, 44:18, 44:22; site audit/hurricanes, 27:18, 27:21. *See also* fires, boatyard
- Insurance Service Organization (ISO): risk assessment data, 81:146
- insurance, workers' compensation:  
classification/experience-modification rating, 24:11; insurance brokers, 23:13; premiums/cost control, 23:13, 24:11, 24:17; resources, 24:16; as state statute/federal regulations/Longshoreman's Act, 81:146
- Intense Boats: high-performance surface effect hullform, 96:6, 114:10
- Intergraph Corp.: Intergraph design/lofting hardware/software, 8:35, 17:58
- Integrated Entry Surface Effect Ship (Intense): high-performance surface effect hullform for monohulls, 96:6
- interior designers, independent: HF Interiors and Knight & Carver Yacht Center, 127:42; Joe Artese Design, 17:8, 123:46; profession/design approaches/sources, 6:34, 6:39, 7:5; relationship with builder, 6:34, 40:24, 87:46
- Interior lighting for yachts, 87:80
- interior joinerwork/cabinetry:  
CAD/CAM/NCC applications/techniques/sources, 13:43, 40:42, 40:52, 40:53, 67:110, 76:80, 84:52, 85:96; Baltic Yachts, 85:45; cored, 13:43, 40:42, 40:52, 51:26, 51:114, 52:4, 54:62, 57:110, 92:76; design mock-ups, 9:28, 37:26, 40:42, 45:47; in-house prefabrication/design, 53:28, 67:110; at Lyman-Morse, 97:82; at Nautor's Swan, 84:52; at Platypus Marine, 85:96; RTA (ready-to-assemble) techniques/applications, 40:42; Wrap Boats/Bayliner cabinets refit using vinyl wrap, 169:28
- interiors, arrangements/decoration: for aluminum boats, 21:26, 53:28; at Bavaria Yachtbau, 94:70; *Bellatrix* custom carbon tender, 81:93; designing for the '90s, 6:34; chef-designed galley, 115:88; designing/upgrading, 32:15; design mock-ups, 9:28, 37:26, 40:42, 45:47, 98:28; Eurostyle, 6:34; finish standards/yachts, 40:24, 40:36, 67:110; Glade Johnson Designs/Delta Marine, 94:32; heads, 5:50, 39:67; importance of offshore comfort and safety, 149:03; independent vs. in-house designers, 6:34, 40:24, 87:46; 93:46, 94:32; interior design handbook/standards & measurements, 120:4; Lazzara Yachts, 81:10, 90:13; outsourcing/quality control, 35:4, 40:24, 97:10, 98:28; photorealistic studies, 40:48; power drapes, 115:88; safe and habitable interiors, 118:30; saloon vs. salon, 57:15; SanJuan Yachts, 107:52; for small power cruisers, 39:67; Sylvia

Bolton Design, 85:96; tracking consumer trends, 51:11; weight reduction, 29:8, 32:21, 34:28, 34:32, 67:110, 76:80, 81:93, 92:76, 98:28. *See also* countertops; fabrics, marine/upholstery; furniture, interior; interior joinerwork/cabinetry; paints/finishes, interior; upholstery/cushions

interiors, paints/finishes. *See* paints/finishes, interior

Interlux Yacht Finishes (Courtauld's): Gelshield blister insurance program, 19:59; Interlux Bilgekote #862, 15:70; InterProtect epoxy (blister prevention), 19:59, 31:10, 47:66; Interspray 800/HVLP, 34:35; Interthane LP paints/spraying tips, 19:12; Micron CSC, 31:10, 47:66; Superyacht 800 customized paint system, 5:26; VC Tar, 19:59; Veridian 2000 foul-release system, 31:10. *See also* Courtauld's Coatings/Courtauld's Aerospace

InterMarine USA: UV-PPG fabrication, 48:35

International 14s: Bruce Kirby designs, 142:62, 151:24; double-trapeze sailing dinghy, 134:42; Object2 Skiffworks, 134:42; Paul Bieker designs, 74:68; similarity of body plan to *Windward Passage*/Alan P. Gurney design, 151:24; Stuart Morris/Prince of Wales trophies, 142:62

internationalism of marine industry: cooperative boatbuilding ventures, 23:4, 26:51; marketing/trade exhibitions/boat shows, 55:3, 55:16. *See also* Europe, exporting to; international market/exporting

International Association of Marine Investigators (IAMI): development of, 71:27

International Electrotechnical Commission (IEC), 156:24

International Marina Institute (IMI): boatyard management program, 35:52; environmental workshops, 38:51; pollution-control manual, 33:75

International Marine Certification Institute (IMCI): certification program, 37:66, 41:38, 55:87

International Marine Consulting Associates (IMCA): EC (EU) certification consulting, 41:38; marine engineering consulting, 33:3, 40:62, 59:21

International Marine Industries: spar market/design/technology, 3:42

International Marine Repair & Refit Exhibition & Conference (IMREX): 62:12

International Marine Standards Summit, 104:96

International Maritime Organization (IMO): chemical carrier standards, 43:36; inclining experiments for certification, 162:24

international market/exporting: CE (European Certification), 63:38; certification standards/testing, 27:3, 28:54; market trends/'90s, 29:8; owners' manuals, 29:4. *See also* certification; Europe, exporting to

International Measurement System (IMS): and cruisers/racers, 154:36; International Class 40/Westerly Marine, 154:36; International Level Classes/boat-to-boat racing, 154:36; scantling rule/offshore racing yachts/core-bonding problems, 43:83, 61:66; "Measurement Rating Rules Explained," 61:76; racing

- penalty/carbon compared to Kevlar, 154:36; standing rigging requirements/masts, 55:44
- International Monohull Open Class Association (IMOCA): racing sailboats/ever-changing rules, 162:52; Vendee Globe, 162:52
- International Moth, 169:104. *See also* Waters, Mike
- International Offshore Rule (IOR): and Cruising Club of America (CCA) rating rule, 162:24; impact on bow/transom design, 25:55; impact on cruising yacht design, 30:48, 76:60; measurement rules/cruising-racing yachts, 30:48, 152:10; measurement rules/offshore racing yachts, 60:66; Quarter Ton Class, 142:62; sail area changes, 154:36; standing rigging requirements, 55:44; ultralight displacement boat (ULDB 70), Alan Andrews, 154:36. *See also* Bruce Kirby
- International One Design (IOD): *Enigma* open cockpit daysailer/Tern Boatworks, 171:60
- International Paint (USA) Inc.: Superyacht 800 customized paint system, 5:26
- International Rule, 61:76
- International Standards Organization (ISO) standards: Australia and New Zealand (AS/NZS) electrical standards for recreational boats, 154:56; barrier-avoidance test, 27:3; assessing structural plywood's edgewise-bending properties for, 102:100; certification process/terminology, 27:3, 28:54, 36:48, 37:34, 41:38, 41:42, 43:17, 55:87; compliance with electrical installations, 75:22, 154:56; engine exhaust systems, 43:44; engine horsepower ratings, 59:56; HINs (Hull Identification Numbers), 35:52; ISO 12215-5 calculations/HullScant/Self-Certifier scantlings software, 136:6; keel arrangements/design, 116:4; quality management systems, 39:80; recreational boats, 55:87, 55:90, 63:38, 69:5, 75:22, 91:192, 107:4, 109:6, 112:120, 114:4, 154:56; Recreational Craft Directive, 106:4, 116:4, 119:4, 154:56; stability, 48:8, 48:9, 48:14, 54:98, 81:128, 112:120, 114:4; standardized composites testing, 34:42; U.S. and European electrical standards, 75:22, 154:56; yacht classification/scantling standards, 39:80, 48:8, 48:14, 63:38; XP980 and 01000 aluminum powerboat/Albatross Marine Design, 122:24.
- international units of measurement: Systeme Internationale d'Unites (SI units), 55:5
- International Women in Boating (IWB): market research/workshops, 23:54, 24:58, 28:54
- International Yacht Restoration School: Digital Modeling & Fabrication training program, 168:14; name change to Rhode Island's International School of Technology, 168:14; restoration of *Coronet* schooner yacht/see-through shed, 101:24; yacht restoration program, 101:106
- Internet. *See* computer applications, online (Internet)
- Interplastic Corp. (St. Paul, Minnesota): hydrolic stability and osmotic resistance test of vinyl ester products, 83:22; Intrepid Powerboats: vacuum-bagging, 30:22
- Inventive Machine Corp.: Air Strip system (plastic-media blasting), 7:8; Blast N'Vac

system, 15:70; Mad Mac blast-cleaning system, 47:66; Sand 'N Vac, 9:56

inventory/parts, computerized tracking: bar code system, 33:36; bill of materials/relational database, 50:59, 62:26; disadvantages, 39:70; Global Solutions Business Planning & Control System software (BPCS)/Cruisers Yachts, 114:68; parts keyed to design/AutoCAD, 28:32; parts keyed to design/CAL/NCC, 38:47

inventory/parts, purchasing/control: bill of materials, 50:59, 87:46; discounts, 35:25; just-in-time (JIT) manufacturing, 12:10, 18:54, 26:20, 28:32, 29:22; kanban system, 29:22, 38:47, 41:28; for megayachts, 32:18; metal/casting vs. NC cutting, 42:46; quality vs. profit, 32:64; technical resource (American Product Inventory Control Society), 12:10. *See also* inventory/parts, computerized tracking

inverters, DC-to-AC: and battery selection, 18:44, 39:56; energy usage analysis/European household, 112:74; fuel consumption and emissions for generator systems/standard inverters/synchronizing inverters, 112:74, 113:56, 114:4; grounding, 30:38, 30:44; load calculation, 25:30, 25:38; MasterVolt Whisper 6 Ultra, 114:4; MultiPlus inverter/Victron Energy, 112:74; Nova Electric 5050-120, 23:54; Quattro inverters, 112:74; "sleep" mode, 34:59; sources, 25:40; types/technology/installations, 25:30, 25:34, 57:100

IOR. *See* International Offshore Rule (IOR)

Iosso Products: Marine Polishing Paste, 20:56

iPad speed controls: on COMO EA runabout, 137:12

Irens, Nigel: Design 027 traditional weekender yacht, 80:68; gaff cutter *Eleanor Mary*, 56:10; *Farfarer* wood-epoxy schooner and Tern Boatworks, 171:60; Gunboat 55 sailing catamaran, 138:6, 144:58; Gunboat 60 sailing catamaran, 144:48; 115' power trimaran design, 50:11, 55:16; profile, 63:86; foil trimaran prototype SCAT, 75:14; *Maggie B*/Covey Island Boatworks, 100:36; Westernman cutter, 100:24

Irens, Nigel, author: "Craft of Least Resistance," 145:100; "Powerboats for Sailors," 80:68

Irish Boat Shop, Inc.: Fein vacuum for dust control, 84:10; recession business strategies, 121:62; structural damage to FRP boats, 97:174

Irwin, Ted: racing sailor and boatbuilder/obit, 155:10

I-Shades: windows using current for light transmission, 84:18; 131:54. *See also* electrochromatic glass.

Island Marine: Wilbur 34 redesign/lifting strakes, 45:86

Island Packet Yachts: dealership strategies, 117:54; EC (EU) certification process, 41:41, 68:54; FRP waste reduction/good manufacturing practice, 55:26, 68:54; Hoyt Jib Boom, 126:8; outsourcing vs. in-house assembly, 37:16, 68:54; profile/handling rapid growth, 11:34, 11:39, 68:54; sailing catamaran market, 30:48; SP Cruiser/Bob Johnson design, 117:54

Island Style Custom Yachts: Island Style 42 Express semi-custom Sportfish/Scott Quaintance, 125:8

Island Technology, Inc.: No-Strike lightning dissipator/protection system, 31:68, 43:64  
 Islander Yachts: Bob Perry designs, 97:28  
 ISO. See International Standards Organization (ISO)  
 isolation transformers: for AC shorepower systems, 45:105;  
 applications/installation, 30:38, 41:21;  
 vs. galvanic isolators, 45:105; ISO-Boost/ISO-Transformer, 45:105  
 isolators, galvanic. See galvanic isolators  
 isolators, vibration. See noise/vibration isolators  
 Italy. See Malingri, Doi; Nuvolari/Lenard Naval Design  
 ITC Marine: Contemporary portlight, 5:58  
 ITT Jabsco: Centri-Max centrifugal pump, 29:58; Ray-Line 255SL searchlight, 7:50  
 ITW Adhesive Systems: Plexus methacrylate adhesives, 26:56, 27:70, 29:8, 42:5, 52:81, 60:11, 60:104; spray finish training workshop/Owens College, 75:74  
 ITW Fluid Products: Accu-Clean, 20:56  
 Ives, Frank: FRP spray equipment development, 38:30

---

**A B C D E F G H I J K L M N**  
**O P Q R S T U V W X Y Z**

---

J. & A. Enterprises Inc.: noise/vibration control, 34:26, 34:27  
 J Boats, 98:28, 157:50; elevated work platforms, 113:10  
 Jachtwerf Neptunus b.v.: mild steel powder-coated fuel tanks, 158:54; sliding-top cabin cruiser, 54:18  
 jacking carriage: for resetting keels, 4:6  
 Jackson, Gifford, designer: Marisol skiff, 105:120

Jackson, Tom, author: "Anti-splashing Protection Has Arrived," 83:103  
 jackstands. See boat stands/jackstands  
 Jacobs, Jim: on gelcoat patch repair, 65:5; on structural repairs, 99:4  
 Jacobsen, Bjorn: on owners' manuals/European market, 29:4  
 Jacobson, Clayton: on Applying Savitsky and using concavity for lift vs. prismatic solution, 149:04  
 Jacops, Peter: on boatbuilding to a single standard, 106:4  
 James Anthony Powerboat Company. See Anthony, James, Powerboat Company  
 James Betts Enterprises, boatbuilders: building an Open 50, 65:24  
 James, Peter: on networking the three-cable boat and NMEA 2000 systems, 99:4  
 Jamestown Boat Yard: osmotic-blister repairs, 9:50, 16:42  
 Jamestown Distributors: Website, 63:10  
*Janice of Wyoming*, 130' sloop, 103:17  
 Janicki: high precision tooling, 136:56  
 Jankel, Robert: 105' schooner, 2:12  
 Jannace, Charlie: on cored bottoms, 51:22  
 Jannace, C.J.: on the changing roles of yacht designers in the computer age, 167:4  
 Jansen, David: five-axis milling machine/Janseneering, 90:13  
 Japan: hull recycling programs, 54:43; kaizen/management, 39:52, 39:55; kanban inventory system/CAD/NCC, 38:47; kanban inventory system/circular manufacturing, 29:22, 41:28; poka yoke assembly aids (CAL/NCC), 38:47  
 Japanese Craft Inspection Agency (JCI): standards for exporting boats, 63:38  
 Jarrett Bay Boatworks: Refit Excellence Award for Best Poweryacht Refit/Reel

*Steel*, 168:14. *See also* Hines-Farley Offshore Yachts.

Jarvis Newman Company. *See* Newman, Jarvis, Company

Jason's Cradle net: SAR 60 refugee rescue boat/FB Design, 164:34

Javes, Art: designer profile, 53:12; rigid-wing sailing trimaran, 53:12, 55:16

Jaworski, Michael: on EcoPoxy Systems, 125:6

Jay Stuart Haft Co. *See* Haft, Jay Stuart, Co.

J-Boats Inc.: ballast keel/L-Keel, 54:18; J-90, 54:18; J-125, 54:18; Doug Zurn design MJM 34Z powerboat, 84:18; J-Y 15, 6:31; J165/Pearson Composites, 98:28; J170/ramp launchable with lifting keel, 152:6; marketing used boats, 10:2; profile of, 98:28; sports boats, 30:48, 98:28; waterjet drive for powerboat, 96:6

J-Class Yachts, 124:12, 141:50, 143:40; hybrid power system for *Rainbow*, 143:46; new J-Class rules, 141:50, 143:40

J/24 keelboat, 98:28; 147:38. *See also* USWatercraft.

JEC Publications: release of book, *Composite Solutions—Thermosets and Thermoplastics*, 107:14

J.D. Power and Associates: recreational boat industry survey, 73:136

Jefferson Yachts: Nida-Core applications, 36:78

Jenkins, Valentine (Val): on building chines, strakes, steps, transom corners, 58:79; on carbon fiber/Kevlar, 28:18; and Chris-Craft turnaround, 80:48; on Foil Fix and stern-mounted hydrofoil benefit, 161:3; on working with carbon fiber, 61:34; on honeycomb cores/applications/techniques, 22:8,

22:20; on hull-to-deck joints/FRP shoebox, 60:104; on in-house machine shop, 48:56; production engineer/Tampa Yacht Manufacturing, 161:20; profile/managing production, 12:10, 80:48, 95:38, 161:20; on sportfishermen layouts, 78:56; and Southport Boat Works, 95:38; on workers' comp, 24:11; on woven vs. knitted reinforcements, 29:38; on vinyl ester resins, 28:18, 42:52. *See also* Cigarette Racing Team, Inc.

Jenkins, Valentine (Val), author: "Building Fast Powerboats That Don't Break," 49:54; "Designing Powerboats for Production," 95:64; "Keep It Simple," 74:32; "The Lady Behind the Yellow," 139:128

Jeanneau America: Jeanneau Sun Odyssey 409 and Harken winches, 132:6; Sun Fast 3200 sailing sloop, 119:6

Jeanneau North America: cruising catamarans, 30:48; Lagoon Power 43/cat without a stick, 86:14

Jensen, Arild: on ground faults and galvanic isolators, 101:4

Jensen, Niel: on slide valve for crossover between water-cooled mufflers, 93:4

Jerow, Jeanne: on survey reports, 30:26

jet boats/jet skis: advertising/product liability, 38:11; capacity, 36:50, 38:11; design/ABYC safety standards, 36:50; efficiency, 67:70; ignition shut-off, 36:50; noise pollution/control, 43:75, 59:10, 67:70; noise pollution/ordinances/banning, 43:75, 44:49, 59:10; Rage mini-jet boat, 81:26; safety concerns/accidents, 32:48, 46:10, 59:10; safety legislation, 32:48, 46:10.

See *also* jetsprint boats; personal watercraft (PWCs)

JetCo: jetsprint boats, 57:15

Jetcraft: builder profile/welded aluminum construction, 21:26

jet propulsion/jet drives: fighter-jet style boat, 77:10; Hamilton jet drives, 96:52; Hinckley JetStick/36' Picnic Boat, 57:110, 67:70; Stolkraft/Sea Sled/power prediction, 49:42; Turbodriven, 8:54. See *also* jet boats/jet skis

jetsprint boats: racing/Pacific Northwest, 57:15

Jetten Yachting: CNC cut metal kits/Smart Kits, 148:47; steel motoryachts/Gamma 20 build, 148:47

Jetter Corporation: Jet-Pro pressure washer, 2:70

jigs: adjustable jigs for multiple builds, 162:66; for aluminum construction, 26:20; for Beetle Cat, 23:32; for clamping, 13:8; for cold-molded building over rigid steel, 61:10; for framing/Bessey KP system, 5:58; for interior joinerwork/CAD/CAM, 13:43, 40:42; for joining DuraKore strips, 15:34; for laminating (frames), 13:8; for making templates, 23:20; for scarfing, 13:43; for turning hull, 58:13

Jim Gardiner: Comp Millennia/advanced-composite structures, 120:62

Jim Smith Boats: boat cloth and epoxy, 62:62

J & J Marine Fabricating Inc: profile of, 104:78

job-cost system: Townsend Bay Marine, 68:44

"JockeySeat," shock-mitigating seat: 70:66

Johannsen, Anders: on ozone-clean marine refrigeration/service, 26:17

Johannsen, Tom: on Airex/Core-Cell, 35:58; on one-off tooling, 10:42; on Poly-Bond/structural adhesives, 42:5; on standardized testing/cores, 34:42; on syntactic foam putties/hot weather, 33:46

John, Frank: on electric motors replacing conventional diesels, 139:5

John, Thomas (Tom): on environmental air permit exemptions for combustion-powered heater for curing ovens, 83:4; on VOC regulations/compliance, 10:8

John, Thomas (Tom), author: "MACT," 60:39; "The Styrene Emissions Story," 53:73; "Charcoal Adsorption: Some System-Design Considerations," 73:28

Johnson, Bob, author: "Kiko, Bob, and Slim" 117:54

Johnson, Bob: on Elgin outboard motors, 121:9; on the short fin-keel problem vs. longer keel design, 103:6

Johnson, Bruce, author: "Thomas C. Gillmer: 1911-2009," 126:8

Johnson, Charles F.: career of Jack Hargrave, 43:36

Johnson, Don: paint removal (plastic media blasting), 7:8

Johnson, Eric, author: "Revising the Standard," 117:18. See *also* Adney, John.

Johnson, Eric: on ABYC Standard H-29 revision for seacocks, 115:6

Johnson, Forest: Prowler boats, 134:4

Johnson, Jay: Glas-Craft/early spray equipment, 38:30

Johnson, Jeffrey V., author: "Stress in a Production Setting," 39:52

Johnson, Robert (Bob): on EC (EU) certification/harmonization, 41:41; on Fuji Rudder Forensics and What's The Rush?/observations and comments,

- 154:4; profile/Island Packet Yachts, 11:34, 11:39, 37:16
- Johnson, Rod: designer/Sea Pearl, 55:46
- Johnson Controls: Dynasty marine gel battery, 10:52
- Johnson Supreme Marine: paint removal (plastic media blasting), 7:8
- Johnston, Dan: Falcon fabrication system/convex-curved aluminum plating, 24:39; profile/demise of Falcon Marine, 57:15
- Johnston, Greg, co-author: "Working-Class Wing," 140:60. *See also* Johnston, Patrick, co-author.
- Johnston Industries Composite Reinforcements Inc.: 69:13
- Johnston, Greg: K8 sportboat with Semi-Rigid (SRW) sail, 163:14. *See also* Johnston, Patrick
- Johnston, Patrick: K8 sport boat with soft-wing sail, 163:14. *See also* Johnston, Greg
- Johnston, Patrick, co-author: "Working-Class Wing," 140:60. *See also* Johnston, Greg, co-author.
- Johnstone, Bob and Mary: motoryacht MJM34z/Doug Zurn/Boston Boat Works, 99:52, 144:10, 157:50; fabric impregnator, 157:50; MJM36z, 157:50; 29z fuel efficiency, 157:50
- Johnstone One-Design, 98:28
- Johnstone, Peter: founder of Gunboat International, 98:28, 144:58
- Johnstone, Rodney: J-90/L-Keel, 54:18; on sailboat market, 30:48, 98:28; mini Transat Acadia, 103:54 *See also* J-Boats Inc.
- Johnstone Yachts: thermoplastic construction, 11:20. *See also* J-Boats Inc.
- joiner/shaper: Stanfield JS1010, 11:52
- Jolley, Eric: 3-D CAD modeling, 41:5; conversion of Ultimate 30 sailboat to lightweight powerboat/Shearwater pocket-cruiser, 115:162, 116:40; Design Challenge/PT Skiff design, 122:24, 130:52
- Jolley, Eric, author: "A High-Efficiency Power Cruiser," 115:162
- jon boat, aluminum: efficiency, 16:4
- Jones Act Division of Enforcement (JADE): customs and border protection, 168:68
- Jones, D.E. and Associates: profile of, 149:56. *See also* Jones, David E., author; Jones, David E.
- Jones, David E., author: "Single Skin or Sandwich?" 99:104; "Six-Step Program," 112:88
- Jones, David, E: on building chines, strakes, steps, transom corners, 58:79; composites engineering affiliation with Lazzara Yachts, 149:56 on fiber-to-resin ratios, 59:30; flexural testing of solid laminate skins, 149:56; on gelcoat peelers, 16:42; on knitted reinforcements, 29:38; multi-mission combatant craft prototype, 149:56; on secondary bonding/shop testing, 39:19; on shock mitigation, 149:56; on solution to hydrodynamic peel and fracture in laminate shell, 91:12; on standardized composites testing, 34:42, 50:46; testing polyurethane adhesive/sealants, 28:27; on wet balsa core, 98:4; on wiring/mounting bilge pumps, 44:26
- Jones, Ivor: on fiberglass, 14:2
- Jones, James: on SP Systems Resin Infusion Technology and PVC foams in elevated-cure applications, 81:6
- Jones, Roger: stick-built deck plug, 28:8



Jones, Roger, author: "Used Boat Nation," 110:118

Jones, Ron: Composite Technologies/32'6" hydroplane, 2:12; profile/Fabrication Specialties/Unlimited hydroplanes, 56:40; Outrider 27 bow-ski prototype boat, 78:12

Jones, Ted, author: "A Remembrance of Alan Gurney," 140:7; "Bill Tripp's Boats," 105:56; "Passage Maker," 151:24

Jones, Ted: on Bill Tripp custom-design boat, 217 deDood *Nicola IV*, 107:4

Jones, Tony, author: "Builders' Takes on NDE," 163:93; "European Boatbuilding Directive Revised," 160:8; "Greener Pastures," 162:4; "The New Renewables," 168:68

Jones, Tony: on motorboat performance testing, 90:4

Jones, Virginia Crowell: on international boatbuilding standards Recreational Craft Directive/European Union, 107:4

Jones-Goodell Yachts: fiberglass megayachts, 2:42

Jonsson, Sigurdar Olafs: aluminum fishing boat/ Design Challenge, 122:24

Joseph, David: on vacuum pumps, 87:4

Joughin, David, author: "Core Transitions," 110:96

Jowi Sailboat Support Systems, Price Design Inc.: folding boat cradles, 54:18

Joyce, Peter: on battery terminal connections, 26:3

J.R. Overseas Co.: moisture meters, 19:8

J. Thompson Marine Carpentry: boat joinery and cabinetmaking/and Newport Shipyard/Vinnie Pard, 173:18; hard-top and settees for WestMac 42 lobster boat conversion, 173:18

Judel/Vrolijk & Co., designers (Bremerhaven): and Hanse Yachts,

91:136, 156:12; 46' classic motorlaunch/DuFlex Ud-strips/E-glass, 131:12

junk, sailing: *Jockey Club Huan/Cheoy Lee*, 103:112

Juska, Thomas: advanced-composites research, 47:57, 58:36; profile/carbon fiber fabrication, 58:36

just-in-time (JIT) manufacturing: Cigarette Racing Team, 12:10; inventory control systems, 12:10, 18:54, 26:20, 28:32, 29:22; with pre-pregs, 24:18; production flow, 12:10, 26:20. *See also* inventory/parts, purchasing/control

Jutson, Scott, designer: aluminum research vessel/Jutson and Armstrong Marine, 151:12; power catamaran for Kodiak Brown Bear Center, 151:12; 75, 152:36; maxi yacht *Brindabella*/Sidney to Hobart Yacht Race, 151:12; M2 60 high-performance luxury yacht/fuel efficiency, 151:12; work with Armstrong Marine, 152:36

---

## A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

---

K&M Yachtbuilders: Bestevaer aluminum cruising boats, 141:50

Kaidy, Robert S.: on boat guys/"lifers," 107:4; redesign of Tempest 35 and 60 boats, 161:20; and Tampa Yacht Manufacturing, 161:29I

Kaidy, Robert, author: "Ethics for the Naval Architect," 159:80

Kaiser, Bruce A.: on lightning dissipators, 46:5; on lightning protection and streamer-delaying air terminls, 88:4

Kalas Manufacturing Inc.: boat cable manufacturer, 51:69

- Kal Kustom Enterprises: use of custom industrial plywood, 16:12
- Kamen, Paul, author: "Is There a Surface Drive in Your Future?," 2:52
- Kamphius, Ryan: on MTU-issued guidelines for blends of fatty acid methyl esters (FAME) and current MTU engines, 118:4
- Kamps, Ria, author: "Innovative Dutch Trihull,": 147:10
- Kanter, Charles E.: on holding tanks/head installations, 52:4
- Karafiath, Gabor, author: "Stern Flaps," 70:81
- Karcher, Alfred A.: compact high-pressure washers/steam-cleaning equipment, 20:56
- Karlskrona Shipyard: Swedish navy/minesweepers/advanced composites, 53:40, 55:5
- Karver Rigging (Honfleur, France): hardware for sailboats/K-Evolution line, 95:6
- Kasten, Michael, author: "Loftsmen's Liability," 38:14
- Kaufman, Mike: on racing yacht scantlings/floating-frame construction, 50:5
- kayaks: business/mergers, 60:11; *Canoe & Kayak Industry News*, 40:62, 43:17; cold-weather boating, 34:55; composite/We-no-nah, 49:36; design/tank-testing/composite engineering (racing kayaks), 41:28, 41:30; knotmeters for, 44:54; manufacturing updates, 4:34, 4:40, 60:11; marketing/promotion, 4:34, 4:40, 21:72, 49:36, 49:40; pedal-powered, 54:18; recycled plastic/recycling programs, 15:4, 29:33, 43:17, 54:112; resin infusion applications, 32:18; roto-molding/thermo-forming, 4:34, 4:40, 29:33, 60:11; sailing/conversion kits, 22:64. *See also specific kayak manufacturers*
- Kazulin Boats Ltd.: Barka utility boat, 141:6; best marketing tool for, 80:4; introduction of all fiberglass runabout, Kavalk25/Sport Runner/Adriatic, 141:6; profile of, 65:52; restoration of Riva runabouts, 141:6
- Kazulin, Veljko: obit, 145:12
- Kays, Brian: on analyzing accelerations, 143:6
- K-boats: diesel-fuel systems/Code of Federal Regulations for, 84:82
- KCS International, Inc.: Rampage Sportfishing Yachts, 59:10
- K.D. & S. Engineering: roto-molded polyethylene utility skiffs, 11:28
- Kearns, Patricia: on NFPA fire-protection standard, 44:22; on surveying damaged boats, 25:18
- Kecsmar, John: response on fabrication failures in aluminum and cracking, 139:5
- Kecsmar, John, author: "Altered Properties," 147:24; "Fabrication and Fatigue Failure," 137:56; "Order of Assembly," 151:82; "Waiting on the Wind," 166:48
- Keefe Kaplan Maritime: dedication to safety and regulatory standards, 140:18; electro-coagulation treatment system, 140:18; large capacity temporary shelters, 140:18; recession business strategies, 121:62; re-conversion of *America's Cup* boat, *USA 76*, 140:22; storm-water treatment, 140:18;
- keel basket trailer: 63:54
- keelbolts: basic design condition for, 96:72; boring machine for, 84:52; epoxy-potted, 51:36; galvanic corrosion, 15:23, 38:20,

39:4; knockdown situation, 96:72; range of materials for, 156:70. See *also* keels, ballast

keels, ballast: articulated/canted wing/winged, 6:20, 10:42, 37:66, 60:66, 95:76; attachment/fasteners, 15:23, 23:24, 38:20, 39:4, 51:36; ballast stability/Didi 38 (*Black Cat*), in knockdown, 149:20; beavertail bulb, 96:72, 118:22; bulbous/lead, 23:24, 30:4, 49:45, 65:24, 156:70; ; bulbous/NAB (nickel-aluminum-bronze), 54:18; canting ballast twin foil (CBTF), 47:17, 95:76; canting keel on *Aqua Quorum*, 62:46; canting keel on Baltic 78; canting keel on *KingFisher*, 70:38; canting keel on 606, 109:40; canting keel on *SpeedDream*, 141:24; canting keel on *Ultimate 27*, 76:60; carbon fiber and wood-epoxy keel, *Bagatelle*, 96:72; Islander 34 wing keel, 95:76; keel design criteria, types, and characteristics of, 95:76, 101:128, 103:6, 104:4, 162:52; ; design software, 24:26; detachable/jettisonable (pros/cons), 20:64, 21:4, 23:4, 23:24, 23:26; drag/performance prediction, 60:66, 95:76; drop keel/winch handle/Rodger Martin, 113:82; fin/installation, 38:20, 101:128; flatiron keels, 139:54 heeling moment, 47:44, 70:38; I-beam/cold-molded sailboat, 51:36; interchangeable/Interkeel, 37:66; keelbolts and welding, 130:38; lead tax, 30:54; moveable/swinging keels, 96:72; lifting keel for J170/J-Boats, Inc., 152:6; lifting keels/German Frers design/Swan boats, 84:52; lifting keel/Rossi 43/Custom Composite Technologies, 103:54; Loop Keel, 109:17' moveable ballast on Swan 45 sailboat, 84:52;

motorized Ring Keel/Vlad Murnikov, 169:6; patternmaking/custom castings, 42:46; Pedrick Whale-tail design, 1:68; quality control, 35:4, 156:70; repairs/resetting, 4:6, 130:38; retractable delta-wing keel, 139:54; retractable keel/MarsKeel, 156:70; rotating keel, 70:38; Scheel Keel, 135:14. See *also* bow configurations

Keene, Hank: on custom castings/patternmaking, 42:46

Keene, William: on Landing School marine systems training, 77:5

K8 sloop: with semi-rigid sails/Greg and Patrick Johnston, 163:14

Kehren, Bert: on pros of using whole-boat or dockside ground fault protection in addition to GFCI's on boat electrical outlets, 105:4

Keil, Darryl: VacuPress System, 13:48

Keizer, Marc: on boat shows/marketing, 36:60, 36:64

Kelley, D.N., & Son: stretched schooner/*Arabella*, 53:12; celebrates 135 years in operation, 61:10

Kelley, Steve: No-chem Paint Stripping (plastic media blasting), 7:8

Kelley, William H.: on fire/property insurance, 7:28

Kellogg, Mark: preservation of boat plans, 21:12

Kelly, John: on interior design, 6:34, 6:39

Kelsall, Derek: on balsa vs. pvc foam sandwich construction, 101:4; on contour-cut vs. sheet foam/cored bottoms, 55:5; on difference between tortured plywood and Kelsall Swiftbuild Sandwich (KSS) system, 139:5; on flat table and resin infusion, 163:4; on formula for performance prediction for catamarans under power, 130:6, 133:8;

*Great Britain II* /Alan Gurney design, 154:4; Kelsall Cat Rigs, 136:10; Kelsall Swiftbuild Sandwich (KSS) system, 50:11, 91:12, 124:6, 136:10; on Peel Ply/secondary bonding, 36:4; on solid mat vs. sandwich cores/knitted uni, 163:4

Kelsey, Mike: on aluminum-fiberglass construction, 17:19; on manual vs. computer lofting, 24:30, 53:28; on megayacht market, 12:50, 53:28; profile/Palmer Johnson, 53:28, 95:3; on welded aluminum construction, 24:34, 53:20

Kelton, Jeff: on Stolkraft hullform, 49:48

Ken Hankinson Associates. See Hankinson, Ken, Associates

Kendon Group, Inc.: Sea-Slide hull lubricant, 14:57

Kennedy, William: on changed workplace and work force, 77:5

Kent, Jeff: on pre-pregs, 24:18, 24:21

Kenway Boats: and Ken Priest, 168:28; acquisition of, 168:28

Kenyon Galley Products: Adler/Barbour Cold Machine, 22:56, 26:8; HFC-134a/MP 39 conversions, 22:56, 26:8; PowerPlate freezers, 22:56. See also Adler Barbour

Keoun, L. Craig: on which ply first, 108:4

Kern, James: on Phil Friedman's book *Ten Golden Rules for Successful New Build Project*, 141:4

Kett Tool Co.: 526/426 combination panel saw, 21:58

Ketterman, Greg: sailing hydrofoil TriFoiler, 6:20

Kevlar (aramid reinforcing fibers): applications/products/laminating techniques, 56:61, 59:5, 85:46; aramid vs. PBO vs. carbon, 110:86, 154:48;

auto-racing applications, 30:4; ballistic-grade/Kevlar 29, 56:61; in canoes/kayaks, 49:36, 49:40, 97:60; ceramic cutting shears, 16:52, 28:18, 56:61; cost, 28:18; cutting/machining/laminate repairs, 43:54, 56:61; drills/drilling, 56:61; elongation, 56:61; end fixity coefficients/maximum bending moment, 69:5; epoxy laminate/polyester gelcoat, 43:5; fiber orientation/strength, 28:18, 43:54, 43:61, 45:5, 45:54; for flat-panel construction, 45:54, 45:62, 54:62; grinding, 28:18, 56:61; grounding straps, 76:60; *Growler*/prepreg Kevlar/S-glass foam, 154:36; impact tolerance vs. carbon fiber, 43:54, 45:5, 45:54, 47:57, 58:36; impact tolerance vs. fiberglass, 60:11, 62:5; impregnator applications, 56:61; Kevlar/carbon-fiber laminate, 47:40, 63:151; Kevlar/fiberglass hybrid laminate, 32:21, 54:62, 57:110, 58:6; laminate failure/coefficients of thermal expansion, 59:5; lifting lines and slings/Navy specwar, 52:43; Navtac/Smart Rigging/Future Fibers/Composite Rigging, 110:86; pultruded carbon rods, 110:86, 154:48; reinforcement applications/techniques, 28:18, 63:151; repairs/patching, 56:61; repairs/scarfing/single-skin laminates, 43:54, 45:5, 56:61; resins for, 56:61; SCRIMP applications, 31:42; socket and cone end fittings, 110:86; specific gravity, 56:61; in sportfisherman construction, 1:22, 54:62, 62:62; strength/compression loading, 43:54, 45:5, 60:11; structural-grade/Kevlar 49, 28:18, 56:61; supply/production of, 28:19; Turbo Shear face planer for, 27:70; ultrasonic knife, 56:61; ultrasonic

testing/difficulty, 150:60; wicking/fiber-to-resin ratio, 56:61. See *also* Twaron

Kiesling, John: builder profile, 52:12

Kiley, John: designer/planing power catamarans, 47:16; model testing, 55:32

Killing, Steve, author: "Flight Plans," 151:110

Killing, Steve, designer: C-class catamarans and refinement of foils, 151:110

Kimberly-Clark Corp.: KleenGuard workwear, 23:54

Kinderman, Quent: on fuel polishing, 113:4; on requirements needed for industry standard tinned cable in marine applications, 139:5; on SmartPlug vs. vintage twist plug, 135:4

King, Bob: Modular Marine/aluminum kit boats, 43:83

King, Bruce: cold-molding, 51:3; designer/large cold-molded offshore sailboats, 51:36, 63:70, 70:58; and Joe Artese, interior designer, 123:46; ketch *Scheherazade*, 70:58, 86:88; *Liberty*, barrel-backed commuter, 51:52, 70:58; on model testing/sailboats, 55:32; molded fiberglass integral grid system, 46:28; planing hull design for waterjet propulsion system, 67:70

King, Bruce, author: "Large-Scale Cold-Molding: Engineering Structure," 51:36

King, Dan: profile/Pacific Skiffs/CAL/NCC welded aluminum construction, 59:71

King, David, author: "Estimating and Tracking Refits and Repairs," 68:44; "Infrared Imaging," 85:22

King, David C. (Dave): on megayacht construction/Admiral Marine, 32:18; on one-off molds for megayachts, 3:5

Kingdon, John J.: on ABS scantling rules, 37:4

King Plastic Corp.: StarBoard polymer sheet material, 7:64, 21:26; StarBoard recycling program, 35:58

Kingsbury, Robert: on recycling fiberglass boats to use as artificial reefs, 135:4

Kirby, Bruce: cartop dinghy, 142:62, 165:10; and IOR/Quarter Ton Class, 142:62; Laser racing dinghy, 142:62, 165:10; Nightwind 35' centerboarder cruising boat, 142:6; profile of, 142:62;

Kirschling, Chris: on secondary bonding resins/techniques, 19:44, 19:46, 19:48

Kit Systems: NC lofting/cutting, 7:18

Kitchell, Joe: traveling boatbuilder, 153:8, turning a mold into an oven, 153:8

kiteboats: kite-powered foiling catamaran/Don Montague, 162:12

kite-flying motor cruise, 133:6

kites/skysails, 109:17; 117:26

KiteShip, 109:17

kits, boat (NC lofting/cutting):  
 aluminum/Modular Marine, 43:83;  
 aluminum/Northwest Plasma Cutting, 42:74, 63:145; aluminum/steel/Elliott Bay Design Group, 40:24; CNC cut metal kits/Smart  
 Kits/Vripack/Hetten/K&M Yachtbuilders, 148:46; digitizing kit plans, 148:18; fiberglass/Mahogany Company, 10:52, 35:58; flats/bay boats/Willis Marine, 121:66; framing/Cornelius & Gump, 37:16, 37:18; kitting a Judel/Vrolijk launch, 131:12; plywood/epoxy-built sailing dinghy/DragonFlyer 3.2/John Brooks and Ruth Hill, builders, 148:18; plywood/Kit Systems, 7:18. PT  
 Skiff/Bieker Boats/Russell Brown, 130:52; Spirited 380 Australian kit boat, 129:40; two-part nesting dinghy/Russell Brown, 130:52. See *also* CAL/NCC (computer-aided lofting/numerically

controlled cutting); numerically controlled lofting/cutting equipment kits, cabinetry/interiors: CAD/NCC applications, 40:24

kits, spill containment/cleanup. *See* spills, fuel/chemical, cleanup/containment kits

Kittredge, Stephen: on Dynal, 11:5; on fire protection in marine composites, 64:5

*Kiwi Magic*: FRP 12-meter, 61:66

Klaha, Kim: on fundamentals of steering systems and terms of force and pressure, 102:4

Klegecell (cross-linked PVC) foam, for FRP sandwich construction: core bonding/installation, 9:36, 129:40; for cored bottoms, 51:22, 51:26, 94:18; structural cores, 52:30; tooling for one-offs, 10:42; vs. Airex, 3:34

Klegecell (cross-linked PVC) foam, for wood sandwich construction: Stave Rander/Schooner Creek/COVE system, 55:79

Klegecell Polimex. *See* Polimex Klegecell

Klein Tools: cable cutter, 12:60

Klem Flying Boats (Virginia): Outrider 27 bow-ski bpat, 78:12

Kleinberg, Al: on requirements for performance of 100-knot yacht, 102:4

Klingel, Gilbert ("Gil"): on identifying corrosion, 15:23; steel boatbuilding, 85:4

Klink, Amyr: Brazilian sailor-explorer/Antarctic circumnavigation, 60:11

K-Lite: bedding putty (foam cores), 9:36

Klopman, Jonathan K., author: "Analyzing Failed Metal Parts," 51:56, 52:4; "Betting the Yard," 81:146; "Hastings Stern-Gear Tolls," 48:86; "Hauling and Launching, Blocking and Cradling," 50:38; "Hot Shop (Consolidated Yacht)," 47:34;

"Inside Ted Van Dusen's Composite Engineering," 41:28; "Klopman's Kontraptions," 36:20; "Moisture Meters Revisited," 60:48; "More on Moisture Meters," 69:31; "Stainless Steel," 54:70, 55:5; "Storm Chasers," 66:64; "Subcontractors in the Boatyard," 52:88, 54:5; "Surveying (1990s Retrospective)," 60:27; "Sterndrive Failures," 76:49; "Surveyors in the Boatyard," 68:96; "Surveyors or Purveyors?," 37:80; "The Surveyor's Role in the Scheme of Things," 44:72; "To Catch a Thief," 71:27; "Upgrading Systems," 75:112; "Yard Boats," 42:34

Klopman, Jonathan: on vintage speedboats, 82:4; on The Power and Peril of Stainless and stress corrosion cracking, 148:4

K & M Yachtbuilders: aluminum sailboats/Bestevaer 53ST unpainted boat, 148:46; lean manufacturing methods, 148:46; use of pre-cut (CNC) stringers and hull plating, 148:46

Knight & Carver Custom Yachts: 400' floating drydock, 127:42; gelcoat restoration, 15:44; M80 Stiletto hull design (M Ship), 97:10; one-off tooling, 10:42; painting, 52:54; power multihull/circumnavigation, 50:11; profile of, 127:42; 70' sportfisherman, 1:20; varnishwork, 19:36; workers' comp premiums, 23:13, 23:14

*Knit Wits*, Hatteras 41 convertible/refit, 160:8

knitted directional fabrics. *See* fabrics, knitted directional

knotmeters: Speedmate, 44:54

Knowles, Tony: on survey haulouts, 30:72

Knox Marine Consultants: Yacht Claims Conference Workshop, 74:9

- Knox, Stephen: on personal watercraft safety, 46:10; research on sales of undamaged boats vs. damaged boats, 107:14
- Knox, Stephen, author: "Loftsman's Liability," 38:14; "The Fundamentals of Appraisals," 85:30; "Photography for Marine Surveyors," 79:86; "Story of a Startup," 66:110
- koa, Hawaiian hardwood, 123:46
- Kobelt Manufacturing Co.: help pump, 6:52
- Kobayashi, Roy: obit, 94:8
- Kochman Reidt and Haigh: NC lofting/cutting, 13:43
- Kody, Paul: on Hitting the Ethanol Blend Wall and proposal to revoke the alcohol-to-fuel law, 161:3
- Koebke, Ralph: on metric units for pressure and English (imperial) units for pressure, 95:4, 101:4; on Florida's landmark licensure decision, 115:6
- Koelbel, Joseph G., Jr., author: "Structural Design for High-Speed Craft," 67:31, 68:32
- Koelbel, Joseph G., Jr.: history of stepped hulls, 85:76; on end-fixity coefficients for panel design bending moment, 69:5; and ferrocement boat design, 71:99; on structural calculations for hull design loads, 70:5
- Koenig, Don: on Volvo-Penta and Cummins propulsion-and-control designs, 108:6
- Konkol, Janusz: Haber Yachts, 148:4; sail straight boats, 148:10
- Kopcsak, Pete: on fuel polishing, 113:4
- Kopr-Shield: compound for marine wiring, 8:12
- Koroknay Marine Woodworking: spraying varnish, 19:36
- Kortchmar & Willner: arbitration, 12:40
- Kotzebue, Paul, Marine Enterprises: computer-generated 3-D model, 24:62
- Kouyoumdjian, Juan, designer: Juan Yacht Design, 127:92, 145:78; Star-Class boat, 127:72
- Kozel, Al: on Detroit Diesel engine management system, 14:34, 14:38
- Kozloff, Alex, author: "Let's Debunk a Myth," 67:136
- Kozloff, Alex: chain plates, 146:10; *Duffy Voyager*, wave-piercer, 61:52; electric speedboat design, 50:11; obit, 146:10; profile/FRP sandwich construction engineering course, 58:13; *Young America's* mishap, 64:11
- Kozlowski, Dennis: 150' aluminum super-sloop/Derektor Shipyards, 82:8
- Kozlowski, Fred: wheeled crane, 36:20
- Kozuls, Aivars, designer-builder: Blesser runabouts, 101:12
- kraft paper: Nomex honeycomb, 22:20, 32:21, 39:30, 45:54, 45:62; for interior joinery, 76:80
- Krautkramer Branson: USD10 ultrasonic flaw detector, 40:4
- Kremer, Charles E.: on Onan exhaust manifold nipples, 45:5
- KROS (Kite, Rowing, Ocean Planing, Solar Energy) project boat, 115:6
- Krueger, Wolfgang: on water-reducible coatings, 22:55
- Krygsman, Martin: on the Foil Fix and importance/safety of directional control, 162:6
- Kulczycki, Chris, author: "Imorted Marine Ply," 90:24
- Kulka, Harv: electronically managed engines/diagnostic systems, 20:8
- Kull, Marcia M.: builder's liability lawsuit, 15:50

Kull, Marcia M., author: "Battle of the Boilerplate Forms," 41:15; "Defining Defects Under the Federal Boat Safety Act," 39:12; "Designer Liability," 40:12; "Disclaiming Liability," 37:13; "Discovering Engineering Documents," 33:13; "Getting Scientific about Crashworthiness," 34:13; "Ordinary Care," 31:30; "Product Liability: A Primer," 32:11; "Product Warnings and the Law," 44:13; "Protecting Your Designs from the Competition," 42:68; "Purchasing Product-Liability Insurance," 36:13; "Selling Yourself Down the River," 38:11; "Trade Dress: Protecting Your Product's Image," 43:13; "Warranty Workshop," 35:8

Kullman, Birger: designer of patrol/rescue boat, 61:10

Kuriyama of America, Inc.: ABA Sure-Seal Clamps, 9:56

Kuuaskoski Oy (Finland): boat recycling company, 160:40; Finnboat boat disposal initiative, 160:40

Kvartet Ltd. (St. Petersburg, Russia): noise test on Russian engines, 83:14

Kvichak Marine: Alcan/defective aluminum, 152:6; *Chinook*, self-righting pilot boat, 68:11; contract to build Response Boat-medium patrol boats for U.S. Coast Guard, 121:78; design of quieter whale-watching boat, 63:10; fireboats for Los Angeles Port Authority, 81:10; foil cat, 81:10; merger with Vigor Industrial, 156:12; profile, 69:114, 96:52; use of environmentally friendly Epaint, 105:106; virtual-reality welding training/VRTEX 360, 133:12

Kydex: thermoplastic alloy (acrylic/PVC), 10:40

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

*La Baronessa*: 62:12, 76:36

La, Jimmy: L&B Technologies vs. Out Island Sport Yachts lawsuit, 93:112; Seaview 36 Express, 93:112

labor: tracking and expenses, 146:18. See *also* payroll/wages, work force.

Lacovara, Bob: on CFA styrene emissions study, 40:17, 41:5; on resin chemistry use in closed molding process, 68:5; on worker training, 13:54; on VOC regulations/compliance, 10:8

Lacovara, Bob, author: "The Bean-Counter Syndrome," 32:64; "Post-Apocalyptic Production Boatbuilding, 123:26; "Resin-Transfer Molding," 26:44, 27:34; "Troubleshooting Tooling," 21:50, 22:12

Lagner, Richard M.: on prop nut sequence, 123:6

Lake, Susan, author: "Core Transitions," 110:96

ladders: design/occupant protection, 34:13, 69:92; double-hooked/Garelick Brothers, 81:10. See *also* staging

Lambers, Tom: on design mock-ups, 10:4

Lamboo Technologies: laminated bamboo panels, 159:10

Lamerdin, Babe: remembrance/obituary, 51:11

laminar and turbulent flow: drag reduction/dimpled bottoms, 59:5, 60:11; model testing/resistance/performance prediction, 58:6, 58:26, 60:66

lamine bulkers: BaltekMat, 7:50

lamine/core bonding. See core bonding, materials/techniques; fiberglass construction, cored/sandwich

laminates, inlaid screen-printed: Wilsonart, 34:28, 34:32



laminates, marine (FRP/composite): ABS laminate strength chart, 87:62, 69:156, 105:32, 106:4; ; advanced composites, repairs to, 82:22, 163:106; aging fiberglass boats, 4:64; blister potential/testing, 15:60, 50:46, 87:62; bulker-plyies, 83:84; classical lamination theory (CLT) software, 166:31; coefficients of thermal expansion (CTE), 59:5, 136:56; computer analysis of laminate properties/GENLAM, 47:53; bulker-plyies, 51:85, 82:22; comparative properties, 56:61, 56:64, 59:5; contamination/acetone replacements, 10:8; contamination/dust, 15:13; controlling print-through, 2:6, 7:50, 14:45, 14:48, 18:3, 29:8, 31:34, 31:42, 45:76, 50:46, 133:46; cracked bottom, 51:85, 82:22; cracking/crazing/DCPD resins, 8:28, 80:40; fatigue resistance, 4:22, 4:64, 28:18, 29:38, 34:42, 49:54, 82:22, 105:32, 106:4, 120:18; electric-powered tensile pull tester, 131:54; fiber-to-resin ratios, 25:58, 51:85, 53:4, 55:26, 59:30, 59:32, 63:38, 125:62, 171:18; fiber-to-resin ratios/VOC emissions reduction, 20:40, 21:18; FEA-plus-load-prediction, 71:20; gel time tests for, 1:6; hardness testing/Barcol hardness tester, 5:12, 87:62; G-10 laminates, 164:40; humidity, 15:13, 33:46, 109:170; impact tolerance/loading, 29:38, 43:54, 66:78, 80:40, 105:32, 106:4, 120:4; inter-laminar bonding, 13:36, 158:54; interply nesting/stacking sequence, 51:85, 51:88, 53:4, 53:20, 57:88, 59:30, 63:151; laminate schedule comparisons, 71:38, 88:26; 97:174, 173:6; laminate schedule/determining from sample coupon, 49:27, 66:78, 72:22; laminate

tiling, 136:56; matching the original laminate, 82:22; micro-cracking, 13:36, 80:40; moisture content/detection of, 60:48, 66:78, 69:31, 85:22, 88:26; monitoring environmental conditions/data loggers, 109:170; noise-reducing, 32:4; PATTI Junior adhesion tester, 100:80; ply-by-ply schematic drawings/laminate schedules/Compromiss, 132:24; PosiTest/Elcometer adhesion testers, 100:80; post-curing, 14:45, 50:46, 97:174; preparing suitable test specimens/what to test, 158:54, 173:6; profit margin, 12:10; pseudocores, effect on a given laminate/problems, 83:84; quality of, 5:12, 6:64, 10:64, 14:2, 14:64, 45:76, 82:22, 95:16, 132:50, 164:40; recycling programs/processes, 54:43, 60:82; resin content/waste reduction, 55:26, 56:5, 59:30, 99:66, 123:26; resin content/weight considerations, 2:42, 3:27, 5:34, 29:38, 45:76, 45:80, 59:30, 64:46, 142:40, 144:58; resin drainout, 33:46, 42:62, 51:85, 59:30, 99:66; resin puddles, 59:30, 66:78; resin-rich/secondary bonding, 20:37, 31:4; room-temperature-cure (RTC), 14:45; sample coupons/plugs/repair patches, 36:34, 37:48, 49:24, 49:25, 49:27, 50:18, 50:46, 66:78, 125:62, 158:54; simple measure of without using FEA, 166:31; soft patch repair, 69:5; specifications/liability, 3:27; Spherecore and Coremat, 83:84; strain-gauge testing, 79:102; strength engineering/testing, 2:42, 4:22, 4:64, 8:28, 50:46, 59:30, 72:22, 87:62, 100:80, 105:32, 131:54, 106:4; strength/breakage/stress concentrations, 13:33, 13:36, 49:54,

59:30, 61:34, 66:78, 72:22, 82:22, 105:32, 106:4; strength vs. stiffness/carbon fiber, 43:54, ; strength vs. stiffness/Kevlar, 43:54, 49:54, 59:5; strength vs. stiffness/offshore powerboats, 49:54; strength vs. stiffness/single-skin laminates, 51:22, 51:24, 51:26, 51:85, 53:20, 55:5, 56:5, 59:30, 66:78, 71:20, 120:18; strength vs. stiffness/woven vs. knitted reinforcements, 29:38, 51:22, 51:85, 83:84; technical assistance/process control (material manufacturers/vendors), 39:27, 42:52, 43:96; temperature/heat, 33:46, 42:52, 82:22, 125:62; tensile testing, 72:22, 87:62, 100:80, 105:32, 106:4; thickness/strength, 50:46, 99:66; thickness/strength/resin content, 51:85, 53:4, 55:26, 59:30, 59:32, 87:46; thickness/vibration, 50:18; thickness/styrene emissions, 40:17, 40:22, 41:5, 55:26; for tooling, 3:34; Tufnol blocks/core replacement, 156:40; VectorLam Cirrus 2.0 software/Road to Optimization (R20) process, 173:6; waste reduction, 55:26; water absorption/oilcanning, 31:34; water absorption/weight gain, 31:39; weights and costs, 53:20, 59:30, 59:34, 71:38; wet-on-dry vs. wet-on-wet, 51:85; worker hours, 20:40. *See also* composites testing; core bonding, materials/techniques; delamination; fiberglass (FRP) construction; fiberglass construction, cored/sandwich; laminates, marine, advanced composites; laminates, marine, repair techniques; laminating techniques; post-curing; pre-pregs; print-through; product quality; resins, curing/exotherm cycle;

secondary bonding; temperature, of laminate  
laminates, marine, advanced-composite: aerospace/Z-axis, 13:36, 47:53, 57:88, 163:93, 106; book/*Marine Composites*/available on Internet, 59:10; carbon fiber sunroofs/Trend Marine, 101:12; computer analysis of laminate properties/GENLAM, 47:53; definition, 43:54, 53:20; diversification/sidelines, 56:40, 58:36. 58:52, 60:116; engineering/training, 41:58, 42:5, 47:57, 58:104, 69:125; fast cat construction/New Zealand, 54:43, 54:44; how to find laminate properties not published/Classical Lamination Theory (CLT)/ Laminate Plate Theory (LPT), 106:62; impact tolerance/safety margins/laminate repairs, 43:54, 45:5; impact tolerance/shock loading/minehunters, 53:40, 58:36; luxury sailing yacht/Baltic Yachts (Finland), 85:46; PRSEUS (Pultruded Rod-Stitched Efficient Unitized Structure) for composite test article evaluation/CAPRI process/Boeing, 163:106; Quickstep process, 72:10; vs. metal construction, 34:55, 48:35; nondestructive testing of, 69:125, 161:36. 163:93, 163:106; recommended test set-up for flexural testing of solid laminate skins, 149:56; research/testing, 58:36; scarfed laminate repairs/ply orientations, 43:54, 45:5; secondary bonding/laminate stacking, 57:88, 106:62; “smart”/stealth technology/applications, 46:3, 46:45, 46:50, 48:4, 53:40, 58:36; switching to/engineering for, 47:57, 53:20, 58:36; tight process control/David E. Jones/Merritt’s Boat and Engine Works,

149:56; tooling for/cheap, 59:76, 60:96; weights and costs, 53:20, 58:36. See *also* carbon fiber; carbon fiber laminates; composite flat-panel construction; epoxy resins; Kevlar; laminates, marine (FRP/composite); laminates, marine, repair techniques; laminating techniques; repair techniques; resin-infusion molding/processing; navy boats/contracts, international; navy boats/contracts, Sweden; Navy boats/contracts, U.S.; vinyl ester resins

laminates, marine, repair techniques: 1990s retrospective, 60:27; adhesion enhancers, 43:54; bedding compounds/caveats, 28:27, 29:4; carbon-fiber single-skin laminates, 43:54, 45:5; caul plate, 43:54, 43:61; DCDP laminates, 52:67, 55:5; Kevlar single-skin laminates, 43:54, 45:5; load transfer in repairs, 107:70; patching techniques/composite laminates, 36:34, 39:19, 39:27, 42:5, 50:18, 70:92, 82:22; 161:36; photo-curing resins/pre-pregs, 18:8; plywood-cored transom, 32:44, 32:45; resin selection/secondary bonding, 20:32, 39:19, 39:27, 42:5, 65:66; scarfed-seam repairs/advanced-composite single-skin laminates, 43:54, 45:5, 82:22; scarfed-seam repairs/deck, 37:48, 82:22; scarf ratios, 36:34, 42:5, 43:54, 52:67, 108:4; severely damaged composite hulls, 25:18, 25:25: small-ply-first vs. large-ply-first sequencing, 107:70, 108:4, 100. See *also* blister repairs; delamination; fiberglass construction, repairs; fiberglass construction, cored/sandwich, repairs; patches/patching techniques/materials

laminates, wood. See cold-molded construction; plywood, marine; plywood, custom industrial; veneers, hardwood

laminating fabrics. See fabrics, specialty; fiberglass fabrics/reinforcements

laminating frames: adjustable clamping jig, 13:8

laminating tables, for fabricating composite panels: aluminum/for vacuum-bagging, 39:30, 61:52; construction/setup/for flat-panel construction, 45:54, 45:62, 73:79; steel/exotherm cycle/laminate warping, 45:68, 48:4

laminating techniques: airflow/styrene emissions, 40:17, 40:18, 40:22, 108:18; blister prevention, 15:13, 50:46; blister repair, 17:11; core repair, 97:130, 82:22; at Gold Coast Yachts, 124:42; for keel stub/floors, 38:20; for small parts, 13:70, 73:79; reducing solvent use, 20:40, 21:18; repair patches, 36:34, 82:22; setting up an appropriate vacuum distribution system for, 83:34; for test samples, 50:46; work area, 17:34, 73:79, 108:18. See *also* fabric impregnators; laminating techniques, closed-molding; laminating techniques, hand layup/open-molding; spraying systems/equipment; robotics; styrene emissions, monitoring/reduction/compliance; vacuum-bagging; VOC emissions, reduction/compliance

laminating techniques, advanced composites: training, 41:58, 42:5, 47:57, 58:104. See *also* laminates, marine, advanced-composite

laminating techniques, closed-molding: Andre Cocquyt DVD/Closed Molding Technology, 103:14; at Cobalt Boats, 113:28; composite flat-panel

construction, 45:54, 45:68; education program for latest processes/Composites One, 124:12; equipment/systems/techniques, 31:42, 32:28, 66:128, 103:208, 113:28, 115:142; fiber-to-resin ratios/controlling resin content, 59:30; at Luffe Yachts/Bodotex Composites, 126:8; MACT point values, 60:39; at Poncin Yacht Group, 115:142; VOC emissions/waste reduction, 26:34, 28:48, 28:52, 31:42, 32:28, 55:26, 60:39, 66:128, 68:5, 69:132; technical work group, 32:28, 103:114; VEC (Virtual Engineered Composites) process/Larson Boats, 168:14. *See also* bagged-laminate infusion process (BLIP); resin-infusion molding/processing; resin-transfer molding (RTM); SCRIMP; vacuum-bagging; vacuum-flow molding

laminating techniques, hand layup/open-molding: airflow/styrene emissions, 40:17, 40:18, 40:22, 88:26, 123:32; bucket-and-roller/Wayne Canning, 45:76; catalyst ratios/temperature/gel time, 1:6, 2:4, 33:46, 70:44; chines, strakes, steps, and transom corners, 58:79, 60:5, 94:48; "cleavage energy" test, 70:44; core installations, 9:36, 94:48, 110:86, 133:114; fiber-to-resin ratios/controlling resin content, 59:30, 99:66; interply nesting, 51:85, 51:88, 59:30; laminate quality, 39:70, 45:76, 50:46, 68:54, 71:38, 123:32; MACT point values, 60:39; Polybeam 703 interlaminar infusion fabric, 116:10; physical compatibility, 131:80; resins and fabric options, 59:30; 71:38 resins and fabric options/FRP sandwich construction, 58:36, 71:38, 116:10; two-

sided resin film infusion/Green Marine, 123:32; VOC emissions/waste reduction, 10:8, 10:17, 40:17, 40:22, 54:112, 55:26, 55:27, 60:39, 68:54, 102:86; wet-on-dry vs. wet-on-wet, 59:30, 71:38; vs. vacuum-bagging, 53:20, 54:112; wrinkling, 133:114, 144:58. *See also* fiberglass (FRP) construction; fiberglass fabrics/reinforcements; laminates, marine; laminating tools

laminating tools: Dibber handheld laminating tool, 154:12; catalogs of, 18:54, 20:8, 25:59; cleaning/blister prevention, 15:13; foam pads, 60:27; Magnum wet-out gun, 71:52; work area, 17:34. *See also* Barcol Hardness Tester (durometer); brush, tip-off; gelltimer; resin pumps; resin (gram) scale; roller brake; rollers/bubble-busters; squeegee

lamp, quartz. *See* heat lamp, quartz

Landing School of Boat Building and Design, The: Arundel 19 built with local resources, 169:88; Composites Program, 110:12; development of life cycle analysis tool for materials selection, 169:88; fiberglass powerboat/carbon footprint analysis, 169:88; Job Fairs, 93:10, 100:4, 106:10; Landing School 17 (LS-17) runabout/materials carbon footprint, 169:88; portable technical training courses, 96:6; profile/facilities/marine systems training, 57:98, 120:34; vocational training program, 20:26, 22:51, 47:24, 50:11, 55:16, 57:98, 75:112; 79:77; 101:106, 102:4

Land Rover Ben Ainslie Racing: and Owen Clarke Design, 159:60; WinDesign velocity performance wind prediction program, 159:60

land yacht: three-wheeled/*Iron Duck*, 60:11  
 Lane, Ken: on CAL/NCC  
     implementation/training, 38:47; on  
     RTA/interiors, 40:24  
 Lang, Richard: on use of Polyumac's  
     Aircell Polyester Foam/All Points Boats,  
     94:4  
 Langan, Michael, "Bill": on carbon fiber vs.  
     aluminum spars, 47:44; designer/on  
     Sparkman & Stephens, 59:48; on  
     megayacht market, 12:50; obit, 130:10  
 Lanning, Bruce: holding tank design, 50:69  
 Lantor Plastic: Coremat (print-through  
     control), 7:50, 7:62  
 Lapworth, C. William, designer: obit,  
     104:12  
 Larson, Pete: on acetone replacements:  
     33:20, 33:26  
 Larson Boats: acetone  
     reduction/replacement, 33:20, 33:26;  
     custom industrial plywood, 16:12; dust-  
     control systems, 28:38; move to Pulaski,  
     Wisconsin, 168:14; 25' Senza Spectre,  
     5:52, 7:5; VEC (Virtual Engineered  
     Composites) closed mold process,  
     168:14  
 Larsson, Lars: author, *Principles of Yacht  
     Design*, 148:10  
 Lascelles, Graham: on using people in  
     estimating weight/stability, 44:5  
 Lasdrop: mechanical face shaft seals,  
     29:14, 29:21  
 Laser Boat: refinement of wing-sail on,  
     63:10  
     laser cutting vs. CNC routing, 115:162  
     laser measuring: 66:110, 99:20' Spar  
     Point Research, 99:20; reverse-  
     engineer modifications, 99:20; Trimble  
     GS200 laser scanner, 99:20  
 laser tracker: in hull repair, 65:66, 99:20

laser welding: Precision Light Systems  
     hybrid Laser/Gas Metal Arc Welding  
     process, 103:44; steel sandwich panels,  
     103:44  
 Lash Brothers: boatyard fires/insurance,  
     1:50  
 Latham, Bob: profile of, 130:44  
 Latham Performance Products: steering  
     system, 130:44; cooling unit for CNC  
     lathe, 130:44; transom-mounted  
     hydraulic dinghy lift, 130:44  
 lathe: in-house machine shop, 48:56;  
     South Bend, 48:56  
 Lathrop, Tom: Pamlico skiff/Powerboat  
     Design Challenge, 122:24  
 Laudeman, Bill: on plywood structure, 41:5;  
     on survey reports, 32:4  
 launching: traditions, 51:11. *See also* boat  
     lifts/hoists; boatyards/marinas,  
     facilities/equipment; boatyards/marinas,  
     management; hauling and launching  
 Laurence, Jim: on Internal Combustion's  
     Backside and the benefits of a muffler  
     drain, 172:4  
 Lawrence, Charles: on Fairey Marine and  
     its boat productions, 151:6  
 Lawrence, Charles, author: "Fairey  
     Marine," 147:64  
 Lawrence, Charles: author of books: *Hurry  
     West Cowes-Torquay Race 1961*,  
     166:16; *Cowes-Torquay Offshore  
     Powerboat Races 1961-1978: The Daily  
     Express Years*, 166:16  
 Lawrence, Jack: on team building, 13:54  
 Lawrence, Jim: on Internal Combustion's  
     Backside and the benefits of a muffler  
     drain, 172:4  
 Lawrence Group, The: team-building,  
     13:54, 13:65  
 Lawrence Productions: video production,  
     22:42

lawsuits/litigation: arbitration as alternative, 12:40, 93:112; contract/warranty disputes, 50:18, 50:20, 50:25; damage claims/subrogation, 50:3, 50:18, 50:20, 50:38, 50:80; dealers and manufacturers/franchises, 150:20; discovery/discoverable documents, 33:13, 42:26, 45:14, 50:20, 59:89; expert-witness testimony, 47:24, 50:18, 50:20, 50:25, 56:53, 59:89, 164:12; Jimmy La/L&B Technologies vs. Out Island Sport Yachts, 93:112; repairs, 50:18, 50:20, 50:25, 50:80; wrongful discharge suit, 103:34. *See also* builder's contracts; legal issues; merchant's contracts

lawyer: selecting/builder's contract, 37:60.  
*See also* lawsuits/litigation

Lazarra Yachts: 62:62, 67:3, 67:110; balsacored boats, 96:3; and American Quality Furniture Co., 90:13; composite construction/affiliation with David E. Jones, 149:56; exceptional customer service, 169:44; Gavio Group and Bertram Yachts, 171:18; incorporation of Gulfstar Yachts, 169:44; installation of inboard performance system (IPS) pods on LSX75 express cruiser, 115:32; interior design award, 81:10; Lazarra Marine Corp./advanced composites/prepreg processes, 169:44; Lazarra Yacht University/training facility for owners, 169:44; and 2008 Great Recession, 169:44, 171:18; profile of company, 169:44; SeaCheck Services, 169:44; selling direct, 169:44

Lazarra, Vince: founder of Lazzara Yachts, 67:123, 149:56

Lazarus, Paul: correction on "0 to 60" article, 154:4; response on RIB on the

Gota alv/OptiMax diesel outboard/ultra-low-sulfur-diesel fuel, 168:4

Lazarus, Paul, author: "A Tale of Two Cruisers," 89:4; "Abrasive Behavior," 23:54; "Access Denied," 43:61; "Aerospace at Sea Level," 62:3; "Analyzing Accelerations, Part I" ; "...A Few Hippies and a Barn," 95:3; "Any Which Way But Loose," 21:60; "American Marine (Grand Banks): "Applying Science to Sail," 60:66; "The Architecture of Very Small Craft," 105:120; "Artificial Intelligence," 61:03; "Backstory," 96:3; "Basic Training," 94:3; "Best of Show," 77:3; "Bionic Foam," 40:66; "Boatbuilding Schools: Cape Fear Community College," 20:18; "Bonding Fastenings & Hardware," 15:21; "The Brand That Beat All," 80:3; "The Brer Face Planer," 27:70; "Brownell Boat Works," 22:32; "The Builder Under The Bridge," 157:50; "Builders Wanted," 64:82; "Buying Pre-engineered Metal Buildings," 26:18; "Buzzi," 133:84; "Buzzi, the Boats, and the Power Trains," 46:43; "Buzzi to Bermuda," 141:6; "Calculating Dynamic (In)stability," 126:80; "Carderock," 42:39; "The Carriage Trade," 117:3; "Cats," 72:3; "A Cautionary Note on Modular Construction," 75:3; "Changing the Process," 69:3; "Cleanest Way to Build A Composite Boat," 131:28; "Committed to the Core," 88:4; "Coming to Terms," 43:3; "Competing Composites," 48:35; "Core Competency," 121:100; "The Corporate Culture," 29:29; "Creative Manufacturing," 81:26; "Customized Industrial Plywood," 16:12; "Cutting Metal for the Trade," 42:74; "A Darwinian Take on the Contents," 101:3;

“A Day in the Life of the Combatant Craft Department,” 52:42; “Dear Reader,” 104:3; “De-confusing Composites,” 61:116; “Departures/Arrivals,” 97:3; “Designer/Builder Dave Sintes: 1947-2016,” 166:20; “Details,” 74:44; “Digital Us,” 124:3; “DJ&A,” 149:56; “Doing the Math,” 78:3; “The Education of a Naval Architect,” 76:36; “End of the Line,” 13:80; “Epoxy Wars,” 125:3; “Ernest M. Brierley,” 41:3; “The Extraction,” 168:28; “Extreme Textiles,” 99:3; “Fabric Impregnators,” 5:34; “Fail-Safe Fenestration,” 41:62; “Fast Boats for Professionals. Plus a Few Yachtsmen,” 167:28; “The Firm,” 59:44; “Flow Coaters,” 25:58; “Found Success. Desperately Seeking Formula,” 91:5; “Free Range,” 126:3; “Getting the Weight Out,” 29:8; “Gifted and Talented,” 66:3; “Geronimo, Giant Squid, and an Anniversary,” 90:3; “Gobbledygook in Acronymland (EPA jargon),” 53:3, 54:5; “Goetz: The Company,” 73:54; “Going It Solo,” 33:75; “Good Air. Bad Air,” 114:4; “A Great Guide to Good Design,” 44:54; “Gunboats,” 52:3; “Handling Rapid Growth,” 10:20, 11:34; “Hands On,” 173:18; “Hanging Planks,” 35:58; “The Hard Way,” 130:28; “H/G-H Pilot Boats, Part I,” 150:34; “H/G-H Pilot Boats, Part 2,” 151:52; “Hines-Farley 63,” 54:56; “The Hipp Initiative,” 97:24; “Holshot,” 111:3; “How Fast Will It Go?” 169:62; “A How-To Manual for Specifying Industrial Plywood,” 31:68; “How We Got Here,” 113:3; “IBEX By the Numbers: 1992 vs. 2002,” 76:104; “The Identity of the Industry,” 44:3; “Imaginary Dumpster.

Real Depression,” 116:3; “The Impressive Comeback,” 19:32; “Improving the Efficiency of Strip-planked Construction,” 46:65; “Industrial Evolution,” 64:3; “Infusion!,” 31:42, 32:28; “Inside Rybovich,” 25:42; “The Italian Connection,” 108:3; “It’s Composite Boatbuilding, Only It’s Wood,” 51:3; “It’s Not a Robot,” 118:16; “Keepers,” 102:3; “Kinda Like Lauderdale in ’92,” 122:3; “Kit Boats: Modular Assembly in Aluminum Using Computer-designed, Pre-cut Parts,” 43:83; “The ‘L’ Word,” 100:3; “Licensure,” 47:24; “Living with 1162,” 25:8; “The Lobsterboat Gene,” 73:3; “The Longest Run,” 28:72; “Low-VOC Gelcoats,” 55:99; “Making and Testing Laminate Samples,” 158:54; “Managing Diversity,” 33:36; “Managing Production,” 12:10; “Managing Waste,” 27:8; “Managing Waste (technical manual),” 28:48; “Manual Lofting Still Preferred at Palmer Johnson,” 24:30; “Manufacturing Wooden Boats: The Beetle Cat Shop,” 23:32; “Marine Systems 101,” 57:98; “Mass Extinction,” 113:3; “The Material World,” 83:3; “Meade’s Trove of Wood Fatigue Data,” 173:76; “METS. Not the Baseball Team,” 55:3; “Model Testing on a Moderate Budget,” 78:22; “More About Flow Coaters,” 27:70; “Motion Pictures,” 63:3; “Mounting a Hatch on a Cast-Epoxy Base,” 21:58; “Moving Antonisa,” 63:70; “Mr. Infusion,” 110:3; “MPYD,” 66:52; “Name Brand,” 106:3; “The Natural (Ray Hunt),” 50:32; “The Near Future of Marine Composites,” 58:36; “NEB,” 81:93; “The Neighbors,” 84:36; “The New & Improved Nigel Calder,” 43:83;

“NEB,” 81:90; “New Regulations in the Work Place,” 1:30; “New Shocks,” 91:172; “The (New) Technology of Tooling,” 71:3; “New Yard, Old Site,” 70:58; “Next Gen RIBS,” 85:3; “No Fear,” 88:62; “Nomex Interiors--by the Numbers,” 51:114; “OSHA-Aboriginal and Otherwise,” 92:3; “Of Pastry Bags and Waterbeds,” 52:81; “Of Model Basins, Costs, and Computer Analysis,” 89:87; , 89:85; “One Decade At A Time,” 77:70; “Open-Molding at Island Packet,” 68:54; “Operating Systems, 98:03; “Parting Shot” on *Puget Sound*, 87:104; “Pete Melvin and Team M&M,” 72, 90; “Phenomenon on Front St,” 143:28; “Plant Layouts,” 17:34; “Pliogrip Adhesive Is Coming On Strong,” 30:60; “Polyurethane Adhesive/Sealants,” 28:27; “Portable Planers,” 12:60; “A Powerful Subculture,” 81:3 “A Practical Guide to Developing a Successful Boat,” 12:24; “A Processing Puzzler,” 70:44; “Production Thinking, Custom Building,” 45:47; “Protecting the Finish,” 29:58; “Putting It All on the Line,” 67:110; “Quantifying FRP Production Waste,” 55:26; “Quick Study,” 69:125; “Raceboats,” 65:3; “Ramping-Up at Hodgdon Yachts,” 34:21; “Reaching for the Right Adhesive,” 26:56; “Redux,” 107:3; “Reflecting on the Bertram Experience,” 39:70; “Reorganizing the Manufacturing Plant,” 29:22; “The Repairable Boat,” 82:3; “Reporting from the Resin Infusion Front,” 44:30; “Rethinking Custom Cabinetry,” 13:43; “Reverse MACT,” 31:3; “Revisiting Pressure-Treated Plywood,” 27:42; “Revisiting RIRM,” 48:48; “RIB on the Gota alv,” 166:64; “Right Place. Right

Time. Right Professional,” 109:5; “The Right Tools for the Job (drilling/cutting test samples), 49:25; “Selling Technical Support,” 67:3; “Sailboats from the Century Before,” 82:18; “Series 62,” 128:18; “Shaping a Boat Company,” 11:39; “Show and Tell: British SeaGull Service-Repair Handbook,” 141:30; “Showtime,” 57:152; “Sometime or Never,” 120:3; “Some Assembly Required,” 155:58; “Sonny,” 135:26; “Sonny Levi: 1926-2016,” 165:10; “Special Project,” 138:48; “Standard G,” 145:100; “Start-Up,” 95:38; “Stephens & Stephens,” 119:3; “The Stepped Repair,” 111:82; “Structure,” 105:3; “Success in the Aftermarket,” 14:26; “Taking the Advanced Out of Composites,” 76:3; “Tall Buildings, Fast Boats,” 68:3; “Teak to Go,” 51:114; “Team Mannerfelt,” 163:26; “Technical Alert,” 70:3; “Test *This*,” 79:3; “Those Black-and-Yellow Clamps,” 49:79; “Titanium,” 132:62; “Turnaround,” 80:48; “Triple Whammy,” 115:184; “True Green,” 115:56; “Two Labs,” 148:26; “Ultrariverine,” 146:24; “The Unbearable Lightness of Being Carbon,” 123:3; “Under the Radar,” 161:20; untitled Parting Shot column/cold-molded ketch Scheherazade, 86:88; untitled Parting Shot/Delta Marine Industries, 88:106; “War Games,” 112:3; “Wave Piercer,” 54:44; “What’s This? An Infusion Issue?,” 103:5; “When the Paint Hits the Fan,” 42:3; “Why I’m Rooting for Rich Wilson,” 118:3; “Will Build to Suit,” 71:88; “Wood in the Time of Composites,” 84:3; “Vacuum-Bagging on the Production Line,” 30:18; “X-Patch Update,” 37:71; “Yachts in the Time of



Terrorism,” 74:3; “Year of the Adhesive,” 29:8; “Yes, We Have No Closed Molding,” 93:3; “Zapped,” 86:3; “0 to 60,” 153:20’ “0 to 60,” 153:20, correction 154:4

LCG. *See* longitudinal center of gravity (LCG)

Leach, Jim: on ABYC jet boat safety standards, 36:50

lead: cast-lead production sailboat keels/Mars Metal Co., 156:70; environmental constraints, 156:70; Sonalead soundproofing, 21:26; use with antimony, 156:70;. *See also* keels, ballast

Leadership 44’ sailboat. *See also* Luders 44.

Leading Edge Tool Co.: Squeeze-Wrench, 14:57; Tight Fit Tool Kit, 10:52

Leaf, Mindy, author: “Designing Interiors for the Nineties,” 6:34; “Flotation Foam: Environmental Hazards,” 2:28; “Solvent-Free Foam Guns,” 11:52; “Today’s Large-Yacht Industry,” 12:50; “Vacuum-Drying Blistered Hulls,” 9:50

leak detectors: AudioTech Probe, 19:59; moisture meters as, 3:60; ultrasonic (Panorama), 2:70; as tool for infusion, 88:26

lean manufacturing methods, 148:4

leases, boatyard: negotiations, 3:48; cost analysis, 69:114

LeClercq Marine: transition/commercial fishing boats to yachts, 40:24

LED (light-emitting diode): 87:82; 115:74; color temperatures/color rendering index, 115:74; current regulating device/drivers, 115:74; DeWalt flexible work lights, 158:48; Dr. LED replacement for common marine halogen lights, 115:74; glove fitted with

LED lights, 158:48; Imtra LEDs, 118:8; Lopo light, 115:74; Lumitec lights, 118:8; Sensibulb with thermal control circuit, 117:5

Lee, Bill. *See* Bill Lee Yachts

Lee, June: on additional information for curriculums for yacht designers/naval architects at University of Southampton and beyond, 103:6

Lee, Richard W.: on pump types/selection, 26:4

Lee, Steve: Westerly Marine/Rule 1162 compliance, 25:8

Lee Engineering Co.: Presto scissor-lift tables (for plywood), 22:56

legal issues. *See* arbitration; builder’s contracts; lawsuits/litigation; lawyers; leases; liability; libel; merchant’s contracts; product liability; product warranties; patents; trademarks

Legendary Yachts, Inc.: rolling hull/64’ schooner, 58:13

Leichtung, Inc.: Equi-Pressure Clamp, 2:70

Leisure Life Ltd.: thermoplastic construction, 10:34, 34:59

LeMieux, Richard (Bud): profile/Northern Marine, 57:123, 58:9. *See also* Northern Marine

Lemsteraaks, 143:40

Lenan Corp.: Recyclit SR 80 solvent recycler, 16:52

Lenci, Mark: response on chemical conversion/failure of lithium technology, 157:6; on “Pushing Batteries to the Limit” and his conversion to a lithium-ion-battery-based electrical system, 172:4

Lenci, Mark, author: “Chemical Conversion,” 155:46

- Lent, Dane E.: on Windsor Craft hulls for replica molds for fiber-reinforced plastic boats, 19:4
- Leo, Jake: on quality control, 35:4
- Lester, Russ: on prop nut sequence in propeller installation, 121:9
- Letcher, John: on AeroHydro/Fairline software, 7:18, 8:35; on CAD/CAM applications, 8:35; on CAD/CAM applications/wood interiors, 40:42; *Geometry of Ships*, 125:50; on numerical fairing and lofting, 79:8; profile of, 125:50
- level: electronic digital/SmartLevel, 14:57, 42:26, 42:32, 44:5
- Levi, Renato "Sonny": *Dart/Arcidiavolo II* design, 135:30; delta shape circuit racers, 135:26, 165:10; *Dhows to Deltas*, book, 165:10; high-speed propulsion, 136:32; Levi Corsair, 135:26; Levi Sidewinder/Diamond back series/Scimitar propellers, 136:32; Levi Step-Drive, 136:32; memoir, *Milestones in My Designs*, 135:26, 137:4; obit for, 165:10; Salpa 28.5 Gran turismo powerboat, 127:8; Ram-Wing 100 design, 135:26; reverse-tricycle geometry, 135:26; *Surfury* motorboat/Delta deep-deadrise hullform, 165:10; *Taxi* racing cat/racing drive and propeller design, 137:4; *Virgin Atlantic Challenger II*, 135:32, 136:32, 165:10
- Levi, Renato "Sonny," author: "The Sidewinder Stern, Scimitar Prop and Appendix C," 136:32
- Levin, Morton S.: on anti-galling compounds, 39:4; on circuit breakers/current ratings, 37:4; on survey reports/descriptions, 31:4; on surveying an electrical system, 72:5
- Levitt, Michael, author: "Derecktor's Way," 75:126
- Lewit, Scott M.: on composite-panel tester, 36:4; on composite stringers/PRISMA, 41:62; on infusion technology patents, 70:5; on knitted fabrics, 32:4
- Lewmar Marine: megayacht winch, 6:52; Synchro Block, 78:12
- Lexan: adhesive for, 26:56; cleaner for, 55:99
- liability: designers and, 9:64, 65:11; surveyors and, 5:64, 30:26; worker safety/training, 13:54. *See also* product liability
- Liba Max 3: CNC multi-axial stitch-bonding machine, 69:13
- libel: litigation/yacht design/John Walker, 39:90
- Libra-Plast A/S: boatshop/environmental safety measures, 2:67
- licensure. *See* designer/naval architect/engineer, profession/responsibility
- Lidgard, Garry: designer/sportfisherman/DuFLEX panels, 59:10
- Lie-Nielsen Toolworks, Inc.: Stanley #95 edge plane, 16:52
- liens, maritime: length of, fees and enforcement of, 101:54; website and database search for registered liens, 75:14; 88:14
- lifeboat: first fiberglass lifeboat/U.S. Navy/Crystaliner, 153:58; Monomoy lifeboat/Northwest School of Wooden Boatbuilding, 137:34; Tamar class/construction of/Green Maine, 123:32. *See also* Royal National Lifeboat Institutio.

lift, dynamic: and performance/lifting strakes, 45:86; vs. aircraft speed, 67:136

lifting strakes: filled/FRP construction/core material, 58:79, 60:5, 70:92; filling/pumpable polyester bonding putty, 58:54, 58:79, 70:92; FRP construction, 58:79; full-length/improved performance, 45:86; hollow/FRP construction, 58:79, 70:92; line bubble in, 70:92

lifting/turning systems. See boat lifts/hoists; hull lifting/rolling/turning systems

lift platforms. See staging

lifts, boat. See boat lifts/hoists; hull lifting/rolling/turning systems

Ligard, Halsey: sailmaker, 62:46

lighting, deck/cockpit/wheelhouse: control station, 48:66, 48:79; Hellamarine halogen reflector lamp, 40:66; Mantagua replacement LED bulbs and navigation lamps, 99:20; 115,74

lighting, interior/cabin: 87:80, 89:4; design, 6:39; energy-efficient, 36:74; engineroom, 37:26; fiber optics, 34:28, 34:32; mock-ups and, 9:28; nav stations, 11:9; overcurrent protection, 36:41, 38:4; prismatic film/Scotch Brand Parallel Light Film, 34:28, 34:32; Sensibulb /self-governing thermal control circuit, 117:5; 12-volt dimmer, 55:99

lighting, shop: for curing photo-initiated resins, 18:17; for paint booth, 37:42, 42:20

Lightning Class: sloop *Blitzen*, 74:44

lightning dissipators (static): Lightning Master, 43:64, 46:5; No-Strike, 31:68, 43:64

Lightning Master: static dissipators, 43:64, 46:5

Lightning Performance Products: gas inboard engines, 17:44

lightning protection systems: bonding/grounding, 43:64, 82:80, 86:3, 83:26; carbon fiber masts/hulls, 43:64; checklist for, 73:102; copper split-bolt connector/Chestnut Hill Industries, 86:26; external grounding strip, 86:26; for catamarans, 86:26; and galvanic isolators/capacitor vs. non-capacitor, 43:5; lightning strikes/damage, 43:64, 70:35, 86:3, 86:26; No-Strike, 31:68; static dissipators, 43:64, 46:5, 86:26; stray currents, 33:28; systems/design/installation, 43:64, 46:5; wiring, 23:4, 33:28; terminology, 43:72; wiring/AC grounding/DC negative circuits, 30:38, 82:80

lights, running. See running lights

light spectrum: and photo-curing resins, 18:8, 18:17

lignum vitae wood: properties of, 166:40; use of for shaft bearing replacement in harbor tug, 166:40; use for bandsaw blade guides and lathe Steady Rest, 168:4; toxicity of dust, 168:4

Lillebo, Arne: on environmental/boatshop safety, 2:67

Lillistone, Ross: Design Challenge, 129:18

Lilly, Wesley C.: on use of washer with nut for prop nut sequence in propeller installation, 121:9

limber holes: and flooded foam-filled compartments, 37:48; premolded limber holes, 117:74; sealing a frame's core from bilge fluids, 117:74

Lincoln, James F.: *Incentive Management*/Lincoln Electric Company, 41:72

Lincoln, Spencer: on designing for production, 2:60; on T-boat conversions,

- 36:32; Nova Scotia fishing boat hulls, 100:36
- Lincoln Composites: carbon fiber laminates/galvanic blister prevention, 57:30
- Lincoln Electric Company: incentive management, 41:72; VRTEX 360 virtual-reality welding training system, 133:12
- Lindsay, Mark: hardware bonding, 15:21; polyester gelcoat/epoxy laminate compatibility, 43:5, 44:5; on post-curing, 14:45, 14:55; start-up of Boston BoatWorks, 157:50; stronger, faster, lighter craft expertise, 157:50; Tornado catamarans, 15:21
- Lindstrand, Leo: on To Heat and To Hold and winterizing choices for marine water heaters, 154:4, 155:4; on Reading the Rust and undersized, poorly designed chainplates, 160:4
- linear polyethylene, high-density (HDP): for ancillary boat parts, 29:37; vs. cross-linked/kayaks, 29:33; vs. cross-linked/tanks, 52:18; for kayak hulls, 29:33; for fuel/water tanks, 52:18
- linear polyurethane (LP) paints: air quality/work area/ventilation systems/safety gear, 19:12, 19:20, 20:8, 28:48, 42:3, 42:20, 42:24, 63:106, 92:12; applications/spraying/shop techniques, 19:12, 19:20, 42:3, 42:20, 42:24, 91:96; Awlgrip, 19:12, 53:31, 83:72; development/aluminum hulls, 53:31; for gelcoat restoration, 15:44, 84:52; Imron, 19:12, 53:31; for interiors, 19:12; Interthane, 19:12; Sterling, 19:12, 21:26; types/performance, 19:12. See *also* Awlgrip
- linear polyurethane (LP) paints, “environmentally friendly” alternatives: isocyanate-free (50P), 15:70, 19:8; water-reducible (System Three WR-LPU), 22:55
- linear polyurethane (LP) paints, alternative: automotive acrylic urethane/Deltron, 19:12; Awlgrip 2/less toxic, 45:5; in-mold coatings, 49:59, 51:6
- liners: mock-ups for tooling, 9:28; molded integral structural grid systems, 46:28, 46:35, 46:37, 48:4, 58:54
- Lines*, book, Olin Stephens author, 82:18
- Lipke, Paul, author: “Through-Hulls and Sea Valves,” 8:42
- Liquid Control Corp.: Variable-Ratio Mini Machine, 15:70
- Liquid Metal Marine: and Armstrong Marine, 164:12; fabricator for aluminum boats/profile, 164:12; Salish recreational series/blackfishing boats, 164:12
- liquified petroleum gas (LPG): ABYC standards for/LPG, A-1). 169:72; CO detectors, 169:72; flame failure device, 169:72; Gaslox/digital tank weight, 169:72; maintenance for, 169:72; overfill protection devices (OPD), 169:72; pressurization testing, 169:72; storage lockers, 169:72
- Lite Cylinder: recall of propane gas tanks, 145:20
- litigation. See *builder’s contracts*; *lawsuits/litigation*; *product liability*
- Little *America’s* Cup: C-Class catamarans, 133:70, 134:42; design/construction/*Cogito*, 39:30; Formula 18 beach catamaran, 134:42; wing (solid) sails, 133:70
- Little Harbor Custom Yachts: profile, 33:36
- Little Harbor Marine: paint booth, 42:20, 42:24; profile, 33:36; refastening keel, 38:20

Little River Industries: Poly-Steel (PVC) Shelters, 5:52

Liverick, John: on professional engineer licensure, 104:4

Livesay, Mark: on photo-initiated resins, 18:8, 18:17; on photo-initiated resins/Carderock project, 50:5; on Rule 1162 development, 26:34; on spraying/dust-coating PVA, 41:50

Livesay, Mark (Sunrez Corp.), photo-curing resins/applications: air-inhibited (secondary/core bonding), 19:8; pre-pregs (UV-PPG), 18:8, 48:35, 50:5; resin-infusion molding (UV-VARTM), 32:28, 48:35, 50:5; Styblock (VOC-reduction) system, 18:8

Livorsi Marine Inc.: Gaffrig gauges, 36:78

Lloyd's, German. See German Lloyd's

Lloyd's of London/Lloyd's Register of Shipping (LR): classification notations, 39:86; classification standards/yachts, 39:80; composites testing, 4:27; "Green Passport," environmental protection program, 117:26, 119:4

loans, low-interest: for small marine businesses, 63:29

lobsterboats: Carroll and Royal Lowell, builders, 73:88; Bunker and Ellis, builders, 109:208; conversion/J. Thompson Marine Carpentry/WesMac 42, 173:18; FRP/fast/Holland's Boat Shop, 45:76; Generic 38/*Nimbus*/Frost, 73:88; hullform/basis for sportfisherman design, 51:96; Hunt hullform, 50:32; Jonesport Island (Maine) torpedo stern/Will Frost Design, 73:3; *Wild Wild West* roll and crash/Maine lobsterboat competition, 126:80

lobster yacht, 109:208

lockers: for flats boat, 47:40

Lockhart, Susan: on interior design, 6:39

Lockheed Fort Worth Co.: ergonomics program/tools, 37:71

Lockheed Martin: SWATH hullform, 65:102

Lockie, Martin: on managing high current DC circuits/short circuit advice, 91:12

Loeser, Robert, author: "Reducing the Risk," 107:94

lofting: Boolean operations, 38:38, 38:47; computer-aided (CAL) vs. traditional (manual), 7:18, 8:35, 24:26, 24:30, 25:4, 25:42, 38:14, 39:4, 53:28, 65:97; design control/errors/liability issues, 25:4, 27:4, 38:14, 38:47, 39:4; flashlight sighting method, 47:34; loft floor, 38:14; outsourcing, 38:14, 38:38, 38:47; planar sheer, 27:4; plug for tooling, 3:34; table of offsets/offsets machine/N.G.Herreshoff, 54:82; at Vicem Yachts, 102:34; vocational training, 20:21, 38:14, 38:47. See *also* CAL/NCC (computer-aided lofting, numerically controlled cutting); computer software, lofting/parts generation; metal construction, CAL/NCC (computer-aided lofting, numerically controlled cutting) applications; offsets, table of

Logic Marine Corp.: profile/world's largest LLPDE boats, 56:10

Loh, Richard (Rick): on builder's liability, 15:50; Grand Banks Ltd./builder profile, 19:32

Loibner, Dieter: on fiberglass folkboats, 99:4

Loibner, Dieter, author: "Foiling Part I: Rising to the Occasion," 172:22; "Foiling Part 2: From Niche to Market," 173:34

Loisel, Tim: on seats and seating on high speed craft, 142:4

LOMOcean: *PlanetSolar* globe circumnavigation design, 124:22

- Long, Henry A, Jr.: on longboard:  
replacement/PowerBoard, 24:66; on  
*Palawan VI* major refit, 83:4
- Long, S. Tracy: on inaccuracies in article  
about Flexiteek and  
PlasTEAK/PlasDECK products, 126:6
- Longino, Frank: on turnaround at Christ-  
Craft, 80:48, 82:4; Southport Boat  
Works, 95:38
- longitudinal center of gravity (LCG): ballast  
and, 23:24; 23:26, 64:46, 75:140;  
stability indicator, 31:20, 31:28, 64:46;  
84:26; stepped hulls, 85:76
- Lonno, Anders: on carbon/vinyl ester  
sandwich construction, 55:5; YS 2000  
Visby class, 53:40, 55:5
- Loomes, Craig: designer of wave-piercer  
powercat, 54:43, 54:44; 68:11; 74:54;  
toe-in and toe-out rudder design for  
sportfisherman, 74:54
- Lord, Lindsay: monohedron/parallel buttock  
lines, 103:150; stepped powerboat  
designs, 5:52
- Loscombe, Robin, author: "Calculating  
Your Way to ISO Compliance," 102:100;  
"Fore-and-Aft Buckling Loads in FRP  
Motoryachts," 71:20; "Simple  
Scantlings," 136:6; "Taking the Simple  
Measures of Laminates," 166:31
- Loscombe, Robin: on defining end fixity  
(EF) in panel-design bending moment,  
69:5; self-certifier scantling assessment  
tool, 136:6
- Loudon, Blaine: on honeycomb  
cores/applications, 22:20
- Lougheed, Mark: Modular  
Marine/aluminum kit boats, 43:83
- Lougheed, Mark, author: "Standards for  
Shock Mitigating Seats," 146:80
- Louisiana boatbuilding industry: and oil/gas  
price fluctuations, 173:6; Scully's  
Aluminum Boats, 173:6
- Louisiana Shipbuilders and Repairers  
Association (LSRA): address, 4:20;  
efforts/membership, 4:9
- Lovelace, Jeffrey: on Securefill, 87:4
- Loven, William E.: on secondary bonding  
preparation/adhesives, 42:5
- Low Tech Innovations, Inc.: Dust Muzzle,  
19:59
- Lowell, Carroll: DuraKore boat design,  
1:20; Even Keel Marine, 79:10
- Lowell, Pete: on wet exhaust riser and  
standpipe design/Cummins B300 turbo  
exhaust, 91:10
- Lozman v. City of Riviera Beach, Florida.*  
*See also* houseboats.
- LP paints. *See* linear polyurethane (LP)  
paints
- LPG (liquified petroleum gas), 169:72. *See*  
*also* liquified petroleum gas
- LPI Inc.: pneumatic-hydraulic scissor-lift  
platforms, 44:54
- LPU paints. *See* linear polyurethane (LP)  
paints
- L.R. Oliver & Co., Inc.: Karbide Kutzall  
SSG circular saw blades, 11:52
- LTC-PPG (low-temperature-cured pre-  
pregs). *See* pre-pregs
- lubricants, anti-seize. *See* anti-seize  
compounds/lubricants
- lubricants, hull: Sea-Slide, 14:57
- lubricants, oil: WD-40, 24:62; WD-  
40/drowned engine, 43:52
- lubricants, refrigerator compressor:  
alkylbenzene oil, 26:8; ester oil, 16:35;  
PAG (polyalkylene glycol) oil, 16:35
- Lucander, Nils: on aluminum/steel tanks,  
54:5; on designing efficient boats, 16:4;  
on design trends/myths, 30:4; on

displacement speeds, 8:4, 30:4; on lofting/CAL vs. manual, 39:4; profile/obituary, 60:11; on propulsive efficiency/turbulence/slip, 46:5; on T-bar/aluminum construction, 26:4

Lucander, Nils, author: "Eyeing the Pump Effect, 26:31

Lucas, C.W., Inc.: RIB builder/Hurricane

Ludwig, Richard: on "Applying Science to Sail," 60:66; on "Bill Tritt and Early Fiberglass," 60:116; on early fiberglass boat building, 61:8

Luders 44'/Leadership 44' sailboat: infusion build/Morris Yachts, 133:114. *See also* U.S. Coast Guard.

Luders Marine Construction Company: engine mounts, 36:4; tribute, 36:74; wood sloop *Julie*/Gordie Villalon, 164:12

Luffe Yachts (Denmark): closed-molding/Bodotex Composites, 126:8

Luhrs, Warren: profile/Hunter Marine, 53:50, 120:62; Child series, 62:46; obit, 148:10; plugs & molds/Jim Gardiner, 120:62

Luke, Frank: on Paul E. Luke accessories/hardware/ancillary equipment production, 14:26, 14:32

Luke, Paul E., Inc.: accessories/hardware/ancillary equipment, 14:25, 14:32

Lukich, Ray: on mold-release agents, 12:27, 12:28

lumber: corrosion problems in pressure-treated wood, 91:20; selection/storage (Rybovich), 25:42. *See also* wood; wood construction; wooden ship building/restoration

Lumileds Lighting LLC: LED lights, 87:97

Lund Boats: riveted aluminum construction, 4:42

Lund, Ross: on a Builder's Guide to the Owner's Manual from an electrician's perspective, 160:4

Lundstrom, Russ: The Anchorage/Dyer 29, 28:72

Lung, James W., Sr.: on foil fix vs. effectiveness of arc-shaped foil, 164:4

Luran S: flotation foam, 34:59

Luxeon LEDs, 87:80

Lyle, Rupert, author: "Adjustable Jigs Ease the Task of Laminating Frames," 13:8; "Big-Boat Blues," 16:64; "Case Studies in Post-Cure," 34:18; "Plastic Fastenings," 9:57

Lyman, A.T. (Terry), author: "Origins and Context: Dare County, North Carolina," 87:32

Lyman, Cabot, author: "Dare to Say No," 122:80

Lyman, Cabot: on boats for older sailors/Landing School, 55:16. *See also* Lyman-Morse

Lyman, Drew: on "Bertram Is Back" and fractional update and stepping Petrel (P32) mast, 173:4

Lyman-Morse Boatbuilding: build of Spirit of Tradition yacht/*Anna*/Stephens Waring Yacht Design, 168:14; building #11/energy and environmentally conscious shop, 115:56; building prototypes for Bertram and other boatbuilders for full-scale production, 173:4; Maine Island 46/Doug Zurn design, 100:42; 55' SCRIMP-infused motoryacht, 55:16; Finot Open 50 SCRIMP-infused cruisers, 64:64; profile/Boatbuilders' Olympics, 58:13, 97:82; Sparkman & Stephens Seguin model, 97:82

Lyman-Morse Fabrication: interfaces between metal fittings and wood

components, 168:44; finishing stainless steel, 168:44; mast cap fittings, 168:44; mast fittings for Pedrick 65 yawl, 168:44; welding expertise, 168:44

Lynch, John: on TIG welding without protective clothing, 85:4

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

MACC (Multi-Agency Craft Conference): 70:66

MacCartney, Kim I., author: "A Practical Approach to an Electrical System Survey," 70:35; "Surveyors Under Fire," 153:80; "The UL Marine Listing," 61:128

MacCartney, Kim I.: on H/GH Pilot Boats, Part 2/improper placement for fixed fire-extinguisher/photo, 153:4; on marine surveyors and qualifications for, 164: 3; on rotting end-grain balsa core, 54:5; on Smoke Detectors: What's It Going to Take?" and a smoke detector that meets NFPA guidelines, 170:4

MacCausland, Kathy: on advertising/marketing, 6:42

MacCorkle, Leon: "What's Certain About Training Is You," 172:76

MacDonald, Jack: on Yacht and Marine Design course/The Art Institute of Fort Lauderdale, 103:6

MacGregor, Roger: Rule 1162 compliance, 25:8

machine shop: in-house/setting up equipment, 48:56

machining: CAM applications, 23:50. See also machine shop

MacLane, Duncan: designer *Cogito*/C-class catamaran, 39:30; on *America's* Cup technology, 61:66; *Guitana X*, 78:12

MacLean, Walt: on professional engineer licensure and other engineering fields, 199:4

Macnaghten, James: on short-fin-keel problem/modded external keel vs. internal one, 104:4

MacNaughton, Dan: on product quality, 23:50

MacNaughton, Thomas A. on boatyard survival strategy, 12:4; on payment/customer satisfaction, 29:54; on surveyor qualifications/NAMS, 38:4

MacNeill, Bob: International Marine Consulting Associates (IMCA), 33:3, 40:62

MacPherson, Donald M., author: "EC Engines," 65:106; "Finding the Elusive High-Pitch Propeller," 44:43

MacSeal Inc.: Excalibur mechanical shaft seal, 29:14, 29:21

MacSema: button memory modeules, 57:88

MACT. See maximum available control technology (MACT)

Mad River Canoe: lightweight canoe, 34:55; manufacturer's award, 34:55; marketing/dealerships, 42:16; marketing/manufacturing, 4:34; marketing to women, 42:16; videos used in marketing, 16:33

Madden, Herb Sr.: rolling boat cradles, 54:18

magazines: *Boating for Women*, 40:62; *Good Old Boat*, 56:10; periodical index (boat design/construction/safety), 36:74; *Powerboat Reports*, 8:9; *Practical Sailor*, 8:4; *Professional BoatBuilder*/10-year retrospective, 60:3, 60:27, 60:136

magic formula: and boat design internet forums, 130:80

MagLift System, 114:10



magnesium anodes: vs: aluminum and zinc anodes, 157:94

magnetometers: Autonnic, 100:4

Magnum Industries: flow coaters, 25:58; pressure-fed resin rollers, 28:32

Magnum Venus Plastech: precision dispensing system for polyester, vinyl ester, and methacrylic resins/Patriot SSB System, 111:12

Mahogany Company: pre-cut fiberglass kits, 10:52, 35:58

mahogany runabouts: 62:12

Maillian, Jeffrey: on economic impact of large yachts, 112:4

Maine: banning of jet skis, 59:10; boatbuilder profiles/Mount Desert Island, 57:110; boatbuilding heritage, 81:168; environmental protection/regulations/emissions reduction, 27:8, 31:42; licensure/engineer, 56:53; lobsterboat hulls, 45:76; marinas/bungee-mooring system, 53:64; temperature-controlled molding (TCM)/thermally adjustable tooling, 125:54; waste management manual, 27:8; workers' comp premiums, 23:13

Maine Advanced Technology Center, 115:14; and Temple Allen Industries' easily manipulated mechanical arm (EMMA), 118:16

Maine Boatbuilders Show. See Portland Yacht Services.

Maine Employers' Mutual Insurance Company (MEMIC): 92:36

Maine Maritime Academy: Marine Engine Testing and Emissions Laboratory/emissions testing/fuel-related products, 161:8; vocational training program, 20:26, 22:51

Maine Maritime Museum Apprenticeshop: vocational program in restoration, 21:12

Maine Yacht Center: distributor for Akilaria (Class 40), 155:58; refit and repair work on Class 40s/Open 60s, 155:58

maintenance: cigar box genio/boat maintenance check, 154:80; systems/owners' manuals, 27:46

Maiorana, Tony: jetsprint boats/JetCo, 57:15

Makita: disc grinder, 15:44, 27:70

Mako Marine International: boat shows/marketing, 36:60, 36:64; obit for founder Robert Schwebke, 158:8

Malaz, Omer: on shipyard conditions in Turkey, 104:4

Malcolm Baldrige National Quality Award: quality management, 19:72

Maldives: tsunami destruction of workboats, 107:14

Malingri, Doi: flying inflatable boat (FIB) developer, 59:10

Maloney, Elbert S. "Mack": author of *Chapman Piloting & Seamanship*, and *Dutton's Navigation and Piloting*, obit, 148:10

Mamba Marine: Mamba 350 sportfish powercat/Hysucat hydrofoils, 124:12 management. See boatyards/marinas, management; production boatbuilding, management

manatee: protection efforts, 4:18, 5:7

Manchester Marine: fire/property insurance, 7:28

Mancini, Alberto, designer: Targa 62 GTO express cruisers/Vripack, 163:14

MAN Engines (Nuremberg): first direct - injection, diesel-powered truck, 157:26; world's first diesel engine, 157:26; profile, 157:26; research and development, 157:26; state-of-the-art

education/MAN Engine Academy, 157:26

Mangia Onda: M-shaped hull/40' sportfisherman, 80:12

maneuverability: bow instability/tuning twin-rudder installation, 45:96; tank-testing, 42:39; testing/certification, 27:3

Mannerberg, Jussi, author: "Practical Impact-Exposure Testing," 142:52

Mannerfelt Design Team: and architectural projects, 163:26; Dahl P10 commuter, 163:26; *Nero* hybrid powercat concept project, 163:26; power and race boats, 163:26; profile of, 163:26

Mannerfelt, Ocke: designer/B-28 runabout, 57:15, 163:26

Mannerfelt, Ted: designer/B-28 runabout, 163:26

man-overboard module: MOM8 kit, 69:92

man-overboard retrieval system; on *Puget Sound* pilot boat, 67:98

Mantex composite sheets: for flat-panel construction, 64:11

Manufacturing Corporation: Master Mark Boat Heater, 6:52

manufacturing without factories: Vetus, 163:56

Marada Powerboats: B-28 runabout, 57:15

Marcali Yacht Brokerage & Consulting: custom hiding places for valuables/furniture/shelving, 150:10

Marchant, Anthony: on hybrid use of Kevlar, 58:6

Marchem Corporation: MistaMixer PFG air-purge foam gun, 11:52

Marco method: early vacuum-flow molding, 26:44, 32:28, 38:30, 69:132, 133:12, 134:62

MARCO Shipyard Seattle: steel boats for San Francisco Bar Pilots, 70:21

Marean, Parker III: obituary, 52:4; on T-boat rules/conversions, 36:22, 36:32

Marek, Bruce: and builder Jim Betts, 129:40; on exemption for yacht designers on Florida law, 471.003 "Qualification for practice exemptions," 100:4; *Ranger* and *Patriot* aluminum catamaran ferries, 106:22

Marek, Bruce, author: "Eighteen Trips A Day," 106:22; "More on Licensure," 56:53

Marelon: for sea valve, 33:75

MAREX, New Zealand Boatbuilders Association, 83:50

Marhevko, Thomas: on National Marine Manufacturers Association's (NMMA) use of ABYC standards for their Boat & Yacht certification program, 94:4

Mariah Boats: use of PT industrial plywood, 27:42, 40:54

Maricomp: engineering analysis/canting ballast keel, 47:17

Marie, J.J.: on Zodiac Group's CAD/CAM and welding technology, 67:5

Marietta Corp.: CO2-blown polyisocyanurate foam, 24:62

MARIN (Marine Research Institute Netherlands): model testing facility, 49:42; 93:30, 107:82, 121:50

marinas. See boatyards/marinas, management

Marinco: easily-engaged lock (EEL) shore-power cord, 138:6; 150BBI Inlet battery charger, 33:75; SaltWater wire, 23:54

marine accessories. See ancillary equipment/accessories

Marine Air: HFC-134a/R-22 refrigeration systems, 26:8

Marine Concepts, Inc.: builder profile/FRP boat shoe, 46:10, 114:94; computer-aided design (CAD) and plug-cutting

capacities, 151:68; customer support, 151:68; holding company/JRL Ventures, 151:68; Sea Pearl 28/free-standing rigs, 55:46; Porsche speedboat, 114:94, 116:4; and Jack Riggelman, 128:8

Marine Corporation of America: Star Power diesel, 9:56

Marinedeck of Florida: Marinedeck 2000 cork decking, 41:62, 125:20; 128:6

Marine Design Resource Alliance: Concept Boat Program, 74:9; grade-school design contest, 64:11, 74:9; tracking consumer trends, 51:11

Marine Education and Training Center (METC): boatbuilding vocational training program, 46:10

Marine Equipment Trade Show (METS): European trade exhibition, 55:3

Marineering Inc.: performance evaluation, 56:26, 56:38

Marine Industrial Fiberglass: 53' target craft, 3:11

Marine Industries Association of South Florida (MIASF): address, 4:20; efforts/membership, 4:9, 4:18

marine-industry directory:  
online/YachtWorld's Boating Yellow Pages, 44:49; PILOT program, 49:96, 60:136

marine law enforcement: variances from state to state, 71:27. *See also* International Association of Marine Investigators

Marine Muffler Corp.: Dapars muffler, 15:70

Marine PILOT Catalog Series. *See* PILOT (Product & Information Locator Tools)

Marine Power, Inc.: EFI (electronic fuel injection) training programs, 27:61; gas inboard engines, 17:44; marinized aircraft engine, 3:60; 6.5-liter diesels, 22:56; Turbodriven jet drive, 8:54

marine repair: Boatest CD rom/repair estimate software, 81:10

marine repair training: in United States, 79:77; Quadrant Marine Institute (Sidney BC), 79:77

Marine Services. *See* Fleury, Paul

Marine Survey Bureau: non-destructive testing (NDT) on carbon fiber sailing yacht, 133:104

Marine Technologies: custom tilt trailers, 135:58

Marinetech, Inc.: 64:11

Marinetics Corporation: overcurrent protection supplier, 38:8

marine toilets. *See* toilets, marine

marine trade associations: addresses, 4:20; programs/efforts/membership, 4:9, 36:78

marine trade shows, 164:3. *See also* IBEX

Marine Theft Bureau: database and networking for, 71:27. *See also* International Association of Marine Investigators

Marine Travelift, Inc.: largest mobile boat hoist, 68:11

Marine Vibrations: vibration monitoring equipment, 74:85; designer's perspective/Dave Gerr, 74:89

Mariner F65 forklift, 19:59; profile/development of Travelift, 57:133. *See also* boat lifts/hoists

Marinescu, Horia: on ground faults, 98:4

Marino, John: response on EcoPoxy's claim as non-toxic, 124:6

Marisol skiff: day cruiser design/Gifford Jackson, 105:120

Maritime and Coast Guard Agency (MCA), U.K.: fire protection standards, 62:78

Maritime Applied Physics Corp.: HYSWAS (hybrid hydrofoil), 49:42  
 Maritime Outfitters: 28' workboat, 4:30  
 Maritime Wood Products Corp.: Speed Strip strip-planking system, 46:65  
 markers: Marine PrepPen, 33:75; Nissen ballpoint writing tubes, 8:54  
 market, boating. *See specific boat markets*  
 marketing tools: CAD 3-D modeling, 24:62, 40:48, 57:15; CAD photorealistic rendering/animation, 40:48, 57:15; free publicity/feature articles, 128:80; interior mock-ups, 2:60, 9:28, 9:34, 10:4, 11:9, 40:42, 40:52, 45:47, 48:66; Internet/Web sites, 38:51, 40:62, 41:58; press releases, 2:17, 2:20, 3:16, 6:5, 6:42, 16:22, 18:40, 36:73; product literature/catalogs, 3:16, 4:50, 6:5, 6:42, 23:37, 36:60, 38:11, 38:12, 39:40, 38:51, 40:48; scale models, 55:32; television, 25:52; videotapes, 16:2, 25:52, 40:62, 55:32. *See also specific marketing tools*  
 marketing/promotion: advertising, 6:42, 9:2, 18:40, 26:64, 36:60, 38:11, 38:12, 43:13, 117:54; at boat shows, 23:37, 36:60, 36:64, 117:54; building market base, 2:4; design considerations, 2:60, 117:54; editorial coverage, 18:2, 18:40, 20:8; experience-oriented, 21:72; fuel efficiency/environment, 15:80, 16:4, 117:26; interactive, 36:74, 38:51; in market downturn/recession, 7:72, 9:13, 11:34, 15:80, 16:4; new product/marinized wind generator, 56:18; niche markets/marketing, 17:8, 29:3, 36:22; owner survey (Boston Whaler), 6:42; pre-boat-show sales, 36:60; product identity/trade dress, 43:13, 117:54; professional-quality, 3:5; public relations, 2:17, 2:20, 3:16, 6:5,

6:42, 16:22, 18:40; strategies/Boston Whaler, 2:34; strategies/Island Packet Yachts, 117:54; strategies/Nexus Marine, 23:37, 23:41; strategies/U.S. Marine/Bayliner, 117:54; strategies/Wenonah Canoe, 49:36, 49:40; trends (readership questionnaire analysis), 3:16. *See also* advertising; boat shows; catalogs/product brochures, builders'; international market/exporting; marketing tools; markets, niche; product lines; product quality/quality control; *specific boat markets*  
 market research: for catalog development, 4:50; customer database, 26:64; International Women in Boating (IWB), 23:54, 24:58, 28:54; in market downturn, 7:72, 12:4; for marine systems technician work/training, 57:98; for production boats (designing for production), 3:27; trends, 3:16, 7:17, 12:4. *See also specific boat markets*  
 markets, niche: aftermarket/accessories, 12:18; 14:26, 14:32; flats boats, 29:3, 47:40; look-alike syndrome, 17:8; runabout replicas/reproductions, 18:20, 20:4; sailboats, 11:34, 11:39, 30:48, 117:54; Subchapter T boats, 36:22, 37:4. *See also* diversification/sidelines  
*Mark's Standard Handbook for Mechanical Engineers*: engineering handbook, 72:22  
 Marlow, Dave: on EC (EU) certification process, 41:38, 41:41  
 Maroussis, Anthony: designer/Navtech, 59:71  
 Marples, John: Design Challenge, 133:40; DC-3 Trimaran, 133:40; on "Praise for Big Props " and engine instrumentation upgrade for over-safe engine/prop combinations, 151:6; on "W17: Can

Simple Hull Shapes Be supported by Science?" and asymmetrical ama hulls/wave drive, 170:4;

Marples, John, author: "High Fiber," 154:48

MARS Craft: See *also* Mayflower autonomous Research Ship.

MarsKeel Group: draft reduction service, 156:70; structural and design services, 156:70

MarsKeel Technology: cast-lead keels, 156:70

Mars Metal Company: integral cast bulb keel, 156:70; lead brick and lead sheet products, 156:70; L-Keel/bulbous fin keel, 54:18, 96:72; largest keel produced, 156:70; profile of, 156:70: MarShield Specialty Casting division, 156:70

Marsh, Peter J., author: "Losing Weight," 55:79

Marshall, Andrew: *Composites Basics*, 22:20; on core materials/composites, 40:62

Marshall, Gregory C., N.A. : hull/bulbs vs. non-bulb advantages, 167:40; refit projects/Sovereign Yacht/*Akiko/Big Fish*, 167:40; and vinyl wrap coatings and graphics, 169:28

Marshall Marine (Padanaram, MA): repairs and refits, 75:112

Marshall, Roger, author: "The Case for Computer Lofting," 24:26; "Hull-to-Deck Joints," 27:66; "Learn to Draw," 101:106

Marshall, Ted: on simple test for grounding circuits, 102:4

MarTech: Nomex Decore interiors/techniques, 51:114; off-axis composites testing procedure, 36:4

Marten Marine: closing of boatyard, 97:10; profile/New Zealand one-off construction, 55:58, 55:61

Marten Spars Ltd: *Icon* cruising boat (Bob Perry design), 97:28; operations continuance, 97:10

Martha's Vineyard Shipyard: hurricane damage/planning/insurance, 27:18; Martha's Vineyard Shipyard: wastewater containment system, 31:10

Martin, Chris, author: "Optimizing the Design," 89:85

Martin, Dave (designer): cockpit motoryacht (CMY) design, 103:160; and Egg Harbor Yachts, 102:86, 134:6; *Efficient Boat Designs* DVD, 134:6; profile of, 103:160; sportfishermen design, 103:160

Martin, David P.: on designing for production, 2:60; on Praise for Big Props and using motor more efficiently, 158:4

Martin, David P., author: "Believe It or Not," 29:72

Martin, J.B., Co./Texitek: X-weave patching material, 36:34

Martin, Jim: bagged-laminate infusion molding/Lincoln canoe, 32:28

Martin Pultrusion Group, 122:12

Martin, Rodger: Aerodyne 38 racer/cruiser design, 65:11. 113:82; Class 40 open class sailboat, 113:82; Design Challenge/3 Nines camp-cruiser, 135:36; designer of wood composite cruising sloop *Gray Wolf*, 69:156, 113:82; drop keel, winch handle/Ross Weene, 113:82; on anchor-stowage systems, 22:29; on Finot boat, 64:64; Johnson 18 production skiff with open transom, 113:82; Martin 66/twin rudders/hydraulically adjusted keel, 113:82; mxNext Skiff, 141:24; Outward Bound Boats/Cyrus Hamlin, 108:16, 113:82; profile of, 113:82; sharpie

design boats/Outward Bound, 108:16;  
*SpeedDream* sailboat prototype/Vlad  
 Murnikov, 141:24. See *also* Rodger  
 Martin Yacht Design.

Martin Tooling & Laminates: Paddle Lite  
 infusion process, 32:18

Marukyo U.S.A. Inc.: plastic fastenings,  
 9:57

MAS Epoxies: Cell-O-Fill silica substitute,  
 115:18; Flexbond 5000, one component  
 hybrid polymer, 115:18; Gluzilla  
 polyurethan adhesive, 115:18

Masciarotte, Mark T.: on custom boat line,  
 2:4

Mashantucket Pequot Tribal Nation/Pequot  
 River Shipworks/fast ferries, 57:15

masking film/paper: for prepping aluminum  
 hulls, 37:36; Hand-Masker, 31:10. See  
*also* tape, masking

masks. See dust mask; respirators

Mason, Andrew: on NC lofting/cutting, 25:4

Mason, Andrew, author: "Loftsman's  
 Liability," 38:14

Masonite: for one-off tooling, 10:42

Massachusetts Institute of Technology:  
 Haffenreffer-Herreshoff Collection,  
 54:82, 54:92

MasterCraft Boat Company: acetone  
 reduction/replacement, 33:20, 33:26;  
 videos production/marketing  
 applications, 16:22, 22:42

Master Power, Inc.: Hawg compressed-air  
 vacs, 16:52

MasterVolt: cell-balanced lithium-ion  
 battery, 119:6; DriveMaster Ultra, 7.5  
 kW electric motor, 127:30; parallel  
 hybrid system, 127:30; pod drive  
 auxiliary power for Watch Hill 15  
 daysailer/Artisan Boatworks, 137:6; 2.5-  
 kw Master Drive System for catboat,  
 137:6

mastic. See sealant

mast pod: cabintop-mounted/flat-panel  
 engineering, 45:62

masts and spars: aluminum, 3:42, 14:8,  
 34:72, 47:44, 47:53, 51:56, 55:58,  
 55:112, 57:7, 75:98, 94:8;  
 aluminum/painting, 55:58; canting,  
 70:38; carbon fiber, 3:42, 10:52, 20:56,  
 28:18, 41:28, 41:30, 43:64, 47:44,  
 47:52, 47:53, 51:11, 55:44, 55:46, 57:7,  
 65:24, 76:60, 94:8, 141:50; chimney  
 masts, 63:86; composite/carbon fiber  
 hybrid, 14:8, 53:40, 55:44, 55:46, 55:58,  
 57:7, 58:36, 75:78; corrosion of  
 fittings/quality control, 34:72, 47:44,  
 168:44; elliptical design/entasis taper,  
 55:44; epoxy/carbon foam-cored mast,  
 96:36; for John Alden schooner  
*Summerwind*/faux bois finish for spruce  
 masts, 146:40; free-standing vs. stayed,  
 55:44, 55:46, 57:7, 58:13, 72:22,  
 159:10; FRP/early fiberglass, 60:116,  
 60:118; high-performance G10 spars for  
 Pedrick 65 Classic yawl, 168:44; laser  
 shearography for stresses in, 163:93;  
 lightning protection systems, 43:64,  
 47:52; loads/bending moment, 55:44,  
 168:44; loads/fatigue/rigging failure,  
 50:18, 51:36, 53:50, 55:112, 57:7, 94:8;  
 market/design/technology, 3:42, 168:44;  
 mast-climbing system, 76:60; metal  
 fatigue/failure, 51:56, 55:112, 57:7;  
 rating rules, 55:44; rotating, 51:11,  
 55:44; Sitka spruce spars, 168:44;  
 wingmasts, 14:8, 55:44, 55:46, 57:7.  
 61:10, 124:42; wishbone boom, 62:46;  
 wood, 57:7; for workboats/Gold Coast  
 Yachts, 124:42. See *also* aluminum  
 masts; carbon fiber spars/masts;  
 sailboats, offshore racing/performance;  
 sailing rigs

mat, roll. See fiberglass mat/chop

material safety data sheets (MSDS): CD-ROM access system, 23:54. See also worker safety/occupational health

Materials Sciences Corporation: finite element analysis (FEA) software, 148:26; heavy-duty specialized testing rigs, 148:26; laminate calculations for large-deflection-type boat panels, 146:24; programs with Seemann Composites, 146:24; structural designer for Advanced Composite Riverine Craft, 146:24

Matheson-Kitagawa: Toxic Gas Sampler, 7:64

*Matthew Turner*, brigantine: traditional construction of using near zero environmental impact, 157:14

Matlack, Mike: on accessories/hardware (Rybovich), 14:26, 14:32

Matrix Applied Computing: industrial finite element analyses, 78:26; Nastran FEA software, 78:26

Matrix Masts: profile/New Zealand sparmaker, 55:58

Matthews, Steve: sportfisherman powerboats/hull alterations, 144:36; training and early professional experience, 145:4

Matthews, Warren: Awesome Yachts, 50:11

mattress: Handcraft Mattress Co., 6:52

Mattson Spray Equipment: Atom-miser ColorCan 2+, 9:56

Matzat, Gregory: designer/Sparkman & Stephens, 59:44

Matzat, Gregory, author: "Engineering a Carbon Fiber Spar," 47:53

Maverick Boat Co., Inc.: acetone reduction/replacement, 33:20; flats-boat market, 29:3, 30:4; team-building, 24:58;

vs. American Holdings and Blazer Boats/splashing, 138:64

Maxco Industries: galley cookstove, 1:68

maxi-boats. See sailboats, offshore racing/performance

maximum achievable control technology (MACT): Clean Air Act/EPA thresholds/definitions/process changes, 21:18, 31:3, 34:3, 34:40, 39:90, 40:17, 60:39, 66:128, 68:5, 69:132, 91:96, 123:26; at Cabo Yachts, 91:96; guidelines/point values and weighted averages, 60:39; at Island Packet Yachts, 68:54

Max Power (France): MFC 100 fuel cell for sailboats, 98:12

Maxwell, Joan (author): "A Penny Gained," 63:29

Maxwell, Owen and Joan: Regulator Marine plant/layout, 17:34, 19:8

Mayher, Bill, author: "Large-Scale Cold-Molding: Building the Boat," 51:52

Maylotte, Don H.: on flammability of resin systems used in boats, 85:4

Mazza, Robert: on changing roles of yacht designers in the computer age, 167:4; on Core-Cell, 51:6; on core materials/cored bottoms, 53:4, 56:5; on Fairey Marine and hot-molded sailboat production, 150:4; on linear vs. cross-linked foam cores, 56:5; on Passage Maker and Alan Gurney design *Nepenthe*, 152:4; on plywood vs. fiberglass stringers, 42:5; on wet balsa core, 99:4

Mazza, Robert, author: "Bedding Structural Cores," 73:40; "The Cored Bottoms Controversy," 51:22; "The Deep-V Refined," 138:32; "The Keel Specialists," 156:70; "Kirby," 142:62; "Molded Integral Grid Systems," 46:28;

- “Object Lesson,” 134:42; “Pumpable Polyester,” 58:54; “Reinventing the Wheel (and the Pump),” 158:18; “The Scarano Fleet,” 164:22; “What A Concept!” 151:68; “When Opportunity Knocks...,” 145:86; “Wings of Change,” 133:70
- Mayflower Autonomous Research Ship (MARS), 158:8
- MBX Metal Blaster: metal components cleaner, 85:10
- McAfee, Roger, author: “Around and Around Vancouver,” 156”16; “Driven!”, 143:52
- McAllister, Charles: on results of lack of attention to design manufacturing, installation, and maintenance, 139:5
- McBeath, Gary Morris: on lobster yachts and other boat term misnomers, 111:4
- McCall, Rusty: on boat engine testing, 87:4; on testing outboards fairly, 83:4
- McCartney, Kim I.: on navigating a Sea of Standards and the National Fire Protection Association 302 committee, 155:4
- McCartney, Kim I., author: “A Question of Professionalism,” 24:72
- McClaskey, Charlie: Rule 1162 development, 26:34
- McClendon, Zach: SeaArk Marine/Boats/profile, 42:16
- McClintock, Scott, author: “Rio Hondo 40S,” 112:22
- McLeod, Ray Jr.: obit for founder of Douglass & McLeod Plastics Corp., 173:6; Tartan 27/Sparkman & Stephens design, 173:6; transition from wood to glass, 173:6
- McCormick, J.J., Company: M Liner custom industrial plywood, 28:8
- McCoy, Jack: hybrid diesel electric charter boat, 118:40
- McCrary, James: on the other stray current, 108:4
- McCrary, James, author: “Not All Hull-to-Deck Joints Are Created Equal,” 33:19
- McDell Marine Ltd.: recyclable boats, 54:43
- McDermott, Joseph S.: on beginnings of fiberglass industry, 39:4; on EPA jargon, 54:5
- McDevitt, John, author: “The Case for Smoke Alarms,” 89:104; “Where There’s Smoke,” 137:22
- McDevitt, John: on regulatory dilemma for smoke detectors on boats, 169:6; on smoke alarms and NMMA and ABYC’s lack of collaborative interest for, 91:10; “Smoke Alarm Update,” 101:12
- McDonald, Ron: on RTA/CAD/NCC/cabinetry, 40:24
- McDonnell-Douglas: lofting/parts generation software, 7:18
- McDougal, Dan H.: on specificity of heat from various liquid substances for marine refrigeration, 92:4
- McFaden, Jeff: on Bayliner Buccaneer sailboat/Slim Sommerville, 119:4
- McGeary, Jeremy, author: “Choosing Pumps & Piping,” 24:44; “The New Face of Chartering,” 27:80
- McGowan, Barby: on professional public relations, 4:5
- McGowan, Laurie: and Tern Boatworks affiliation, 171:60; submarine-themed playground, 171:60; *Tari-Ann* motorsailer, 171:60. See *also* McGowan Marine Design
- McGowan Marine Design, 171:60. See *also* McGowan, Laurie
- McIvor, Shelley, author: “Commodore’s Boats - Old Ways and Innovation,”



167:14; "Developing a Strong Boatbuilding Community," 162:12; "It's Not Paint," 169:28

McKellar, Hugh, author: "Low-Drag Mechanical Controls," 29:58; "A Safer Alternative to Stripping Bottom Paint," 33:75; "Specialized Pumps for Putties and Adhesives," 31:68

McKeough, Don: on polypropylene water tanks, 20:56

McKesson, Chris: on hybrid marine power, 108:4; on professional engineer (P.E.) licensure, 72:112

McKnight, John, author: "Almost Everything You Need to Know About the New Evaporative Emissions Rule,," 121:72; "EPA Rules May Require Major Changes to Boat Fuel Systems," 97:200

McKnight, John: on CFA/NMMA styrene emissions testing/exposure limits, 41:5, 41:58, 42:5

McLean, Rick: on blister prevention, 4:5; on catalyst dispersal, 2:4; on wet strength of composites, 6:5

McLeod, Ray Jr.: founder of Douglass & McLeod Plastics Corp./obit for, 173:6; Tartan 27/Sparkman & Stephens design, 173:6; transition from wood to glass, 173:6

McMaster Carr Supply: Adhesive-Backed Paper Tape Rule, 42:74

McMullen & wing: profile/New Zealand builder, 55:58

McNalley, Tom: transatlantic voyage in 3'11" boat, 53:12

McNally, Steve: on Clean Air Act/Amendments/allowable pollution/styrene emissions, 40:17

McNeel, Robert, & Associates: Accrender CAD raytracing software/photorealistic

rendering, 40:48; Rhino software/3-D renderings, 57:15

McNeill, Doug: on custom industrial plywood/structure, 42:5

McTavish, Bob: Pro Circuit surfboard replicas, 28:54

McTighe Industries, Inc.: wastewater collection system, 6:8

*Meadowlark*, L.F. Herreshoff design: composite boats with foam ribs, 91:178

Mearl Corp.: Mearlin Bright White Pearlescent Pigment, 20:56

measurement rules. See International Measurement System (IMS); International Offshore Rule (IOR); speed of impact load/Dynamic Loading Analysis/Gulfstar Yachts, 169:44; tonnage/admeasurement laws

measurement systems: international units of, 55:5; metric system, 29:4, 29:51

Medalist M&S: MS60 Douglas-fir decking panels, 18:54

Medeiros, Al. See Medeiros Boatworks

Medeiros Boatworks: Limestone 24/molded integral grid system, 46:28, 138:32

megayachts: advanced components for/Rhebergen, 96:36; aluminum/Palmer Johnson, 53:28; aluminum/Royal Huisman, 45:47; aluminum-fiberglass hybrids, 17:19; boat show/Superyacht Northwest, 26:44, 34:55; cash flow/reorganization of builder, 59:10; cored fiberglass, 2:42, 3:5, 3:11, 32:18, 32:21; design justifications/concerns, 16:64, 17:4; finish standards, 40:24; *Freedom*/4,320' 30-story international community, 51:11; Hargrave designs, 43:36; interior design mock-ups, 9:28, 9:34, 10:4, 45:47; inventory/purchasing/workforce for, 32:18; market for, 12:50; masts for,

- 47:44; model testing, 56:26;  
 refit/Rybovich Spencer, 51:11; resin-  
 infusion/SCRIMP applications, 44:30;  
 structural fire protection requirements  
 for, 62:78; tooling for, 32:18, 47:34. *See*  
*also* custom/semi-cutom/one-off  
 construction
- MEK (methyl ethyl ketone): MACT  
 standards, 34:40; solvent  
 wipes/secondary bonding, 20:32
- MEKP (methyl ethyl ketone peroxide):  
 blister prevention, 15:70; catalyzation  
 graph, 29:51; introduction of, 38:30;  
 recycling of, 2:67; safety  
 concerns/cobalt promoters, 6:16, 35:4,  
 42:62; safety concerns/internal mixing,  
 24:4; summer-grade, 2:6, 15:13, 33:46,  
 33:57; tinting/mixing/ratios, 2:6. *See*  
*also* catalyst
- Mele, Andre (Andy): on interior design  
 (Elco), 6:34, 6:39; on noise pollution/jet  
 skis, 43:75; *Polluting for Pleasure*, 19:8,  
 43:17, 43:75
- Mele, Andre (Andy), author: "It's Time to  
 Look Beyond the Obvious," 15:70
- Melillo, David: FIB flying boat, 59:10
- Melvin, Pete: on carbon-aluminum core  
 galvanic interaction/*PlayStation*, 59:5;  
 on composite flat-panel  
 construction/core materials, 45:54;  
 profile, 72:90. *See also* Morelli & Melvin  
 Design and Engineering
- memory modules: MacSema, 57:88
- Menorquin Yachts (Spain): MY 160 cruiser,  
 106:10
- Mercer: aging fiberglass boats (laminates),  
 4:64
- merchants' contracts: components and  
 ancillary equipment/warranties, 41:15
- Mercier, Larry: on integrating/implementing  
 CAL/NCC, 38:38
- Mercury Marine: Cummins MerCruiser,  
 111:42; OptiMax, 111:42, 166:54;  
 SmartCraft, 97:148, 98:50; tracking of  
 stolen outdrive units, 71:27; Verado  
 four-stroke engine, 111:42
- Mercury Marine High Performance:  
 galvanic isolators, 41:21, 41:25;  
 supercharged gas inboards, 17:44
- Mercury Motors: Mark 55 4-cylinder  
 Thunderbolt, 92:68; vintage  
 motors/Lincoln Davis, 92:68
- Mercury Racing: DSI (diesel spark ignition)  
 3-liter two-stroke outboard, 166:64
- Mercury Vacuum Presses: vacuum-bag  
 system, 13:48; vacuum systems  
 (boatshop dust); vinyl vacuum bags,  
 15:70
- Mereth Oy: aluminum-fiberglass hybrids,  
 19:4
- mergers/buyouts: in market downturn,  
 9:13, 29:8; of OEM suppliers, 1:5;  
 Rybovich merger, 14:26; selling to  
 venture capitalists/Munson  
 Manufacturing, 58:66; of Southern  
 California builders, 25:8. *See also*  
 production boatbuilding, business of  
*Merlin*, Santa Cruz 70 and Transpac Race,  
 1977, 161:8
- Merriam, Robert W.: on DC wiring, 23:4
- Merrifield, John: on computer lofting,  
 24:26, obit 99:120
- Merrifield-Roberts Inc.: fabric impregnator  
 applications, 5:34; 52' sloop, 1:20; post-  
 curing epoxy, 14:45, 14:55; resin-  
 transfer molding (RTM), 27:39
- Merrill-Stevens Dry Dock: megayacht  
 market/repairs, 12:50
- Merritt, Roy: on cored bottoms
- Merritt's Boat and Engine Works:  
 adherence to laminate quality, 149:56;  
 cored bottoms, 51:22; 62:3; profile 62:62

metacentric height: small-craft stability, 54:98

metal boats, damage  
 assessment/surveying techniques: non-destructive surveying/ultrasonic, 35:42; Flevo Jachtbouw/deck first construction, 132:18

Metal Boat Society, The:  
 membership/activities, 18:4, 35:52, 43:17

metal buildings, pre-engineered: coatings for, 26:18; design/construction/sources, 26:18

metal cleaner: MBX Metal Blaster, 85:10; SuperClean, 38:55

metal construction: bonding systems for (corrosion), 33:28; built-in fuel/water tanks, 52:18, 54:5; classification process/rules, 39:80; vs. composites (specifications/standards/testing), 4:22, 34:4, 48:35; galvanic/stray-current corrosion, 32:36, 33:28; increasing modification of stock designer/Specmar Inc., 167:6; loft floor, 38:14; metal sandwich panels, 103:44; molded lines/extent of, 59:56; pollution prevention manuals, 20:12; strength testing/scantlings, 48:8, 48:9, 48:16; structural adhesives for, 41:44; Subchapter T boats, 36:22; Triclad strips/aluminum to steel welding/Flevo Jachtbouw, 132:18. *See also* aluminum construction; aluminum construction, welded; corrosion, galvanic; Metal Boat Society, The; steel construction. *See also* Spectmar, Inc.

metal construction, CAL/NCC (computer-aided lofting/numerically controlled cutting) applications: boat kits, 40:24, 42:74, 43:83, 63:145; bending information/press brake, 38:14, 38:38,

38:47, 69:52; Boolean operations, 38:38, 38:47; fishing skiffs/small shop, 59:71; vs. foundry castings (parts/hardware/fittings), 42:46; glossary, 38:38; implementing and integrating/process, 38:38, 38:47, 59:71; lofting/fine-tuning/parts fit, 59:71; lofting errors/liability, 38:14, 38:47; loft floor, 38:14; megayacht/Royal Huisman, 45:47; one-off hulls, 38:38; outsourcing, 38:14, 38:38, 38:47; plasma cutting torches, 38:38, 38:47, 42:74; software, 38:38, 38:47; sources, 38:49. *See also* aluminum construction, welded; CAL/NCC (computer-aided lofting/numerically controlled cutting); kits, boat (NC lofting/cutting); lofting; numerically controlled (NC) lofting/cutting equipment

*Metal Corrosion in Boats* (Nigel Warren, author): Paul Coble surveying tip, 88:46

MetalCraft Marine Group: aluminum fireboats/Firestorm 36, 145:86; on-site apprenticeship program, 145:86; profile/Bullnose high-speed landing craft, 57:15; slap-it-together boatbuilding contest, 68:11; switching from recreational to commercial market, 145:86; use of environmentally friendly Epaint, 105:106

Metal oxide field effect transistors (MOSFETS), 99:82. *See also* MOSFETS

Willard Marine hybrid RIB for U.S. Navy, 67:13

Metalmast Marine: spar technology, 3:42

metal polish: Marine Polishing Paste, 20:56

metals, bonding: to FRP/structural adhesive, 41:44; to metal/structural adhesive, 41:44, 69:5; to plastic/structural adhesive, 41:44

- metals, marine: ductility vs. brittleness, 51:56, 53:4; fatigue/failure, 51:56, 54:70, 137:56, 139:5; reference, 53:12
- metal sealer: for tools/Top Cote, 24:62
- Metal Shark: Swamp Shark drive system for shallow water boats, 171:10
- metalworking: in-house composite skills/De Vries Scheepsbouw, 132:24; setting up in-house machine shop, 48:56
- Metan Marine: remanufacturing Sea Craft boats, 102:14; restoration on old SeaCrafts and Boston Whalers, 132:6
- METCO: bus bars, 36:44, 38:51
- methacrylate adhesives:  
description/applications, 41:44; for mounting plates, 145:48; glued together catamaran/camper hybrid/Footprint Boats, 137:12; pull-testing, 100:80; structural adhesives/Plexus, 26:56, 27:70, 29:8, 42:5, 52:81, 60:11, 60:104, 75:58, 102:14
- methylene chloride: solvent/vinyl ester, 42:59; solvent wipes/secondary bonding, 39:19, 52:67
- methyl methacrylate (MMA) hulls:  
development/technology/performance, 10:34
- metric system: English-metric conversions, 90:112, 102:4, 103:6; catalyst measuring system, 29:51; international market/owners' manuals, 29:4
- METS USA: 68:11; 120:38; 124:3
- METYX Composites: opening of new tooling center, 135:6
- Miami Boat Show:  
ConnectFest/navigational electronics, 97:148
- Michael Peters, (designer and boatbuilder): 66:3, 66:52
- Michael Peters Yacht Design: Hy-Lite Powerboat *Green Wing II*, 66:11; profile, 66:52; modified-V/Deep-V/Stepped-V hullforms/weight studies, 126:38; Magnum 80, 126:38; performance catamaran/Outerlimits Offshore Powerboats, 133:60
- Michalczyk, Paul: on sizing electrical cables, 37:4
- Michaud, Jay: on technique of dye penetrant testing, 113:4
- Michel, John: on vacuum-bagging, 30:22
- Michigan: boating-safety law/boat noise, 43:75
- MICHLET computer program: viscous drag analysis, 74:54
- Micjan, Ron: on Smoke Detectors: What's It Going to Take? and a better supplementation for, 171:4
- Micro Commander: engine control system, 1:68
- Micron Corporation: capacitor starting system/Micron PowerPak, 153:8
- Microsoft: Excel spreadsheet software/weight estimating, 42:26; Windows Access 95/relational database/tracking labor and parts, 50:59
- microspheres/microballoons: in antifouling copper coating, 8:4; applications/performance, 60:27; delivery/fairing system (Extender), 27:70; Dualite filler, 11:52; in laminate bulkers/print blockers, 7:50; storage, 15:13; thermoplastic/Spherecore SBC core material, 39:98. See *a/so* BaltekMat; epoxy syntactic tooling foam/slurries; resin thixotropes
- Microstation modeler: modeling software program, 66:90
- Micro-Surface Finishing Products Inc.: Micro-Gloss, 12:60; Micro-Mesh, 12:60
- Mid-Coast School of Technology: vocational training program, 22:51

Middle East and recreational boat facility  
start-up: Tampa Yacht Manufacturing,  
161:20; redesign of Tempest 35 abd  
60/Robert Kaidy, 161:20

Middleton, John: Hinckley Co./SCRIMP,  
31:42

Midget Ocean Racing Club (MORC);  
*Wolverine* racer/Alan P. Gurney design,  
151:40

Mid-Jet Manufacturing, Inc.: profile/welded  
aluminum construction/Sea Master line,  
21:26, 40:36; transition/commercial  
boats to yachts, 40:36

Midwest General Corporation: Clear-Stick  
adhesive, 20:56

Mighty DataDot: alphanumeric  
identification code, 71:6

Mighty Midget: benchtop forming/bending  
machine, 67:13

Migeotte, Gunther, author: "Hydrofoil-  
Supported Catamarans," 157:68

Midget Ocean Racing (MORC): rating  
system for small boats, 154:36; and  
Alan Andrews, yacht designer, 154:36

Migueis, Ronaldo Fazanelli: Niteroi wave-  
piercing powerboat/ Design Challenge,  
122:24

mildew: shrink-wrapping caveats, 18:28

Miler, Phillip: on volksboat, 18:4

*Milestones in My Designs*: book by Renato  
"Sonny" Levi, 135:26, 137:4

mil gauges: for gelcoat application, 11:42

military standards for composite structures:  
63:38

military vessels: aluminum-fiberglass  
hybrids, 17:19; *USS High Point* patrol  
vessel/hydrofoil, 172:22; weight/stability  
standards, 42:26. See also navy  
boats/contracts, Sweden; Navy  
boats/contracts, U.S.; U.S. Coast  
Guard; U.S. Department of Defense

Millennium Round the World Race:  
Farr/Colvic one-design, 59:10

Miller Electric Manufacturing Co.  
(Wisconsin): CoolBand and CoolBelt for  
welding helmet, 126:8; Invision 352  
MPa Plus MIG Runner Dual Wire  
Feeder system, 126:8; Millermatic 350 P  
System, 118:8

Miller, Herman: Aeron ergonomic chair,  
34:31, 34:32

Miller, Paul H., author: "By the Book,"  
105:32; "Fourth Generation 44," 121:88;  
"Marine Composites Design, Part 2,"  
106:62

Miller, Paul H.: on "Bertram is Back" and  
incorrect placement of prop-nuts, 172:4;  
Leadership 44 trainers/Infusion  
specifications, 133:114; on professional  
engineer licensure, 86:4, 100:4; and  
SailBots/U.S. Naval Academy/World  
Robotic Sailing Championship, 126:8;  
on structural design and bottom  
slamming on high-speed powerboats,  
70:5

Miller, Raymond L., Jr.: on vacuum-  
bagging, 46:5

Miller, Rex W.: on "Bertram Is Back," and  
incorrect placement of prop nuts," 172:4;  
on Saved by the Wood of Life and use of  
lignum vitae for lath Steady Rest, 168:4

Miller, Capt. Richards T.: on *Vamarie*  
mizzenmast prop, 70:5

milling machine: Bridgeport, 48:56; buying  
used, 48:56; computer-controlled, 66:90;  
Ferretti Group five-axis machine, 100:4;  
Five-axis MR Gantry Milling  
System/Par Systems, 116:10; Five-axis  
milling machine/mouldCAM tooling  
shop, 145:78; Homag CNC wood-milling  
machine/Hanse Yachtzentrum, 163:114;  
in-house machine shop, 48:56:

- Janseneering/five-axis milling machine, 90:13, 84
- Mills, Mark: *Quokka IV*, 52:30; King 40, 123:10; 60M luxury sailing yacht /collaboration with Donald L. Blount, 123:10; Summit 35, 123:10
- Milne, Alex, Associates Ltd.: Zebra biodegradable products, 8:35
- Milne, Kevin: integrally cast bulb (ICB) technology, 96:72; Mars Metal/L-Keel, 54:18
- Milner, Craig, author: "Second Generation," 116:60; "Systems Ed," 120:34
- Milwaukee Electric Tool Corp.: drill, 23:20
- Mincher, Rod: on Fairey Marine and famous hot-molding processes/Hydrolite and Duramold, 151:6; *Spruce Goose* wood airplane/Howard Hughes, 151:6
- mine-countermeasure vessels (MCMs): Swedish navy/YS 2000/Visby class, 53:40, 55:5; Umoe Mandal, 65:84; U.S. navy, 25:58, 48:48, 53:40. *See also* navy boats/contracts, Sweden; Navy boats/contracts, U.S.
- minimalist cruising sailboat, 156:12
- Miner, Jay N., author: "Controlling Weight in Large FRP Yachts," 64:52
- Miner, Jay: on Bill Tripp designed boats, 107:4; on Delta Marine/transition to yachts, 40:24, 94:32; obituary for naval architect John J. Schubert, 65:5
- Minesweepers: Bill Luders, Philip Rhodes, and Sparkman & Stephens, 88:46
- Mini-Craft of Florida, Inc.: reverse-label maker/affixing HINs, 60:5
- Mini 6.50, advanced composite singlehanded ocean racer, 109:40
- Minnesott Yacht Repair: gelcoat maintenance/restoration, 15:44
- Mirage Marine: methacrylate adhesives, 26:56
- MirroCraft: Ultra Pro AL aluminum-fiberglass fishing boats, 17:31
- mirrors: in interiors, 6:39
- Miser, Scott A.: on subcontractors in boatyard, 54:5
- Miss America VII* Garwood design speedboat replica, 81:72
- Miss Austria* (schooner-yacht): refit at Rybovich Spencer, 69:13
- Miss Delson*: dayboat cruiser with composite membrane panels/bottom, 150:22
- Mission Marine: aluminum workboats, 100:4
- Missouri: boating-safety law/boat noise, 43:75
- Mister Blister: diamond abrasives, 12:60; micro-cracking study, 22:51
- Misunas, Gvidas: on resistance speed graphs on Series 62 hulls, 130:6
- Mitchell, Chris: on Ericson bilge pump/flow rates, 60:5
- Mitchell, Frederick C.: copper alloy sheathing (Mariner 706), 7:42, 7:48, 9:5, 23:4
- Mitchell, Lorrie K., author: "Relational vs. Tactical Negotiations," 96:104
- Mitchell, Robert, photographer: "New Yard, Old Site," 70:58
- MITEC (Marine Industry Training and Educational Council): career awareness/cataloguing of training programs, 116:112;
- mixer-dispenser: Variable-Ratio Mini Machine, 15:70. *See also* catalyst, mixing/metering
- MIXPAC Equipment: DX Series dispensing system, 100:4
- MJM34z motoryacht: construction of/Boston Boatworks, 99:52, 99:66, 157:50

MkIII FirstStar, anchor light, 87:95

MK V SOC (Mark-Five Special Operations Craft): Carderock Combatant Craft Department, 52:42

MMC: engine control system, 1:68

MNK Enterprises, Inc.: MNK Honeycomb Process, 32:52; sailboards/honeycomb cores, 24:4; Tricel paper honeycombs, 32:52

Mochi Craft (Italy): Long Range 23 motoryacht/manually engaged parallel hybrid system, 127:30; mock-ups, interior, as sales/design tools: CAD/CAM applications, 40:42, 40:52, 48:66, 95:64; construction/costs/benefits, 2:60, 9:28, 10:4; control-station layout, 48:66; engineroom layout, 37:26; joinerwork, 9:28, 9:34, 10:4, 45:47; limitations, 10:4; nav station, 11:9; plywood, 2:60, 9:28

model basins/tank-testing facilities and programs, Australia: Australian Maritime College, 54:44

model basins/tank-testing facilities and programs, Europe: FB Design's High-Speed Research Facility (Italy), 93:10; Maritime Research Institute of the Netherlands (MARIN), 49:42, 58:26; Wolfson Unit/University of Southampton (England), 58:26

model basins/tank-testing facilities and programs, North America: British Columbia Research Inc./Ocean Engineering Centre, 56:26, 56:38, 89:85; Carderock/Combatant Craft Department, 52:42, 58:26; Carderock/David Taylor Model Basin, 42:39, 49:42, 53:12, 56:26, 56:38, 58:13, 58:26; Carderock/High-Speed Basin, 56:26, 56:38; Carderock/Maneuvering and

Seakeeping Basin, 56:26, 58:13, 148:10; design reviews by, 55:32, 89:85; drones and vessel wakes, 160:66; Halifax, Nova Scotia's Center for Marine Vessel Development and Research, 64:11; Hydromechanics Laboratory, 56:26, 56:38; Hydronautics Research Incorporated, 56:26, 56:28; Institute for Marine Dynamics/Offshore Engineering Basin, 56:26, 56:38; model-towing tank, 64:11, 89:85; Oceanic Consulting and the Institute for Marine Dynamics, 114:20; South Bay Simulations CFD program SPLASH, 61:66; Stevens Institute/Davidson Laboratory, 56:26, 56:38, 58:26, 60:66; University of Michigan/Marine Hydrodynamics Laboratory, 56:26, 56:38, 58:26; Webb Institute/Robinson Model Basin, 56:26, 56:38, 58:26. See *also* model testing

model testing: consistent conditions and large geographic area, 140:34; combined with computational fluid dynamics (CFD), 60:66; vs. computer analysis/performance prediction, 55:32, 58:26; custombuilt data logger for, 160:66; vs. design analysis, 49:8; Dynaplane design, 97:164, 160:66; fresh vs. salt water, 59:56; vs. full-scale testing (sea trials)/limitations of/laminar and turbulent flow, 58:6, 58:26, 68:32; model construction/size/cost, 55:32, 56:26, 58:6, 60:66; Moloka'i Strait MS75 *Hercules*, 114:20; outdoor test method vs. indoor test tank facilities, 78:22; for performance evaluation/prediction, 56:26, 58:6, 58:26, 59:56, 60:66, 64:11, 68:32, 89:85, 114:20, 116:80, 140:34; propellers/propulsion systems, 59:56, 89:85; radio-controlled/stealth lobsterboat, 51:96; reverse-

engineering/wreck of *Titanic*, 58:13;  
 shallow vs. deep water, 58:26,  
 60:5; side-tow testing vs. free-running  
 testing, 160:66; speed prediction,  
 59:56; Twelve-meter yacht *Mariner*,  
 76:60; water-powered test tank/Harry  
 Schoell, 160:16. *See also* model  
 basins/tank-testing facilities and  
 programs; model, scale, for  
 performance testing; performance  
 prediction; speed, estimating

model, 2D: modeling software program,  
 66:90; vs. 3D CAD, 66:90; Solid Edge  
 program, Origin, 66:90; SolidWorks  
 program, 66:90

model, 2 3/4-D: computer-generated, 38:38

model, 3-D: computer-generated, 24:62,  
 38:38, 54:82, 57:15, 66:90, 68:5; vs.  
 carved half model, 54:82. *See also*  
 model, 3-D

model, half. *See* half models, carved

model, scale, for performance testing: cold-  
 molded/*Titanic*, 58:13;  
 construction/size/cost/powering, 55:32,  
 56:26, 58:6, 60:66; foam, 55:32;  
 gimbaled/comparison of sailing  
 rigs/induced drag, 55:44; model-towing  
 tank, 64:11, 89:85. *See also* model  
 testing

modular construction: at Westport  
 Shipyard, 62:33; access and inspection  
 issues, 75:3

Modular Marine: CAL/NCC aluminum kit  
 boats, 43:83

Modutech Marine: profile/commercial  
 boats/repairs, 40:40; *Sea Ranger* and  
*Pacific Ranger*/biodiesel fuel, 77:22

Moe, Howard: Hoquiam Boat Shop/fishing  
 boats/yachts, 40:28; on vocational  
 training programs, 20:21

Moeller Manufacturing Company, Inc.:  
 polyethylene fuel tanks, 12:60

Moesly, Carl: and Sea Craft boats, 91:116;  
 Moesly hull/variable deadrise panels,  
 144:36. *See also* Sea Craft

Moga, Thomas J., author: "How to Counter  
 Industrial Counterfeiting," 103:134

Mohrschladt, Henry: Cat Harbor Boats,  
 20:8; on cored bottoms, 51:22; Pacific  
 Seacraft, 10:20, 25:8

Moir, Jim: on power multihulls, 45:120

moisture: and laminate  
 degradation/blistering, 4:64, 15:13,  
 15:60, 23:42, 85:22, 102:46; shrink-  
 wrapping caveats, 18:28. *See also*  
 blistering, gelcoat/osmotic; core  
 bonding; fiberglass construction;  
 fiberglass construction, cored/sandwich;  
 foam cores, PVC; plywood deck,  
 waterlogged

moisture meters: Caisson Novanex, 23:42,  
 23:45, 23:47, 23:49, 60:48; Caisson  
 Novanex V1/D2, 35:58; capacitance,  
 23:42, 60:48, 66:5; *Code of Practice for  
 the Analysis of Moisture Meter  
 Readings*, 104:4; freezing temperatures  
 and, 60:48; gelcoat peeling, 13:4;  
 impedance, 23:42, 66:5; 104:4;  
 laminate/leak testing, 3:60, 66:5;  
 misinterpretation of data, 102:46; 104:4;  
 near-field attachment, 60:48; Protimeter  
 Aquant, 19:8, 23:42, 23:45, 23:47,  
 23:49, 69:31; Protimeter Mini, 69:31;  
 Protimeter Surveymaster, 60:48, 69:31;  
 readings, interpretation of, 62:5, 66:5,  
 69:70, 102:46; SAMs "boot camp" meter  
 testing, 104:128; resistance, 23:42,  
 60:48, 69:31; sensitivity to solvents,  
 60:48; sensitivity to static electricity,  
 104:4; sources, 16:50, 19:8, 23:49,  
 60:65, 69:31; Sovereign MkII, 60:48;



104:4; Sovereign Moisture Master, 9:50, 23:42, 23:45, 23:47, 23:49; Tramex Skipper, 3:60, 23:42, 23:45, 23:47, 23:49, 60:48; types/applications/performance, 16:50, 19:8, 23:42, 23:45, 23:47, 60:48, 61:5, 66:5, 69:31; vacuum-drying blistered hull, 9:50, 9:53, 70:92

molder/planer: portable (Williams & Hussey W-7), 12:60

molding: power sander for, 42:74

mold-release agents/systems: aluminum foil (one-offs), 10:42; cellulose acetate, 60:114, 60:120; Chemlease CPR large-part mold release, 112:10; for composite flat-panel fabrication, 45:68, 62:62; development of, 38:30, 60:116, 60:120; Dixie-Cup method, 60:124; fillers/sealers/glazes, 12:27, 12:28; FreKote, 12:27, 13:11; Frekote Aquiline GP-100 (water-based), 19:59; Frekote 44NC, 59:76; internal, 13:11; and methacrylate-based adhesives, 75:58; Mono-Coat RPM, 5:26, 12:27; Peel Ply, 10:42; polymeric, 12:27, 13:11; PVA (polyvinyl acetate), 10:42, 12:27, 12:30, 22:12, 41:50, 45:68, 60:120; for scarfed-seam deck repair, 37:48; sources, 13:18; types/applications/troubleshooting, 12:27, 22:12, 25:59; water-based, 13:11; wax/additives, 12:27, 12:28, 22:12, 37:48, 60:124. *See also* Peel Ply/peel ply; tooling, troubleshooting

molds. *See* plug (male mold); tooling (molds)

Molinaro, Ralph: on the Necessity of Straight and providing fixed points/shaft alignment using masonry string, 161:3

Mollica, Jason: on CNC tooling/Mollicam, 67:5

Mollica, Jason and Jeremy: Mollicam's CNC machining, 63:5

Mollica, Jeremy: on CNC tooling/Mollicam, 67:5; foam models/Mollicam, 55:32

Mollicam: CNC machining, 67:5; robotic tooling equipment/foam models, 55:32

Moloka'i Strait: long-range motoryachts/Eric Sponberg designs, 114:20; MS75 Hercules/bulbous bow/model testing, 114:20

Moltschaniwskyj, Andre, author: "Planet Solar," 124:22; 139:18

molybdenum disulfide grease: CV joints, 120:42

Momany, Ned: grillage structure, 48:4

Monarch Manufacturing: industrial-grade embossing system for hull identification numbers, 63:5

MonArk. *See* SeaArk Marine/SeaArk Boats

Monaro planing hull model; get-home power system, 140:4

Monel (nickel/copper alloy): and galvanic corrosion, 32:39, 33:28, 84:82; stopnuts/stainless steel keel fasteners, 38:20

Monfort, Platt. on boat shelters/condensation, 36:4; Clamp-It, 15:70

Monk, Dan: computer design, 57:15, 87:46

Monk, Ed, Jr.: profile, 57:15; on tooling/hull stretching techniques, 2:42; and Nordlund Motoryachts, 87:46; Ocean Alexander-style motoryacht, 64:96; sportfisherman, *Kona Concept*, 61:52; and Westport Shipyard, 62:27

Monk, Russ: on specialty plywood panels, 16:12

monocoque grid system, 133:60

Monroe, Robert H. (Rob): on composite wing spars, 14:8; on epoxy-gluing PT industrial plywood, 27:42; on hardware

- bonding, 15:21; on vacuum-bagging, 1:58
- Monroe, Robert H. (Rob), author: "Gimme Shelter: A Gable-Roof Shed," 35:15
- Monsanto Chemical Co.: Centrex plastic/cracking, 34:59; Centrex thermoplastic resin, 14:57
- Monsees, John: titanium seminar/IBEX 2005, 132:62
- Montana Boatbuilders: drift boats, 91:20
- Montgomery, Gene: on LP hazards/safety gear, 20:8
- Montgomery, Larry, author: "The Multiple Roles of the Marine Surveyor," 59:89; "Wood Behaving Badly," 65:38
- Montreal Protocol: phaseout of CFCs (R-12 refrigerant), 16:35, 17:4, 18:4, 26:8
- moorage: fees, 24:4
- Moore, Charles W., author: "Consciousness Raising," 36:88
- Moore, Joe: on advanced composites in the Adirondacks, 99:4. *See also* Wilson, Charlie
- Moore, Lewis: aluminum-fiberglass *Alumineyman*, 17:19
- Moor, Mike: on owning component failure/possible resolution for warranty ills, 142:4
- Moore, Ron: and Ballenger Spar Systems, 94:8; *Grindel* ultralight, 129:40; Moore 24 sloops, 93:10
- Moore, Jim: profile of, 109:60; Trumpy boats, 109:5, 60; 142:18
- Moore, Jim, author: "Blocking Drill," 142:18; "Whiteboard Accountability," 146:18
- Moore's Marine: Trumpy boats, 109:5, 60; 142:18; blocking procedures/travelift use, 142:18; whiteboard for tracking labor, 146:18
- moorings: anchor design/performance (hurricanes), 30:8, 31:4, 38:4, 64:36; cable/chain/scope/rode/lines, 30:8, 53:64, 64:36; concrete, 31:4; pennant, 30:8; marina/bungee-mooring system, 53:64. *See also* anchors, mooring
- Moose Boats: aluminum power catamarans, 79:10; fire/rescue boat, 121:78; port security vessel, 121:78
- Morabito, Margaret and Michael: retro 1900 outboard motorboat/ Design Challenge, 122:24
- Morabito, Michael: response on Savitsky's lift-equation for prismatic deadrise hulls, 147:6; stepped planing hulls/Daniel Savitsky, 126:64; 128:3
- Morabito, Michael, author: "Applying Savitsky," 145:30; "Misbehavioral Analysis," 163:68
- Moran, Wally, author: "A Plea for A Nautical Model T," 135:72
- MORC. *See* Midget Ocean Racing Club.
- Moreland, Daniel D.: passenger-carrying sailing barque, 52:12
- Morelli, Gino: on commercial market/power catamarans, 45:120. *See also* Morelli & Melvin Design and Engineering
- Morelli & Melvin Design and Engineering: Harbor Wing Technologies/X-1 catamaran/autonomous unmanned surface vessel (AUSV), 133:96; hydrofoil cat, 86:14; Leopard 37 powercat, 119:6, 127:94; models/testing, 55:32; plywood-cored flat-panel construction, 45:54; power catamaran/passenger ferry *Lady Cat*, 59:10; power catamarans/multihulls, 45:120, 50:11, 55:32, 72:84; profile, 72:84; sailing mega-catamaran *PlayStation*, 58:13, 59:5, 60:11; 62:57,

72:84; 78:29; TRIAK sailing kayak, 128:38; WindCat workboats, 127:94

Morgan, Charles E., Jr.: and start-up of Morgan Yachts, 135:14, 171:18; Out Island series boats, 135:14

Morgan, Peter J.: on international units of measurement (SI units), 55:5; on "Peters On(Fast)Powerboats," Parts 1 and 2/Reyes speed formula/Crouch's formula, 127:6; on running lines of the winner of the Design Challenge, 122:6; on ventilated stepped hull, 88:4; on working with epoxy in wooden boat construction in New Zealand, 73:5

Morganroth, Peter: on cockpit drainage and boat stability, 114:4

Morris, Jackie L.: on the Trumpy Specialists and *Destriero*, 113:4

Morris, Tom: profile/Morris Yachts, 57:110; 116:60

Morris Yachts: acetone reduction/replacement, 33:20; core kits/M-Series daysailers, 116:60; Ocean Series IMF and PHRF racing yacht, 116:60; profile/*Reindeer V*, 57:110; Chuck Paine/flush-deck double-ender sailboat, 92:30; SmartPac box kits/Leadership 44 trainers/U.S. Coast Guard Academy, 133:114; yard safety profile, 92:30

Morse Overland Marine: custom-built hydraulic trailers, 135:58. *See also* Myco Trailers, American Trailer, Marine Technologies.

Mota, Oscar: on Malo 46 cruising sailboat characteristics and tests, 110:4

Morton, Steve: on HVLP spray equipment, 29:8

Mosher, Bill: on Leisure Furl booms, 117:4

Mosher, Phil: on vinyl ester resins, 6:10

MOSFETS (metal oxide field effect transistors), 99:82.

*Mostro*: 62:12

Motion: analysis 61:82; control, 61:82; sickness, 61:82

MotoRing Technical Training Institute, 120:34

motors, DC: wiring considerations, 8:12

motoryachts. *See* powerboats, motoryachts

MotoTron, SmartCraft: networked communications system for electronic engine control, 106:42; Skyhook Electronic Anchor, 106:42

mouldCAM Tooling Shop: *Commanche* hull plug for Hodgdon Yachts, 153:20; profile of, 145:78; direct-to-mold no-male-mould plug, 145:78

Mouligne, Jean-Pierre: *CCP/Cray Valley*, 50:11

Mountford, John: titanium seminar/IBEX 2005, 132:62

mounting plates, 145:48

Mower, Marilyn: review of book/biography of Jack B. Hargrave, *American Classic: The Yachts and Ships of Jack Hargrave*, 99:30

Moyer, Skip, author: "Have Training Program, Will Travel," 69:184

MP 39 refrigerant: conversion to, 22:56, 26:8

MP 66 refrigerant: conversion to, 22:56, 26:8

MSDS. *See* material safety data sheets (MSDS)

M-shaped hull: Mangia Onda sportfisherman/Knight and Carver Yard, 80:12

M Ship Co.: M80 Stiletto hull design, 97:10; open-water testing (FLOWT)

- platform/Rapid Empirical Innovation (REI) program, 136:10;
- MTU of North America: electronic engine management system, 14:34, 14:38; improved M94 Series 2000 engine/Yacht & Brokerage Show, 119:6
- Mucklow, Glenn: on Challenger Marine/Crystaliners/Don Mucklow, 105:4
- Mudie, Colin (designer): aluminum-hulled junk design for Hong Kong-based Youth Organization, 76:10
- Mueller, Ron: videotape production, 16:33
- Muenzinger, Paul: on drivetrain shaft failures due to fatigue, 76:4
- Muffett, Jessica: YachtWorld's Boating Yellow Pages, 44:49
- mufflers/silencers: boat-noise control/bypass switches, 43:75; Dapars, 15:70; fiberglass Super II Vernatone, 6:52; linear vs. in-line/engine room layout, 37:26, 46:16; multiple exhaust stacks, 112:48; plastic Vetus, 46:5; Vetus lift-type, 49:16, 51:6. *See also* engine exhaust systems, dry; engine exhaust systems, wet; engine exhausts
- Mulder, Frank, designer: E4 motoryacht/Elling Yachts, 158:54
- Mull, Gary: on designing for production, 2:60; on racing measurement rules, 60:00; Allan H. Vaites/corrugated deck sample/Star Boat Fleet, 91:178
- Mullen Advertising: marine advertising/marketing, 6:42
- multihulls: designs by Nigel Irens, 63:86, 145:100; giant/Trophee Jules Verne round-the-world race, 58:13, 59:5, 60:11, 118:8; Multiplast designs, 90:50; playboat market, 54:28; power market/designs/production, 45:120, 47:5, 47:17, 50:11, 90:50; sailboat market/designs for, 6:25, 22:64, 23:4, 30:48, 75:14; Sonny Levi designs, 135:26; stability/survival/jettisonable keels, 23:24, 23:26, 74:54; storage/trailing swing-wing design/Jim Antrim, 76:60. *See also* catamarans, power; catamarans, sailing/cruising; trimarans, power; trimarans, sail
- Multimarine Composites (UK): handicapped accessible power catamaran, 119:6
- multimeters: Ancor Marine Prova CM-01, 50:73; brochure/testing for galvanic corrosion, 36:78; Fluke 23, 44:54; Fluke 867, 44:54
- MultiStar. Tri-color anchor light fixture, 87:95
- Multiple Chemical Sensitivities (MCS): chemical workplace allergies, 36:88, 38:6
- Munoz, Javier: Internet/marine services, 41:58
- Munson, William E. (Bill). *See* Munson Manufacturing/Munson, William E., Co.
- Munson Manufacturing/Munson, William E., Co.: CAL/NCC integration/training, 38:3, 38:38, 38:47, 43:83, 58:3, 58:66, 133:84; Packman Beachcraft, 53:12; patrol boat/personal landing craft/pleasure cruiser, 3:11, 58:66; profile/welded aluminum construction, 58:3, 58:66
- Murden, Tori (solo transatlantic rower): 64:11, 161:56
- Murman, Christopher: on combination of imperial and metric systems for Derek Kelsall's speed formula, 133:8
- Murnikov, Vladislav (Vlad): Design Challenge, 129:18; Golden 21 prototype, 169:6; maxi yacht *Fazisi*, 141:24, 169:6; mx-Ray fiberglass skiff/mxNext Skiff, 141:24; motorized

Ring Keel, 169:6; *SpeedDream*, 1,000-mile-a-day sailboat with canting keel, 141:24, 169:6

Murphy, Finnbar P.: on engine accessibility, 108

Murphy, Matthew P. (Matt), author: “Gimme Shelter: A Bow-Roof Shed,” 35:15

Murray & Associates, yacht designers: SOLAS compliant motoryachts, 70:21

Murray Corporation: Clamp Key, 150:72; Constant Tension Turbo Seal Clamps, 150:72; Dual Bead Super Sealing Clamp, 150:72 Flexible Clamp Driver/Nut Runner, 150:72

Murray, John: on megayacht market, 12:50

Murray Products: teak and mappo-burl table/cabinet, 74:9

Murray, Tim: on waterborne interior finishes, 24:58

Muskat, Herbert: Marco method, 26:44, 32:28, 38:30

Muskat, Dr. Irving: Laminac 4116 room-temperature-curing polyester resin, 103:191

Mussel Mast R filter system: for wakeboard boats to trap invasive species, 158:8

Mustoe, Lorin: on sprayable lightweight core/Euromere’s barrier coat products vs. Spraycore barrier coat products, 113:4

Myco Trailers: custom tilt trailers, 135:58

Mylar patterns for transfer to material, 172:56

Mylar tape: for air-release ports/vacuum-bagging, 45:68; “flash breaker” tape, 73:79

Mylne, A., and Co.: survival of design/survey firm, 46:72

Mystic Powerboats: Dave Callan raceboats, 119:6; *Aqua Mania G3*, turbine-powered speedboat, 119:6

Mystic River Foundry: patternmaking/custom castings, 42:46

Mystic Seaport Museum: building of near-replica tops’l schooner *Amistad*, 64:11; New Bedford Whaleboat replica/The Apprenticeshop, 144:10; Sparkman & Stephens Yacht Rendezvous, June 2001, 74:44, 116:60

Mystic Shipyard: bottom prep/environmental compliance, 31:18

---

## A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

---

NAAQS (National Ambient Air Quality Standard): non-attainment provisions/ozone, 34:40

NAB (nickel-aluminum-bronze) alloy (C95500): for bulbous fin keel, 54:18

NACA (National Advisory Committee for Aeronautics), 126:64; studies for stepped hulls on flying boats, 85:76; XFOIL software program/X-1 Concept vessel/Harbor Wing Technologies, 133:96

Nacira Design (France): mini 650 class boat/all carbon *Soitec*, 112:10

*Nada*, Malo 46 Classic: as test boat for propulsion-efficiency experiment, 124:54, 150:50

Naiad *Explorer*: Canadian whale-watching boat, 61:10, 135:4

nails, plastic: applications/sources, 9:57; Raptor, 31:68, 32:52

Najid (Orust, Sweden), profile of, 82:58

NAMS. See National Association of Marine Surveyors (NAMS)

Nanni: marine engine niche market, 122:64

Nanotechnology: nano products, strength and health hazards of, 107:36, 108:4, 109:6; Magic Nano cleaning solution/breathing problems with, 108:6, 109:6

Naranjo, Ralph: on keel installation, 38:20

Naranjo, Ralph, author: "The 17 MLB, Revisited," 117:44; "SailBots at USNA," 126:8; "Salvage," 20:6; "Team Sport," 144:36

Nasman, Damon L.: on builder's risk insurance, 12:4

Nastran FEA (finite element analysis) software, 78:26

Nasty-class fast patrol boat (PTF): 67:31

Natchez, David S., and Associates: environmental waterfront design, 31:10

National Association of Marine Surveyors (NAMS): avoidance of conflict of interest, 162:6, 163:132; professional ethics, 24:72, 162:6, 163:132; professional qualifications/skills, 37:80, 162:6, 163:132; survey report guidelines, 55:71

National Association of Passenger Vessel Owners (NAPVO): address, 4:20; efforts/membership, 4:9

National Council of Examiners for Engineering and Surveying (NCEES): engineering licensure/exam, 47:24; engineering licensure/testing/Ship Design Engineering, 56:53

National Electric Code: ground fault circuit interrupter (GFCI), 94:84

National Energy Policy Act (NEPA): energy-efficient lighting, 36:74

National Fire Protection Association (NFPA) standards/compliance: exhaust systems, 43:44; fire protection/safety, 5:64, 36:48, 39:44, 44:18, 44:22, 44:25, 137:22, 155:4, 169:6; ground fault

monitoring/marina safety code, 104:30, 108:114; isolation vs. polarization transformers, 108:114; lightning protection, 43:64; position on SmartPlug, 134:80; requirement for ground fault protection on overcurrent protection devices, 171:76; wiring, 8:12, 8:24, 37:4, 38:4, 38:55, 66:38. *See also* fires, boat; fires, electrical, causes/prevention

National Insurance Crime Bureau: 71:27

National Marine Manufacturers Association (NMMA): address, 4:20; "Bling My Boat" contest, 110:12; boat noise standards/compliance, 43:75; certification program/European market, 4:9, 15:50, 16:4, 37:66, 41:38, 41:41, 43:17, 55:87, 154:56; efforts/membership, 4:9; family boating market, 118:80; Grow Boating campaign and need for industry apprenticeships, 166:64; HINs (Hull Identification Numbers), 35:52; MACT survey, 34:3; resin surveillance program, 1:30; safety standards/liability/certification program, 4:9, 15:50, 16:4, 36:48, 37:34, 37:66, 40:62, 158:3; sailboat market/industry, 30:48; styrene-emission-control assessment/testing/guidance, 32:48, 40:17, 41:5, 45:21; *Water Watch* (environmental issues publication), 31:16; women/boating market, 38:51, 40:62

National Oceanographic and Atmospheric Administration and National Data Buoy Center (NDBC), 61:82

National Paint Company: Zolatone, 21:26

National Renewable Energy Laboratory: photoelectrochromic windows, 57:88

National Safe Boating Council: safe-boating manual, 32:48

- National Safety Council (NSC): worker-safety training programs, 13:54
- National Safety Transportation Board (NTSB), 114:94
- National Sailing Hall of Fame (NSHOF): inductees, 158:8; Steve Colgate/offshore sailing school, 158:8
- Native Americans. *See* Mashantucket Pequot Tribal Nation
- Naugatuck Chemical: early polyester resin supplier, 60:116
- Nauset Marine: yard boats, 42:34
- Nautech Corporation: Bertram Yacht, 39:70
- Nautor's Swann (Finland): pigmented resins/SPRINT reinforcements, 79:114; start up of Baltic Yachts, 85:46; Swan sailboats, 84:52
- Nautical Outfitters: CREWS stainless steel raw-water strainer, 39:98
- Nautical Ventures, Inc.: Reverso oil-change pump/system, 40:66
- Nautilus: hull design/fairing/lofting software, 7:18, 7:25, 9:5, 17:58, 24:26, 24:32
- Navada Industries: Environmental Spray Gun Cleaner, 13:70
- naval architect. *See* designer/naval architect/engineer, profession/responsibility
- Naval DC: Czeer MK1 solar-powered launch, 161:48; solar-electric propulsion units for freight and passenger catamarans, 161:48
- Naval Surface Warfare Center, Carderock Division. *See* Carderock Division, Naval Surface Warfare Center
- Navatek Ltd: ARE S motion control system, 143:6
- NavCad: propulsion-design software, 17:58, 26:54, 46:62, 87:53
- navigation instruments/systems: access, 48:66; captive nuts/Southco, 41:62; integrated/Dataline, 6:52; lightning protection/impulse suppressors, 43:64; Tiny Coach, 103:14. *See also* instruments/instrument panel; navigation stations
- navigation lights: and compliance with American Boat & Yacht Council (ABYC), 115:74; Dr. LED replacement for common marine halogen lights, 115:74; and Immana Laboratory independent test facility, 115:74; Lopolight LEDs, 115:74; Mantaqua (France) replacement LED bulbs, 99:20
- navigation stations: design considerations, 11:9, 11:19, 48:66, 48:79, 53:50
- Navilene Industries: ship interior designer/2D and 3D CNC machines, 158:8
- Navtec: sling-wound PBO stays, 154:48
- Navtech Inc.: design firm/computerized lofting/welded aluminum construction, 59:71
- Navtech US Surveyors Association (USSA), 162:6, 163:132. *See also* surveyors/surveying, profession/judgement
- Navy, U.S. *See* Navy boats/contracts, U.S.; U.S. Navy
- navy boats/contracts, Sweden: advanced composites/minehunters/Karlskrona Shipyard, 53:40, 55:5, 57:7, 58:36; carbon fiber/hybrid masts/superstructures, 53:40, 58:36; surface-effect ship (SES), 53:40; YS 2000/Visby-class corvette, 53:40, 55:5
- Navy boats/contracts, U.S.: advanced composites/resin-infusion molding, 32:28, 42:39, 48:35, 50:5, 52:43, 53:40; builder diversification/Hood Enterprises,

33:36; CAD/CAM/3-D models, 38:38; carbon fiber/hybrid masts/superstructures, 58:36; coastal patrol ships (PCs), 52:43; combatant craft, 28:27; Corvette class, 48:35; custom design vs. adaptation, 52:43; fabric selection, 31:4; glass-to-resin ratios, 25:58; gunboats/small combatants, 25:8, 28:27, 52:3, 52:43, 52:51; HYSWAS (Hybrid Hydrofoil Small Waterplane Area Ship), 49:45; landing craft and motor whaleboats, 52:43; mine-warfare/MCM vessels, 25:58, 48:48, 53:4, 53:40; MK Vs, 52:43; PT boats (MTBs), 5:52, 5:57, 34:5, 52:43, 52:51; RIBs, 52:43; river patrol boats (PRBs), 54:18, 57:7; secondary-bonding specifications/testing, 20:32, 20:37, 39:19; SES hullform/sportfishermen, 48:6; shipbuilding/Bay Ship & Yacht, 21:38; specwar boats, 52:3, 52:42; *Standard Specifications for U.S. Navy Craft*, 52:43; stealth technology, 53:40; structural adhesive/3M 5200, 28:27; target boats, 3:11, 25:8, 30:18; torpedo and flying boats/Herreshoff, 54:85; turbine engine, 12:60; utility and personnel boats, 25:8, 52:43; vacuum-bagging/Hood Enterprises, 30:18; vinyl esters, 6:10, 25:8, 52:43. *See also* Naval Surface Warfare Center, Carderock Division; U.S. Navy

Nazarov, Albert: on Series 62 and questions on drag curves starting from  $F_{nl}=0.25$ , 130:6; Picnic 550 Classic/Design Challenge, 122:24, 127:20, 135:36; Silver Arrow 860/Design Challenge, 127:20; XP980 and 01000 aluminum powerboats, 131:22

Nazarov, Albert, author: "Small Boats for a Global Market," 131:22; "Impacts on Cats," 157:80

NC cutting. *See* CAD/CAM; CAL/NCC (computer-aided lofting/numerically controlled cutting); kits, boat (NC lofting/cutting); metal construction, CAL/NCC (computer-aided lofting, numerically controlled cutting) applications; numerically controlled (NC) lofting/cutting equipment

Neeter, Henry E., author: "All Hands on Deck," 132:18

negotiation: builder's contracts, 37:60, 37:61; insurance claims/surveys/*Getting to Yes*, 35:72; relational vs. tactical, 96:104. *See also* arbitration epoxy exposure, 3:19, 42:62, 45:105, 48:104, 53:40, 55:5, 57:7;

Nelms, J.C. (Jay): on blocking/boatyard safety standards, 53:4; on "eminence" exception for professional engineer (P.E.) licensure, 72:5; on subcontractors in boatyard, 54:5

Nelson, Larry: on outsourcing/Westport Shipyard, 37:16

Nelson/Marek Yacht Design: containerable day sailer, *Karen*, 68:11; 91' cruiser design, 3:11

neodymium: magnetic alloy for compasses, 149:68

neoprene adhesive: Boscoprene 2402, 46:38

Neorion Shipyard (Greece): SOLAS compliant motoryachts, 70:21

Neptune Marine Shipbuilding: Elling E4 motoryacht/publicity run/fuel efficiency, 156:12; using Twaron for marine applications, 158:54

Neptunus. *See* Jachtwerf Neptunus b.v.



- Neste Polyester: vinyl ester tooling glecoat, 49:59
- nesting, of parts. See CAL/NCC (computer-aided lofting/numerically controlled cutting)
- Nestler Electronics Division: large-format digitizer, 10:52
- Neutralizer AC finishing gun, 129:8
- Neverbonds: definition, 87:62
- Neverdosky, Michael: on Cobra Cable Tie vs. nylon wrap, 75:5
- New England Boatworks: profile of, 81:90; *Bellatrix* custom carbon tender, 81:93; pushboat, 131:12; triple support (conformal) cradle, 106:80; Zurn 50/Doug Zurn designer, 144:10
- New England Casting: lost-wax process/metal casting, 168:44; optical emission spectrometer, 168:44; Pedrick 65 Classic yawl spars, 168:44
- New England Institute of Technology: Volvo engine training center, 57:15
- New England Thermoplastics: dust/mist mask, 3:60
- Newcastle Marine: John Traina/profile, 130:28
- Newfoundland: model basin/Institute for Marine Dynamics, 56:26, 56:38; performance evaluation/Marineering Inc., 56:26, 56:38
- Newick, Richard C. (Dick), author: "Yes, We Have No P.E.," 71:136
- Newick, Richard C. (Dick): *Cheers*/Atlantic proa/OSTAR race, 122:40; dagger foils in floats, 63:86; experimental trimaran/crab-claw rig, 57:15; on hardware bonding, 15:21; induction to North American Designers Hall of Fame, 113:10; obit, 146:10; Ocean Surer, 40' solo racer, 122:40; *Trine*, trimaran, 122:40; VAL 3/trimarans, 122:40; virtual circumnavigation attempt, 54:18
- Newman, Jarvis, Company: Aluminewman (customized aluminum-fiberglass lobsterboat), 17:19; Newman 46 fiberglass hulls, 97:82; 116:60
- Newmar: Seaproof waterproof electrical panels/circuit breakers, 45:105
- New Meadows Marina: shrink-wrapping (storage), 18:28
- New Pig Corp.: leak/spill containment products, 21:60
- Newport Adhesives: 1101 pre-preg resin system, 39:30
- Newport News Shipbuilding: R&D/advanced composites, 58:36
- Newport Shipyard: foam-planking/Core-Cell, 35:58
- newsletters: boatyard information/environmental issues, 31:16, 35:25
- Newton, John and Whit: American Marine Ltd./builder profile, 19:28
- New Wave Systems: CAD systems, 7:18, 8:35; Nautilus design software, 7:18, 7:25, 9:5, 17:58, 24:26, 24:32
- New York Police Department: Dauntless 35 patrol/rescue boat, 83:14
- New York (state): boat-noise control/Motorless Otsego, 43:75
- New Zealand: apprenticeship system, 20:18, 20:25, 54:52; boatbuilders/new construction in, 54:43, 54:44, 55:5, 55:58, 55:61, 71:70; High-Performance Yacht Design Conference, 98:12; jetsprint boats, 57:15; market for sportfishermen/power cats, 47:5. See also Awesome Yachts; Cookson Boats; Downs-Honey, Richard; High Modulus; Matrix Masts; Southern Spars; Tristram Boats

- New Zealand Yachts Ltd.: 68:11
- Next Technologies: inflatable wing sail with retractable mast and electric fans, 170:10
- Nexus Marine Corporation: builder profile/marketing/production methods, 23:37, 23:41; 21' planing dory, 23:37, 23:41; 23' Chinook sportfisherman, 23:37
- nF2 (*Neither Fish Nor Fowl*), hydrofoil-equipped trimaran, 75:14
- Nguyen, Loc: Carderock composites R&D, 48:35
- Nice, Susan: on interior design, 6:39
- niche markets. See markets, niche
- Nichols, Archie: on integrating/implementing CAD/CAM, 38:38
- Nichols Advanced Marine: model testing/performance analysis, 58:13
- Nichols Brothers Boat Builders: CAD/CAM applications, 8:35, 38:38; 3-D CAD ZOLT system, 38:38
- Nicholson Saw: Quik-Cut, 14:57
- Nickum and Spaulding: design for mold, 62:26
- Nicolon: Geolon 1250X/Geolon 600 polypropylene filter cloth, 9:50
- Nicolson, Ian: *Surveying Small Craft*/review, 34:52
- Nicolson, Ian, author: "Engine Access," 106:34; "First Principles," 108:136; "The Secret of Survival," 46:72; "The Short-Fin-Keel Problem," 101:128
- Nicolson, Ian: on regulations worries for boatbuilders, 106:4
- Nicro Marine: Moonlight hatch, 30:60
- Nida-Core Corp.: Nida-Core polypropylene honeycomb core, 21:4, 22:20, 36:78, 52:30, 115:18; bondline facings/adhesion, 36:78; Nida Fusion STO rigid urethane foam, 115:18; H8PP rigid-elastic structural honeycomb core, 115:18
- Nieff, Mitch: profile/Sparkman & Stephens, 59:44
- Nigel Calder's Cruising Handbook*: checklist chapter, excerpted from, 73:102
- Nilfisk of America Inc.: VT-60A wet/dry shop vacuum, 25:59
- Nimac America: inflatable sportboat, 1:20
- Nippon Challenge*: 61:52; race with *Young America*, 65:66
- Nitto Kohki U.S.A., Inc.: hydraulic hole punch, 2:70; Super Hand 100 A tool, 10:52; Super Saw air-driven hacksaw, 25:59
- Nixon, Dr. John: on flexi-resin use, 67:5
- N-methyl-pyrrolidone (NMP): in resin cleaner/acetone replacement, 33:20; in water-based strippers, 33:69
- NMEA: NMEA 0183/NMEA 2000, 97:148, 98:50, 99:4, 99:82, 106:42, 119:38, 122:64, 156:24; backbone and drop cables/Network Bridge, 156:24; brownouts/voltage spikes/voltage drop calculations, 156:24; certified label vs. compliant label/costs, 156:24; OneNet, 156:24; running diagnostics, 156:24; standardized electronic communication between electronic devices, 97:148, 98:50, 106:42, 108:34, 119:38, 131:46; support of MITEC (Marine Industry Training and Educational Council), 116:112; troubleshooting issues/color code label to DSC radios, 156:24;
- NMMA. See National Marine Manufacturers Association (NMMA)
- NMMA Publications: warning labels/decals, 21:12

NOAA. See National Oceanographic and Atmospheric Administration (NOAA)

Noise Cancellation Technologies (NCT): ProActive 1000 anti-noise headsets, 36:78

noise pollution: boat-noise standards/legislation/compliance, 43:75, 63:10

noise/vibration control: acoustic signatures, 46:50; analog/digital sound meter, 78:104; Barry Controls, 120:42; consultants, 34:27; Co-Rez, 120:42; diagnostics/computers, 5:48, 74:85; diesel-electric generator, 109:140; E-A-R bulletin, 26:54; engine mounts, 5:42, 34:22, 34:26, 34:27, 35:58, 120:38, 122:6; laminate thickness, 50:18; liquid sound-dampening products, 97:10; materials/methods, 5:42, 34:22, 34:26, 34:27, 34:59; minehunter ships, 65:84; noise/vibration isolators, 34:59, 35:4; noise-cancellation headsets, 36:78, 78:104; noise-damping electronics/anti-noise systems, 46:50; noise isolation with thrust-bearing drivetrains, 120:42, 122:6; noise-reducing laminates, 32:4; QuietBoat viscoelastic polymer covering, 97:10; Roxul Safe 'n Sound/SeaRox acoustical foil for hull sides, 165:56, sources 5:49, 34:27; Soundown, 165:56; turbo silencer/Navy specwar, 52:43; vibration severity chart, 74:85; waterjet propulsion systems, 67:70, 70:21. See *also* engines, marine, noise/vibration control; noise pollution; soundproofing insulation

noise/vibration isolators: Aquadrive, 35:4; ISOLOSS HD, 34:59; Silent Running SR 1000 viscoelastic coating, 147:10

Nolan, Tim, Marine Design: accommodations design/wheelchair-

accessible yacht, 57:15; canoe-stern launch *Ajax*, 67:13; engineer for Nordlund Boat Company, 87:46; pilot boat *Puget Sound*, 67:90, 67:98, 67:128, 87:104

Noll, Rob: on boatyard customer service, 3:5

Nomex honeycomb. See aramid honeycomb; honeycomb cores

non-compete agreements, 143:80, 145:4

non-destructive inspection (NDI). See surveying techniques/tools/equipment, non-destructive

non-destructive technologies for inspecting carbon parts, 124:26

non-destructive testing (NDT): on G-10 laminates, 164:40; training and certification, 150:60. See surveying techniques/tools/equipment, non-destructive

nonskid covers: for workplace/walkways, 45:105

nonskid deck coatings/coverings: design/safety considerations, 42:88, 69:92; Ensolite foam decking, 91:172; Epifanes coating, 1:68; gelcoat/thickened/candy-stripe-rolled, 45:80; Gibco silicone covering/scarfed-seam repairs (waterlogged flotation foam), 37:48; linear polyurethane (LP) paint, 19:12; Sea Shocks polymeric decking, 91:172; SoftSand rubber particles, 171:10; TBS polyurethane deck covering, 8:54

Norcold: HFC-134a-compatible marine refrigeration, 16:35, 18:4

Norden, Greg: on ethanol and fiberglass tanks, 109:6

Nordhavn Yachts: adding applicable standards from the ABYC or International Organization for

- Standardization 10240, 159:22; fuel shut-off cables outside of engine room, 154:56; N59CP semi-displacement Coastal Pilot and European Category A specifications, 165:48; owner's manuals, 159:23; outsized engine room on Coastal Pilot, 165:48; passagemaker: simplicity vs. complexity of onboard systems, 137:34, 139:5. *See also* Cloud-based systems.
- Nordic Boat Standard: for pleasure boats under 49', 81:128
- Nordlund Boat Company: adaptable mold, 67:128; pilot boat *Puget Sound*, 67:90; 67:128, 87:104; profile, 87:46
- Nordlund-Silvia Boat Company: 87:46
- Norsafe AS: Marathon 900 RIB/Mercury OptiMa diesel outboards, 166:64; Norwegian builder, patrol/rescue boat, 61:10
- Nord West Yachts (Orust, Sweden): profile of, 117:66
- Norscot: lip-type shaft seal, 29:14, 29:21
- Norseman Marine: re-rigging project, 38:51
- North American Boat Designers Hall of Fame: Dick Newick, 113:10; Jack Hargrave, 113:10
- North American Land Sailing Association: land-yacht speed-sailing/world records, 60:11
- North American Textiles: fiberglass fabric (binders/blistering), 15:60
- North Atlantic Industries: aluminum-fiberglass hybrids, 17:19
- North Carolina: waste-reduction and safety studies/manual, 27:17, 28:48, 28:52
- North End Marine and Fiberglass Engineering/North End Composites: airboat/SCRIMP sidelines, 44:35; *CCP Cray Valley* (Open 50), 64:64; fabric impregnator applications, 5:40; fairings production for Pequot River Shipworks, 62:87; profile, 44:35; resin-infusion/SCRIMP/Hunt 90, 44:30, 44:35; mold-release systems, 12:27, 13:11; sale of five-axis milling machine to Janseneering, 90:13; scale model construction, 55:32; tooling/Husky Airboat, 53:12; tooling/powerboat, 61:102; tooling for production, 3:34, 71:3; use of PolyLite Profile tooling resin system, 16:52, 32:45
- Northern California Marine Association (NCMA): address, 4:20; efforts/membership, 4:9
- Northern Fiberglass Sales: vacuum bag, 1:58; vacuum-bag film, 30:25
- Northern Lights Hybrid: HybriDrive propulsion system, 138:6; Northern Marine: profile/Defiant 64 and Long-Range Cruisers, 57:123; 75' Starship Millennium, 57:123; Weskor structural core, 54:5
- Northern Spy*, vintage Huckins Corinthian motoryacht/pod drive installation, 129:54
- Northfield Precision Instrument Corporation: precision chuck, 5:58
- Northport (MirroCraft): Ultra Pro AL aluminum-fiberglass fishing boats, 17:31
- North Safety Equipment: respirators, 3:19
- Northstar Software: Shiphull 2000, 17:58
- North Thin Ply Technology: Automatic Tape Laying (ATL) process/thin ply prepregs unidirectional tapes, 169:6; and Fibre Mechanics, 169:6. *See also* Fibre Mechanics
- Northwest Bay Ships (Tasmania, Australia): trimaran ferry hull, 95:6
- Northwest Plasma Cutting: custom NC cutting/metal-construction boat kits, 42:74, 63:145

Northwest School of Wooden Boatbuilding:  
vocational training programs, 22:4;  
*Sliver* 30-square-meter-class  
sloop/Robert H. Perry, 137:44; Buzzards  
Bay 14 sloop, 137:44; San Pedro 25,  
137:44

Northwind Marine: EXTREME aluminum  
RIBs, 55:16; SAFE Boat, 52:12

Norway: boatshop safety regulations, 2:67;  
FRP construction/styrene exposure,  
1:30

Norwegian classification society. *See* Det  
Norske Veritas

Nova Electric: 5060-120 inverter, 23:54

Novak, Derek: equivalency testing,  
158:54; testing of single-skin and  
sandwich panels, 158:54

Nova Kool: HFC-134a-compatible marine  
refrigeration, 16:35

Novanex. *See* moisture meters

Nova Scotia Boatbuilders Association  
(NSBA): Cape Horn 65 steel trawler  
yacht, 77:10; and New Zealand Boating  
Industry Training Organization (BITO),  
100:24; marine trades training  
programs, 67:13; recreational boat  
market, 77:10; rise in sales of  
commercial fishboats, 171:60

Novis Marine, 115:100. *See also* C & C  
Yachts.

Noyes, Daniel: Design Challenge, 122:24

NQEA Engineers and Shipbuilders: 63:106

NRD, Inc.: static-dissipating air guns, 13:18

Nuclejet (NRD): anti-static blow gun, 48:86  
numerically controlled (NC) lofting/cutting.

*See* CAL/NCC (computer-aided  
lofting/numerically controlled cutting);  
kits, boat (NC lofting/cutting); in-house  
CNC router for machining lead  
components, 156:70; metal  
construction, CAL/NCC (computer-aided

lofting, numerically controlled cutting)  
applications  
numerically controlled (NC) lofting/cutting  
equipment: at Chesapeake Light  
Craft/C.R. Onsrud CNC machine/affixes  
bar codes, 152:24; Cutting Edge  
automated cutting machinery, 21:60;  
digitizers, 10:52, 32:52, 40:42; Formes  
& Volumes/inexpensive plugmaking,  
88:14; history of, 67:8; Homag BOF-712  
fixed gantry processing center, 90:13;  
Limited Production Tool (LPT) for  
machining female mold, 71:106; NC  
System 200 large-format digitizer,  
10:52; KOMO CNC machine/Cruisers  
Yachts, 114:68; at Marine Concepts,  
151:68; at Navilene Industries, 158:8;  
outsourcing of/Rhebergen, 96:36;  
outsourcing of/Nautor, 84:52; plasma-  
arc cutting/boat kits, 42:74, 43:83;  
plasma-arc cutting/welded aluminum,  
24:34, 42:74, 63:145, 69:52; polystyrene  
cores/extrudable paste/Axson  
Technologies, 128:8; routers/cutters,  
2:70, 7:18, 13:43, 24:26, 37:16, 37:18,  
38:38, 40:42, 57:15, 61:102; Skalar  
Systems digitizer, 32:52, 40:42; Techno  
Isel 599/Univ. of Kansas School of  
Engineering, 106:10; Thermwood Model  
50 cutting machine, 24:62; for  
wood/interior joinerwork, 40:42, 90:13,  
97:10, 97:108, 114:68. *See also*  
CAL/NCC (computer-aided  
lofting/numerically controlled cutting);  
computer software, lofting/parts  
generation; metal construction,  
CAL/NCC (computer-aided lofting,  
numerically controlled cutting)  
applications; routers, numerically  
controlled (NC)

NuTeak, PVC composite deck material, 125:20. See *also* Flexiteek.

Nu-Tec Northwest, Inc.: Nu-Tec strippers, 14:57

Nutt, David: DuraKore strip planking, 15:34; dust control, 28:38; hardware potting, 15:21

Nuvolari/Lenard Naval Design: 72' composite motoryacht, 59:57; *Mostro*, 62:12; Perini Navi ketch, 63:10

Nye, Tim: on composites design/comparison of hull thickness calculation/ABS rules, 106:4

Nylok Fastener Corp.: self-locking patch/engine mount, 35:58

nylon, high-density, oil-impregnated: Ertalon LFX, 29:14

Nyman Marine Corp.: WaterLift boat hoists, 23:50

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

Oakwood Veneer Co.: engineered veneer/Macassar ebony, 163:14; specialty wood veneers, 153:8

Object 2 Skiffworks: *Canaan* C-Class catamaran, 133:70

O'Brien, Mike, author: "Better Blister Protection," 2:72

Occidental Chemical Corporation: Hazorb spill-cleanup products, 4:58

occupational health. See worker safety/occupational health

Occupational Safety and Health Administration. See OSHA

ocean: acidic, 165:72, 166:10

Ocean Alexander-style motoryacht: 64:96

Ocean Connect, Inc.: On-board's information services, 15:70

Oceanfast Motor Yachts: aluminum-fiberglass hybrids, 17:19

Ocean Kayak: boat-recycling program/polyethylene kayaks, 15:4

Ocean Marine Specialties: claim investigation of boat accidents, fire, and theft, 71:27

Ocean Tech Marine: 34' sportfisherman/DuraKore strip planking, 2:12, 15:34

Ocean Technical Services Inc. (OTECH): CeRam-Kote applicator, 54:18; SCRIMP/Mark V Motor Surfboats (Coast Guard), 37:3

Ocean Volt: generic calculator of speed and range in flat water, 164:58; serial hybrid design for cruising catamaran, 164:58;

Ocean Yachts: Dean Maggio, founder, 169:6; designing for production, 2:60; interior design, 6:34; fast tender for *Meteor*/America's Cup Yacht, 169:6; sportfishermen/Dave Martin, designer, 103:160

Oehrli, Richard: profile, 54:18; on Navy river patrol boats, 61:5, 84:18; on professional engineer (P.E.) licensure, 72:5; powerboat design 4-ways configuration, 84:18

OEM suppliers: mergers, 1:5

offsets, table of: pantograph/offsets machine/N.G. Herreshoff, 54:82; paper and slide rule/Bill Trip, 105:56

Offshore Marine Service Association (OMSA): address, 4:20; efforts/membership, 4:9

offshore cruising/racing sailboats. See sailboats, offshore cruising/racing

offshore race: Venture Offshore Cup/England to Monte Carlo/runs again, 147:10

offshore racing/performance powerboats.  
     See powerboats, high-performance  
     offshore/raceboats  
 offshore racing/performance sailboats. See  
     sailboats, offshore racing/performance  
 offshore service vessels: certification for  
     (UK), 166:48; crew transfer vessels  
     (CTVs) for servicing wind farms, 166:48;  
     and Louisiana boatbuilding industry,  
     173:6; ship length vs. wave height/effect  
     of LD ratio on resistance, 166:48  
 Offshorer Marine: restoration of Monte  
     Carlo Offshorer/RAM Offshorer, 149:10.  
     See *a/o* Riva runabouts.  
 offshore sportfishing yachts. See  
     powerboats, offshore sportfishing yachts  
 Offshore Systems: refrigerant recovery,  
     26:8  
 offshore wind farms: Block Island, Rhode  
     Island/first US windfarm, 168:68;  
     challenging Round 3 wind farms/boats  
     for, 166:48, 168:68; CVTs (crew transfer  
     vessels), 166:48, 168:68;  
     legislative/work boat codes for CVTs,  
     166:48; North Sea Logistics  
     boat/powercat *Xplorer*, 108:16; United  
     Kingdom windfarms, 168:68  
 oil analysis reports: need for executive  
     summary in, 157:128  
 oil, crude: resin percentage per barrel,  
     65:11  
 oil, in bilge: pumps/skimming techniques,  
     31:59  
 oilcanning/deflection: racing shells/kayaks,  
     41:28; waterlogged cored composites,  
     31:34, 31:39  
 oil-change pump/system: Reverso, 40:66  
 oil changes. See engine oil  
 oil filters. See engine oil  
 oil purifier: portable, 3:60  
 oil recovery: Kvichak Marine, 96:52

Oldag, Claus-P: on engine accessibility,  
     109:6; stern tube repair, 130:38  
 Oldag, Claus, author: "Tales From  
     Trinidad," 130:38  
 Oldenburg, Bo: designer/curved-stepped  
     hull, 54:18  
 Old Slip Marina: vacuum-drying blistered  
     hulls, 9:50, 9:53  
 Old Town Canoe Company: Crosslink 3  
     system/tooling, 10:34, 11:20; Discovery  
     canoe, 4:34, 4:40; product line/canoe  
     market, 4:34; roto-molding technology,  
     4:34, 4:40, 10:34; Royalex construction,  
     11:20; videos/marketing, 16:33  
 Olin Urethane Systems: Autofroth SL-317  
     air-purge foam gun, 11:52; CFC-free  
     flotation foam, 2:28  
 Olsen, Henry: on surveyor pricing, 71:5  
 Olson, Stephen (Steve): on holding tank  
     design/installation, 52:4; on keel  
     attachment/fasteners, 40:4; on marine  
     wiring/soldered terminal connections,  
     11:5; obit, 171:10  
 Olson, Stephen (Steve), author: "Air  
     Power," 33:58; "Bad Blood!," 41:55; "A  
     Brief History of Aluminum Boatbuilding,"  
     53:31; "Dealing with Fiberglass Dust,"  
     28:38; "Down and Dirty," 31:59; "A Fine  
     Invention (Travelifts) Refined," 57:133;  
     "Getting to Yes," 35:72; "Living by the  
     Book," 5:64; "A New Approach for  
     Removing Old Wood Screws," 23:20;  
     "PJI," 53:28; "Ovenless Post-Cure,"  
     136:22; "A Practical, Portable Pump for  
     Boatyards," 30:60; "Seeing in the Dark,"  
     158:48; "Simple Setup Eases Coupling  
     Flange Removal," 5:8; "A Simplified  
     Holding Tank," 50:69; "T-Boats," 36:22;  
     "To Carry A Big Stick," 168:44;  
     "Wayne's World," 45:76

Olympics: racing events, 41:58; racing shell/kayak design/engineering, 41:28, 41:30

OMC. See Outboard Marine Corp.

O'Meara, Richard (Rich): on carbon-fiber/Kevlar reinforcements, 28:18; on fabric impregnators, 5:34, 5:40; on PowerBoard sanding/fairing tool, 24:66; on pre-pregs, 24:18, 24:21

Omega Chemical: SprayCore sprayable syntactic foam, 7:50, 7:62

Omni: stepped 22' Tridyne, 5:52

Omni Research Corporation: Omni-Gel hull cleaner, 10:52

Omohundro Corp.: carbon-fiber spars/lightning protection system, 43:64

Onan Corporation: generators/carbon monoxide warnings, 45:32; generators/exhaust nipples, 45:5

Oneida Air Systems: dust and fume extraction system, 87:10

O'Neill, Mike: on thermoplastic construction, 11:20

one hundred knot yacht, 101:82, 104:4, 105:4

one-off construction. See custom/semi-custom/one-off construction; tooling, for custom/one-off boats

Ongaro Marine: throttle arms and knobs, 44:54

Onset Bay Marina: wastewater collection system, 6:8

Ontario: Hy-Lite Power Boats/welded aluminum offshore powerboats, 51:11; MetalCraft Marine/Bullnose high-speed landing craft, 57:15

open-class singlehanded offshore raceboats: Class 40 shorthanded racers, 153:20; Maine Yacht Center/setup and outfitting services for, 153:20

Open 40s (Groupe Finot design): ocean racing vessel *Syllogic*, 70:38

Open 50s (Groupe Finot design): ocean racing vessel, 64:64; 65:24, 76:60, 155:58

Open 60s (Groupe Finot design): ocean racing vessels, 64:64, 155:58; Karver Rigging K-Evolution furler systems and blocks, 95:6; work on at Maine Yacht Center, 155:58

open-molding. See laminating techniques, open-molding

Open 60s: 64:64

Ording Blockmakers: wood shell blocks, 145:24

Oregon: commercial/yacht markets, 40:24

Oregon Iron Works: welded steel tourist sub, 55:16

Organoil Pty Ltd.: timber preservatives and finishes, 96:6

original speed: powerboats going faster than hull speed/Donald L. Blount interview, 128:18

Orust, Sweden: profile of Hallberg-Rassy Yard, Najid and Mala boatyards, 82:58; Nord West Yachts, 117:66

OSHA (Occupational Safety and Health Administration), regulations: air quality/VOC emissions, 1:30, 7:64; chemical exposure limits/1989, 1:30; compliance manual, 34:59; ergonomics program/hand tools, 37:71; fire-preparedness guidelines, 1:50; foundries, 42:46; inspections, 18:4, 34:59, 69:13; Morris Yachts, 92:36; need for reasonable guidelines/limited spray-painting, 80:96: paint application, 42:24; safety and health, 17:2, 69:13; styrene exposure limits, 1:30, 7:64, 40:17, 40:20, 41:58, 42:5, 53:73;



tuberculosis exposure, 36:74. *See also* worker safety/occupational health

oscillating multipurpose tools, 133:12

oscilloscope: Dynamic loading analysis program/Dick Lazarra, 169:44

osmotic blistering. *See* blistering, gelcoat/osmotic; blister repairs

OSTAR (Observer Singlehanded Treansatlantic Race): 1984/*Thursday's Child*, 53:50

Oster, Richard: Wilbur 34  
redesign/performance, 5:86

Osterhaug, Erik, author: "Application Strategies," 67:52

OTH RIB (Over the Horizon Rigid Inflatable Boat): 66:11

Otton, Stephen: on carbon fiber/auto-racing applications, 30:4

Out Island 41, 135:14. *See also* Morgan, Charles E., Jr.

Outboard Marine Corp. (OMC): and Chris-Craft, 80:48; Cobra sterndrive, 14:34; diesel propulsion package (SDU/Cobra), 14:34; Peter Van Lancker, 80:48, 81:26; pressure-treated industrial plywood/lab testing, 27:42; styrene reduction, 26:34

outboard motors: fuel-demand valves, 160:64; world's largest/Seven Marine, 138:6

outboard motor test tank: at Newcastle Marine, 130:28

outboard mounting brackets, 171:34

outdrive system: aluminum corrosion/galvanic stray current problem, 105:96; design of/problems of, 76:49; MerCruiser Bravo drive, 76:49; dial indicator for shaft runout, 76:49

Outerlimits Offshore Powerboats:  
ethanol/E85 bullet, 133:60; finite element analysis to optimize laminates, 133:46, 60; in-house upholstered seats,

133:84; pre-preg carbon fiber Funny Car, 133:60; Quad Step design, 133:60; start-up history, 133:60;

outriggers: aftermarket niche/Rybovich, 14:26, 14:32; single outrigger powerboat/Russell Brown, 130:52

outsourcing/subcontractors: applications, 37:16, 37:18; at Azimut-Bennetti Yard (Italy), 108:62; in boatyards/marinas, 52:88, 54:5, 57:76; flexibility for designers, 159:60; vs. in-house manufacturing/cross-training, 35:34, 37:16, 39:70, 57:76; flotation foam, 37:48; laminate kits/Mahogany Company, 10:52, 35:58; laminating/Island Packet Yachts/Arjay Industries, 11:34; lofting/NC parts generation, 38:14, 38:38, 38:47; at Owen Clarke Design, 159:60; quality control, 35:4; quality/profit considerations, 32:64; racing shells/kayaks, 41:28; subcontracting relationships/contracts/warranties, 35:8, 37:16, 41:15, 57:76

ovens/autoclaves: dedicated vacuum system for, 63:151; environmental air permits and combustion-powered heaters, 83:4; five-sided removable oven box top and heat table/Goetz plant, 73:54; foam sheets for portable oven/*Cinderella*/Spitfire Quay, 123:32; for carbon fiber masts and spars/Southern Spars, 75:98; for G4 catamaran rudders and daggerboards, 156:40; for heat-cured composites, 39:30, 63:86, 70:3, 153:8; jury-rigged oven for *Team Adventure* repair, 72:38; large oven for curing resins/Lazarra Yachts, 169:44; for post-curing, 14:45, 65:66; for post-curing/alternatives to, 8:54, 14:45; for post-curing/pre-preg

parts, 24:18, 24:25, 41:28, 41:30, 61:52, 63:151, 82:22, 153:20; for post-curing/spar construction, 3:42, 41:28, 41:30, 47:44, 47:52, 47:53, 55:44, 55:58; for post-curing/tooling, 60:96, 60:103; gas-powered heater unit and metal-faced insulating boards, 82:22; removable roof and multiple ovens/Hodgdon Yachts, 153:20; sources for oven construction materials, 82:22; turning a mold into an oven/Joe Kitchell, 153:8. *See also* post-curing

overhead: financial planning/pricing/profit margin, 1:38, 45:76, 54:43, 55:58, 57:74, 58:66; low/small shop, 45:76, 54:43, 55:58, 57:74, 58:66; reducing/boatyard in a box, 21:38; reducing/market downturn, 9:13, 21:4. *See also* price/value/profit; production boatbuilding, plant/facilities

Over the Horizon Rigid Inflatable Boat (OTH RIB): 66:11

Owen Clarke Design (U.K.): high-tech high-performance racing and cruising yachts, 159:60, 162:52; IMOCA 60s and Vendee Globe Race 2016, 162:52; laser scans, 159:60; retrofitting, 159:60; wooden yacht *Misty*/virtual dynamic and hydrodynamic conditions, 159:60

Owen, Patrick: on Macintosh CAD/CAM, 9:5

Owen, Patrick, author: “Inboard Efficiency,” 17:44; “The Much-Neglected Gas Inboard,” 11:64; “Two-part Varnish Shines for Michigan Builder,” 26:54

Owen, R. Scott: on professional engineer (p.e.) licensure, 110:4

Owens, Norman G.: on marine engine conversion, 19:4; on stepped hulls, 7:5

Owens Corning Fiberglass Corporation: development of fiberglass

reinforcements, 38:30; 134:62;

OptiSpray multi-end roving, 146:10

Owens Yacht Company: marine engine development, 19:4

owners/buyers. *See* boat owners/customers

owners’ manuals:

- developing/writing/producing, 27:46, 27:54, 159:22; eFit iPad/Fleming Yachts, 159:22; European Union guidance for, 159:22; importance of a schematic for electrician’s perspective, 160:4; for international market, 29:4; as PDFs, 159:22; maintenance alerts, 159:22; outsourcing, 159:22; repurpose of construction drawings for graphic illustrations, 159:22;
- web-based vessel management platforms, 159:22

owners’ representatives: and builders’ contracts/customer relations, 12:72, 37:60, 40:24, 40:40

Ozite: Compozitex (print blocker), 7:50, 7:62

ozone depletion: CFCs/halocarbons and, 2:31; non-attainment provisions/NAAQS, 34:40. *See also* Environmental Protection Agency, regulations/guidelines/compliance; VOC emissions, reduction/compliance

ozone generators: 72:73

---

A B C D E F G H I J K L M N

O P Q R S T U V W X Y Z

---

Pacemaker: Pacemaker 40/Dave Martin design, 103:160; rudder installation, 29:72

Pacific Laminates: early FRP, 60:116, 60:120

- Pacific Mariner: acquisition of by Westport Shipyard, 121:62; re-tool of production fiberglass motoryachts, 121:62
- Pacific Northwest. See Oregon; Washington state/Puget Sound
- Pacific Seacraft Corporation/Singmarine Industries: boat transport, 63:54; profile/handling growth, 10:20; profile/systems audit, 59:21, 61:5; Robert H. Perry design/cruising boat *Catari* build, 150:10 start-up and sale of, 91:96; Rule 1162 compliance, 25:8
- Pacific 22 Series: composite rendition/Chris-Craft Cutlass, 98:12; design by Ralph and Wayne Mooer, 98:12
- Pacific Yachting Pacific Challenge: first boat to complete challenge/Aspen C100 proa, 156:12; timed event for production powerboats, 156:12
- Packard Inc.: runabout replicas, 18:20
- Padden Creek Marine: blister repairs/Turbo Shear, 27:70; blister repairs/vacuum-drying, 16:42; bottom prep/wastewater runoff, 31:10, 31:16; diversification/shower-tub units, 37:16; gelcoat maintenance/restoration, 15:44
- PAG (polyalkylene glycol) oil: refrigerator-compressor lubricant, 16:35
- PainDrawing: impact and slamming exposure/pain app downloading, 147:10
- Paine, Art: Novakeel design, 23:24
- Paine, Art, author: "The Case for Mock-ups," 9:28; "High Time for 'The Vision Thing,'" 20:64; "Jettisonable Keels," 23:24
- Paine, C.W. (Chuck): designer/*Reindeer V*, 57:110; flush-deck double-ender sailboat/Morris Yachts collaboration, 92:30, 116:60; on Palmer Johnson/manual vs. computer yacht design, 53:28; on rig weight/aluminum vs. carbon fiber, 47:44
- paint: *Fighting Lady* yellow, 139:128, 170:20; heated storage locker, 52:81, 55:5; vs. vinyl wrap/labor-saving and time costs, 169:28; waste/recycling/incineration, 37:16; Zahn viscosity measurement system, 34:35. See also paint removal
- paint, bilge: Interlux Bilgekote #862, 15:70
- paint, bottom. See antifouling paints/coatings; antifouling paints, removal
- paint, epoxy. See epoxy paints
- paint, hull/topside. See paints/coatings, exterior
- paint, linear polyurethane (LP). See linear polyurethane (LP) paints/coatings
- paint, nonskid. See nonskid deck coatings/coverings
- paint, splatter: Zolotone, 21:26, 37:36, 37:42
- paint, stainless steel: Steel It two-part coating, 20:56
- paint, textured: Polomyx, 34:28, 34:32
- paint, water-reducible: System Three, 22:55
- paintbrush: disposable/The Fooler, 29:58, 81:22
- painting supplies: disposable paintbrush, 29:58; dropcloth, 3:60; Fine-Line plastic tape, 37:36; masking film, 31:10; masking tape, 37:36; protective tape, 29:58
- painting techniques: "concurrent" painting at De Vries Scheepsbouw, 77:52; defensive painting/troubleshooting, 52:54; diagnosing blisters, 52:55; dust reduction/control/removal, 52:54; oval cross-section brushes/De Vries Scheepsbouw shop, 77:52; recoating,

52:54; rolling and tipping, 8:52, 34:35;  
 yacht finish standards, 52:54  
 painting techniques, spraying:  
   adhesion/contaminants/wash-down  
   system (aluminum), 37:36;  
   airflow/overspray, 42:20, 42:24;  
   alternatives to/topsides, 34:35;  
   aluminum boats, 21:26, 37:36, 37:42;;  
   defensive painting/trouble-shooting,  
   52:54; fisheyes, 33:46, 41:50, 52:54;  
   HVLP/increasing transfer efficiency,  
   34:35, 34:40; linear polyurethanes,  
   19:12, 19:20, 42:20. *See also* gelcoat,  
   application/shop  
   practices/troubleshooting; paint  
   shop/spray booth; spraying  
   equipment/systems/techniques  
 paint removal. *See* antifouling paints,  
   removal; blast media, for paint/gelcoat  
   removal; boatyard waste  
   disposal/reduction/compliance;  
   gelcoat/laminate removal (blister  
   repairs); paint strippers,  
   alternative/water-based; paint strippers,  
   chemical; waste-collection systems  
 paints/coatings, exterior: acrylic, 37:36;  
   adhesive films, 57:88; for aluminum  
   boats, 21:26, 37:16, 37:36, 52:54,  
   52:55; bondcoats/tie coats for epoxy  
   laminates, 49:59, 49:60; color-matching  
   vehicles, 37:36, 37:47; customized  
   system/Superyacht 800, 5:26; graphite-  
   filled/black/moisture meter readings,  
   60:48; isocyanate-free enamel/50P,  
   15:70, 19:8; moisture meter readings,  
   60:48; orange-peel corrector/Perfect-It  
   polishing system, 10:52; outsourcing,  
   37:16; paint job/profit margin, 37:36,  
   37:47; pearl finish/Mearlin Pearlescent  
   Pigment, 20:56; polyurethane clear coat,  
   37:36; subcontracting, 57:76; striping

paint/Formula 40 Marine Color, 18:54;  
 waterline striping/AutoCAD pattern,  
 45:86. *See also* antifouling bottom  
 paints/coatings; gelcoat,  
 application/shop  
 practices/troubleshooting; gelcoat,  
 formulations/applications/performance;  
 linear polyurethane (LP) paints/coatings;  
 spraying equipment/systems/techniques  
 paints/finishes, interior: for aluminum  
   boats, 21:26, 37:36, 37:42; granite  
   coatings, 34:28, 34:34; LP paints, 19:12;  
   outsourcing, 37:16; splatter  
   texture/Zolotone, 21:26, 37:36, 37:42;  
   textured/Polomyx, 34:28, 34:32;  
   varnishwork, 19:36, 23:54, 24:58. *See  
   also* linear polyurethane (LP)  
   paints/coatings; varnish  
 paint separator, centrifugal: Paint Pig, 8:54  
 paint shop/spray booth: air-driven  
   equipment, 33:58; air-filtration/make-up  
   systems, 28:48, 42:20, 42:24, 45:47;  
   airflow, 42:20, 42:24; collapsible/for  
   spars, 55:58; design/ventilation/lighting,  
   37:42, 42:20, 42:24; heatable tent as,  
   19:25; metal building as, 42:20, 42:24;  
   open-topped shipping container, 140:18;  
   plant layouts, 17:34, 28:48, 29:22,  
   42:20; prefabricated/Viking, 37:42;  
   waste disposal system/Paint Pig  
   centrifugal separator, 8:54; water-jet  
   system, 42:20. *See also* spraying  
   equipment/systems/techniques  
 paint strippers, alternative/water-based:  
   Nu-Tec, 15:57; Peel-Away Marine  
   Safety Strip, 18:54, 31:10, 33:75  
 paint strippers, chemical: and gelcoat  
   blistering, 7:8  
 Paktek Inc.: Toolpak tool bag, 11:52  
 Palme Charles, author: "Shape Shifters,"  
 173:54

*Palawan*, aluminum bluewater cruiser: repair at Zimmerman Marine, 82:40

Palladium Yachts: CAD/CAM/interior joinerwork, 40:52

Pall Land and Marine Corporation: oil purifier, 3:60

Palm Beach Motor Yachts (Australia): factory direct (dealerless) sales, 165:36; powerboats and sailboats, 165:36; profile of, 165:36; “quiet chine” innovation, 165:36

Palmer, Brian: on emissions in small shops, 73:5

Palmer Johnson: aluminum-fiberglass construction, 17:19; Brierley 30, 44:49, 62:16; Corniche series, 62:12; design mock-ups, 9:28; *La Baronessa*, 62:16, 67:49; manual vs. computer lofting, 24:30, 53:28; megayacht construction/market, 12:50, 53:28, 95:3; 125' *Mandalay*, 53:28; profile/custom aluminum yachts, 53:28, 53:31; 72' sportfisherman, 1:22; welded aluminum construction, 24:34, 95:3

Palmer Johnson Savannah: repair and refit, 53:28

Pamlico skiff. *See also* Lathrop, Tom.

Panduit Corp.: CST-101 wire-cutting tool, 23:54; harness mount systems, 35:58; spiral cable wrapping, 13:70

Panel clips: Fastmount panel-mounting clip system, 104:22

panel construction. *See* composite flat-panel construction; fiberglass construction, cored/sandwich, flat-panel panels. *See* composite panels; stone panels; thermoplastic polymer panels

Panorama Inc.: marine leak detector, 2:70

Pantawee Marine: Hans Christian model line/Jack Hall, 128:62

Paper Thermometer Company: paper thermometers, 8:54

Parabeam: mold lamination schedule/vinylester resin, 143:10; ready to paint boatbuilding material, 72:10, 125:54; as solar collectors, 125:54; 3D fabric reinforcements, 79:114; use in heat-controlled tooling, 143:10

*Paragon* (trimaran): 62:46

Pard, Vincent E. (“Vinnie”), Jr.: and Alfresco Composites, 173:18; carbon fiber furniture, 173:18; construction of hybrid wing sail, 173:18; custom-designed daggerboards for catamaran, 173:18; Gunboat production catamaran refits, 173:18; and Oracle Team LISA, 173:18;

Paris, Jay E., Jr., author: “Head Arrangements,” 5:50; “Navigation Stations,” 11:9, 11:19

Paris, Jay E., Jr.: design of *Lone Star* (cruiser) galley, 73:102; fourth edition of *Principles of Yacht Design*, 149:04; “Fractional Update,” 171:46; G-37 keel centerboard yawl/sail plan/fractional rig, 171:46; *Petrel* (P-32) design/fractional rig, 171:46; profile of, 88:62; Aeromarine 50 racer cruiser, 88:62; stepping *Petrel's* mast/Lyman-Morse Boatbuilding, 173:4

Parise, Tom: on gelcoat maintenance/restoration, 15:44

Park Industries: Posi-Turner, 10:52

Parker, Dan: on auxiliary diesel installation for a planing hull, 140:4. *See also* Monaro planing hull model; propulsion/drive systems; engines, marine, fuel efficiency.

Parker, David: co-founder/Hatteras Yacht Company /obit, 154:12

Parker, Grahame, designer: low-wash cat ferry, 63:162

Parker, Joe, author: "Kids in Boats Become the Adults Who Buy Them," 118:80;  
 Parker, Joseph (Joe): building parts with epoxy and lab testing finished laminates, 95:16; on G32 catamaran/polyester gelcoat combined with epoxy laminate, 42:52, 44:5; on high-performance resins, 42:59  
 Parker, Joseph (Joe), author: "In-Mold Coatings for Epoxy Laminates," 49:59; "Why Some Dark Boats Blister," 64:22  
 Parker, Linwood: Parker Marine, 17:34  
 Parker Hannifin Corp.: 221FR marine fuel hose, 33:75  
 Parker Marine: plant/shop layout, 17:34; vocational training, 20:18  
 Parker, Reuel: response on capsize and full knockdown definitions, 140:4; Dive Tender 14 skiff with open outboard transom, 172:52; *Sarah/Exhuma* 62 schooner, 139:54; ultralight displacement multi-chine hullform design/*Australia* 47, 139:54  
 Parker, Reuel B., author: "A Studied Lack of Depth," 139:54; "Back from Abandoned," 156:54; "Dive Tender 14," 172:52; "Out of the Everglades,," 130:20; "Real World Brightwork," 154:22  
 Parkyn, Nicholas, author: "Getting More From Model Testing," 160:66  
 Parkyn, Nick: on Applying Savitsky and application to planing surfaces with a narrow beam and long wetted length, 147:6, 149:04  
 Parsons, Bruce: on dimpled bottoms, 59:5 parts. See computer software, lofting/parts generation; inventory/parts; small parts  
 Pascoe, David: on plywood structure/longevity, 42:5; on surveying electrical systems, 67:5  
 Pascoe, D.H., & Co. See Pascoe, David

passagemaker style production boats, 81:58; Passagemaker Lite 80/46/56, 81:58  
 passenger vessels: amphibious vehicle/DUKW, 56:10, 57:13; Blount-Barker Shipbuilding/passenger-only ferry *Freedom*, 81:10; construction/transition to yachts, 40:24; converted steam trawler, 52:12; fire protection/aluminum hulls, 53:31; large uninspected/U.S. Coast Guard regulations, 59:9; nonprofit vs. commercial, 52:12; overland transport, 36:33; regulations/certification/testing, 36:22, 36:32, 37:4, 37:34, 39:4, 53:31, 59:9, 59:44; tourist submarine, 55:16. See also catamarans, power; charter boats; excursion boat market; ferries; Subchapter T boats  
 Passenger Vessel Safety Act (1993): chartering regulations, 27:80  
 patches/patching techniques/materials: for FRP/composite hulls, 36:34, 39:19, 39:27, 42:5, 50:18; secondary bonding, 36:34, 50:18, 69:5; X-patches, 36:34, 37:71. See also laminates, marine, repair techniques; repair techniques  
 Patco Electronics, Inc.: IntelliMate battery charger monitor, 28:60  
 patents: design patent, 42:68, 83:104, 110:118; patent law/prior art, 42:68; photo-initiated resins/technology, 32:28, 50:5; Quick Draw bagging film, 32:28; SCRIMP process, 31:42, 31:53, 69:154; Steven Lough's patent/sterndrive seal vs. Brunswick Corp., 110:118; utility patent, 42:68, 110:118. See also trademarks  
 Patrick, Jeff: on ferro-resonant battery chargers, 29:4

- Patrix, Ronan: Design Challenge/Swift 26 trimaran, 135:36
- patternmaking: for foundrywork/custom castings, 42:46, 42:48
- Patterson, Simon: Design Challenge, 129:18
- PATTI (pneumatic adhesion tensile test instrument) meter: adhesion between finish coating and epoxy laminate, 49:59, 100:80; gelcoat adhesion to an epoxy substrate, 87:62; PosiTest adhesion tester, 100:80
- Patton, Jonathan, co-author (with Eric Goetz): "Medic!" 72:
- Paul Elvstrom Explains the Yacht Racing Rules*, author Paul Elvstrom, 166:14
- Paul E. Luke, Inc. See Luke, Paul E., Inc.
- Paul Gardner Company. See Gardner, Paul, Company
- Paulhus, Mark D.: on licensure, 49:4
- Pauli and Griffin: PRAM 21 plastic-media blasting equipment, 7:8, 7:12
- Paulin, Ivan: on hooded 3M respirator, 1:68
- Pauls, Marc: on displacement hulls/wavemaking reduction, 28:6
- Pavia, John: on battery technology for boats and cheaper lithium cells, 122:6; on connecting lithium cells, 124:6
- Payne, Joseph: on overcurrent protection, 38:4; on lighting efficiency and comparisons, 89:4
- payroll/wages: bar code system (labor reporting), 33:36; in market downturn, 9:13; piecework basis, 41:72; for quality employees/incentives, 32:64, 41:72, 146:18; for small businesses, 1:38, 57:74; software, 18:54, 57:74, 57:80; trends (reader questionnaire analysis), 5:32
- PC Cox. See Cox North America
- PCM Marine Power: warranty engine repairs, 22:55
- Peale, Barry, author: "Serve Yourself by Serving the Customer," 31:80
- Pearson, Everett: builder profile/diversification, 33:36, 33:40, 74:9, 147:38; first small boats, 172:12; J/24 boat *Ragtime*, 98:28; obit, 172:12; on SCRIMP, 31:42
- Pearson Marine Group: North Rip2/center console, 129:8
- Pearson Precision Tooling: machining/AAB robots, 112:10
- Pearson Yachts: *Burgoo* invicta centerboard yawl/turret-style doghouse, 105:56; designing for production, 2:60; interior design, 6:34; diversification into industrial and unusual products, 172:12; Pearson 35 restoration/Landing School, 75:112; *Red Jacket*, racing sailboat/balsa-cored hull, 115:100; Tritt designs/Pearson-Grumman/early FRP, 60:116, 134:62, 172:12; re-launch of business/*True North*, 79:9. See also Tillotson-Pearson
- Pedrazzini: traditional mahogany runabouts, 155:10
- Pedrick, David, author: "Fourth Generation 44," 121:88
- Pedrick, David (designer): profile of, 86:44
- Pedrick Yacht Designs: 44 MK II sail-training vessels/U.S. Naval Academy, 121:88, 133:114; shock-absorber system for helm/Edson International, 158:18; Pedrick 65 classic yawl, 168:44; whale-tale keel, 1:68; Navy 44s, 98:28
- Peel Away Marine Safety Strip: water-based stripper, 18:54, 31:10, 33:75
- Peel Ply/peel ply: epoxy-compatible, 45:54; as finishing cloth, 45:54; interleaving for wet pregs, 99:66; as laminating

- aid/chines, strakes, steps, and transom corners, 58:79, 66:83, 70:92; mold-release applications, 10:42; primary vs. secondary bonding, 39:27; product variations/applications/testing, 19:48, 36:4, 45:21, 88:26; SCRIMP applications, 31:42, 79:114; secondary-bonding applications, 9:42, 13:67, 19:48, 20:32, 20:37, 36:4, 39:19, 39:27, 45:68; sticky/pre-pregged with laminating resin, 59:76; between tooling and skincoat/high-temp tooling, 59:76; vacuum-bagging applications, 1:58, 1:64, 42:59, 59:76
- Pelagic Boats: walkaround sportfisherman, 87:16
- Pelletier, Marice: on the best marketing tool you have/Kazulin Boats, 80:4
- Penn State Industries: Portable Panel Saw System, 19:59
- pens. See markers
- Penske Composites: composite sheet material/deck core replacement, 52:40
- Pequot River Shipworks: shipbuilder/fast ferries, 57:15, 62:87
- Perception/Aquaterra: polyethylene kayak recycling program, 15:4; roto-molded polyethylene kayaks, 29:33
- Pereira, Al: vacuum-bagging/Hood Enterprises, 30:18
- Pereli, Dick, author: "Controlling Emissions in a Small Shop," 73:26
- Performance by Design: Hydrodynamics for High-Speed Vessels*, by Donald L. Blount: book review/Dudley Dawson, 153:46
- Performance Cruising: cruising catamarans, 30:48
- Performance Metals: navalloy anodes/Intelligent Anode System, 136:10
- performance prediction: engine/propulsion systems, 13:38, 14:34, 14:38, 20:8, 55:32; 113:32; horsepower/speed, 45:105, 54:62, 54:96; model testing vs. computer analysis, 55:32, 58:26; model testing vs. sea trials, 58:26; performance prediction of catamarans under power/Derek Kelsall, 130:6; resistance/drag, 56:26, 58:6, 58:26, 60:5, 60:66; small craft, 46:62, 58:26. See also computer software, propeller/propulsion analysis; drag/resistance; model testing; speed, estimating
- performance testing: Carderock Division of the Naval Surface Warfare Center, 52:42, 52:53. See also model testing
- Perini Navi (Italy): custom-built captive reel winch, 108:62; ketch, 63:10; custom sailing yacht *Tamsen*, 111:12
- periscope, illuminating: AvScope, 24:62
- Perkins Sabre marine engines, 122:64
- Perkins Trucking: superload deliveries, 36:33
- Perko: Extended Range running lights, 36:78
- Perma-Foil International, Inc.: copper/nickel bottom sheathing, 7:42, 7:48
- Perry, Phillip M., author: "Builders' Liability," 15:50; "Controlling the Cost of Workers' Comp," 23:13, 24:11; "Lease Negotiations," 3:49; "Property Insurance," 7:28
- Perry, Robert, author: "Container Cruiser," 108:28
- Perry, Robert H.: boat-in-a-box motorsailer, 105:12. 108:28; carbon Bristol Channel Cutter build/Jim Betts, 167:6; *Catari* cruising boat/aft and center cockpit/ketch rig, 150:10; cruising boat



- Stealth Chicken*, 97:28; gaff cutter with carbon rig/Dencho Marine, 126:56; Hans Christian boat, 128:62; Islander Yachts, 97:28; on megayachts, 17:4; *Sliver* 30-square-meter-class sloop/Northwest School of Wooden Boatbuilding, 137:44
- Perry, Roger E.: on honoring those who build and repair boats, 83:4
- Perryman, Eric W.: on designing for an electrical emergency, 64:5
- Pershing Yachts (Italy): Pershing 115 yacht/waterjet propulsion system, 91:20
- personal protective gear: catalogs, 20:8; importance of, 60:5, 66:5; review/sources, 3:19. *See also* barrier cream; clothing/work clothes; gloves; goggles, safety; hearing protection; respirators; safety glasses
- personal watercraft (PWCs): boat noise/legal limits/ordinances, 43:75, 44:49, 59:10; Cuyuna engine, 5:26; safety conditions/legislation, 32:48, 46:10; snowmobiles as, 54:18; tank-testing, 56:26; Trampofoil, 54:18. *See also* jet boats/jet skis
- Personal Watercraft Industry Association (PWIA): rights/ordinances/boat noise, 44:49; safety legislation, 32:48; safety video, 46:10
- Persson, Jon: on marketing/market base, 2:4
- Pesznecker, Dan: Mid-Jet Manufacturing/commercial boats to yachts, 40:36
- Peters, Michael, author: "The Large Green Yacht, Part 2," 117:26; "Peters on (Fast) Powerboats," 126:38; "Peters on (Fast) Powerboats, Part 2," 127:56
- Peters, Michael: high-speed single step hull, 85:76; motoryacht designer/on New Zealand one-off builders, 55:58; 66:3, 66:52; new Bertram 35 sportfisherman, 171:18; resin-infused superyacht tenders/Hodgdon Yachts, 153:20; Stepped-vee Ventilated Tunnel (SVVT) hull for Barker Boat Works, 169:116; Sterling 38 center console/stepped hull, 79:10
- Peterson Builders, Inc.: liquidation of, 53:28; profile/commercial market, 26:51; steel ferries, 1:20, 26:51
- Peterson, Douglas (designer): and Baltic Yachts, 85:46; cast lead keel for *Coug* //Mars Metal Co., 156:70; DP production boat, 85:46; obit, 170:10
- Peterson Mfg. Co.: Vise-Grips, 23:20
- Petrick, Mark E.: on Lake George, NY excursion boat (*Ethan Allen*) loss and U.S. Coast Guard jurisdiction, 101:4
- Pettegrow, Malcolm (Mac): on catalytic heaters/post-curing, 8:54; 36' cruiser, 1:20; on Extender putty delivery/fairing system, 27:70; on T-boat market, 36:22; on tooling/DuraKore construction, 15:34; on Wayne Canning laminates, 45:76
- Pettegrow, Malcolm L., Inc.: profile/*Boomer* sportfisherman, 57:110
- Pettit Paint Company: ACP-50 copper-based ablative bottom paint, 16:52; ECO ablative antifouling bottom paints, 146:10; Glass Flake epoxy, 23:54; Ultra-V-Gold urethane varnish, 11:52
- Pfund, Bruce: on black discoloration of foam core, 34:5; on carbon fiber laminates, 63:5; on China Sail factory/nip roller safety, 146:4; on contour-cut vs. sheet foam/cored bottoms, 55:5; on cored panel penetrations, 99:44; on DCPD laminate repairs, 55:5; on Dynel, 11:5; on engineered putties, 42:5; on galvanic

blistering, 57:32; on  
 impregnators/retarding gelation of  
 polyester resins, 7:5; on Infusion Gone  
 Wrong, Made Right and simpler re-  
 infusion process using I-beam gallowes,  
 162:6; on keel attachment/fasteners,  
 40:4; on moisture meters, 16:50;  
 nondestructive testing workshop,  
 47:57; on proper ways to block a boat,  
 144:4; on PVC foams in elevated-cure  
 applications, 81:6; on repairing  
 damaged laminates, 43:54; on Saved by  
 the Wood of Life/toxic dust, 168:4; on  
 secondary bondline  
 preparation/adhesives, 42:5; Smart  
 Hammer, 47:57; on spraying high-solids  
 epoxies, 43:5

Pfund, Bruce, author: "About High-Grade  
 Acetone and Super-Clean Rags," 43:62;  
 "Absolutely Right," 62:62; "Acoustic  
 Signatures," 46:50; "Advice on Shrink-  
 Wrapping Gelcoated Composites,"  
 18:33; "The Aging of the Builders of the  
 Fleet," 48:104; "Aircraft and Aerospace  
 Technology in the Boatshop," 57:88;  
 "Analyzing Fiber Alignment," 114:52;  
 "Analyzing FRP Construction Problems,"  
 29:8; "Another Way to Skin the  
 Cat(alyst)," 30:57; "Are You a  
 Boatbuilder or a Crook?," 69:154;  
 "Avoiding Fairing Problems," 67:49;  
 "Back It Up," 127:84; "Back to the  
 Future, 55:112; "Bagged Wet  
 Laminating," 73:79; "Baltic Yachts,"  
 85:46; "Beware the Money Men," 53:96;  
 "Bilge Pump Rigging Problems," 44:26;  
 "The Blister Phenomenon," 15:60;  
 "Blister Repairs," 16:42, 17:11; "The  
 Boatbuilder as Cook," 10:64; "Of Boats  
 and Bombers," 25:64; "Boat Show and  
 Tell," 171:34; "Boatyard Repair

Strategies," 64:112; "Brush-Painting a  
 Megayacht," 77:52; "Building Big in  
 Advanced Composites," 53:40; "Building  
 Big in Composites," 65:84; "Building  
 Strakes, Steps, and Chines," 58:79;  
 "The Burnout Test," 125:62; "Catalyst  
 Ratios, Part I, 1:6; "Catalyst Ratios, Part  
 II, 2:6; "The Changing Face of Polyester  
 Resins," 8:28; "Chopper Guns," 3:54;  
 "Closed Molding at Cobalt Boats,"  
 113:28; "Coming Soon to a Boatshop or  
 Manufacturing Plant Near You," 103:44;  
 "Controlling Print-Through," 7:50;  
 "Cook's Armorcote IMC Promises  
 Improved Cosmetics," 13:70; "Coping  
 with VOCs," 10:8; "Core Failure," 59:14;  
 "Core Installation" (sidebars), 9:38, 9:42,  
 9:44, 9:47; "Core Installation" (feature  
 article), 94:48; "Core It Right...or Don't  
 Core It at All," 51:29; "Contour-Cut  
 Cores," 31:34; "Damage Tolerance,"  
 80:40; "Designing & Building with  
 Kevlar," 56:61; "Down to the Nuts &  
 Bolts," 38:20; "Dragging' Tools for  
 Hoses and Cables," 28:14; "Drilling for  
 Rod Holders Refined," 168:68; "DuFlex,"  
 63:162; "Electronic Temperature-  
 Sending in the Boatshop," 89:78;  
 "Encapsulated Plywood," 32:44; "Epoxy  
 Boatbuilding," 95:16; "Evaluating and  
 Repairing Major Damage," 25:18;  
 "Fairing A Megayacht," 91:82; "Fast  
 Ferry," 75:78; "A Few Thoughts on  
 Installation and Testing (Flotation  
 Foams)," 57:42; "Fiber in the Hole!,"  
 36:34; "The Fiber-Resin Connection,"  
 13:36; "Fiber-to-Resin Ratios," 59:30;  
 "The Fine Points of Changing Over to  
 Vinyl Ester and Epoxy Resins," 42:62;  
 "Flange Design and Fastner  
 Installation," 86:62; "Flotation Foam,"

37:48; "Forensic Composite Testing," 87:62; "Gearing Up for Infusion," 88:26; "Gelcoat Repair," 64:113; "Goetz: The Shop," 73:54; "Going Digital," 79:94' "The Harder They Come" (laminate/gelcoat hardness testing), 5:12; "Hawsepipes in Composite Construction," 105:26; "High-Performance Cradles," 106:80; "Honeycomb Cores," 22:20; "Hot Boatbuilding," 33:46; "How the Laminating Process Can Affect Thickness," 51:88; "Hull-to-Deck Joints," 60:104; "An Important Book on Surveying," 34:52; "The Humble Limber Hole," 117:74; "Infusing the Leadership 44," 133:114; "Innovative Machine Makes Syntactic Foam from Polyester Resin," 28:60; "Infusion Just Got More Interesting," 79:114; "Inspired Solutions, Favorite Tricks," 131:54; "An Internally Mounted Transducer," 45:29; "Legal Side of Transom Repairs," 69:70; "Light-Curing Resins," 18:8; "Lightweight Interior Joinery," 76:80; "Log In," 109:170; "A Machine Shop for the Boatshop," 48:56; "Making the Best of Narrow Flanges," 139:96; "Marketing Sportfishing Boats," 79:36; "The Men in the Middle," 132:24; "Micron CSC Extra," 47:66; "Moisture Meters," 23:42; "Mold-Release Systems," 12:27, 13:11; "Nautor's Swan," 84:52; "New Construction in New Zealand," 54:43, 55:58; "New Hydraulic System for Mechanical Controls," 28:60; "New Materials from Aerospace," 163:106; "Notes on Flat-Panel Construction," 45:68; "Now You See It," 111:26; "NQEA Engineers and Shipbuilders," 63:106; "One Method for Replacing a

Rotten Transom," 69:70; "Osmotic-Blister Update," 51:108; "The Peel Ply Peril," 19:48; "Penetrations and Closeouts," 97:130; "The Perils of 'Wet' Inspection," 30:72; "Post-Curing," 14:45; "Pre-preg Reinforcements," 24:18; "Preventing the Pox," 15:13; "Problems in Cored Construction," 70:92; "Problem-Solving with Light, Sound, & Heat," 35:42; "Reading the Meter," 102:46; "Re-engineering Production-Boat Laminates," 71:38; "Reinforcements for Closed Molding," 90:84; "Reinforcing with Carbon Fiber and Kevlar," 28:18; "Repairs to Advanced Composites," 82:22; "Repairing DCPD Laminates," 52:67; "Repairing from the Inside Out: A Word of Caution," 66:83; "Repairing Infused Laminates," 108:100; "Repairing Single-Skin Laminates," 66:78; "Rethinking Composites Testing," 34:42; "Return to *Unexpected*," 92:76; "Reusable Disposable," 81:22; "Rhebergen," 96:36; "A Sampling of 'Smart' Composites Technology," 46:45; "Secondary Bonding," 13:67; "Secondary Bonding," 19:44, 20:32; "Seen At Mets," 120:38; "Selecting Vacuum-Bag Films," 30:25; "Setting Up A Reliable Vacuum System," 83:34; "Shootout," 101:38; "Smarter, Faster Tabbings," 119:58; "Smooth Operators," 99:66; "Some Like It Hot," 123:32; "Spar Technology," 3:42; "Sportfishing Boat Layouts," 78:56; "The Stick-on Solution," 145:38; "Stringers and Bulkheads," 68:64; "Styrene Sniffers," 7:64; "Surveying and Repairing Cored Transoms," 69:70; "Taping and Tabbings," 39:19; "Testing Composites," 4:22, 6:5; "Testing the

Bondline," 100:80; "Testing Resins for Blister Resistance," 83:22; "Test Lab vs. Shop Floor," 50:46; "Tips for Cost-Effective Vacuum-Bagging," 43:24; "Tips for Making Clean Holes, Cutouts, and Laminate Samples," 49:24; "Tips for Spraying PVA," 41:50; "Ultrasonic Leak Detector," 2:70; "Understanding the Basic Engineering of Composite Boats," 47:66; "A User-Friendly Honeycomb (Nida-Core)," 36:78; "Vegetables, Yes; Boats, Maybe (vacuum-drying)," 9:53; "Vinyl Ester Resins," 6:10; "Wet-Wiring Autopsy," 143:22; "Which Ply First?" 107:70; "Why Some Dark Boats Blister," 64:22; "What Goes Around," 146:62; "Of Woodworkers and Fiberglass," 17:64; "A Word of Caution (on Vacuum-Bagging)," 1:64; "Working with a Foundry," 42:46; "Working with Carbon Fiber," 61:34; "Working with Honeycomb Cores," 22:8; "Woven vs. Stitched Fabrics," 29:38; "Writing a Good Survey Report," 30:26; "Yard Crawl," 81:110

Phase Two Design: computerized lofting service, 7:18

phenolic resins. See resins, phenolic

phenolic varnish. See varnish, phenolic

Philbrook's Boatyard: *Akiko* refit/McMullen & Wing Yard, 167:40; history of, 165:56; refit projects, 165:56, 167:40; Sovereign Yacht/Jack Sarin design/refit, 167:40; William Garden patrol design/custom motoryacht *Chinook Post*/aluminum hull, 80:12

Phillips Fibers Corporation: Alpha marine carpet, 6:52

phlebitis: cautions/treatment, 41:55

Phoenix fiberglass: recycled fiberglass, 37:66

photo-curing resins: additive for, 19:4; air-inhibited/secondary bonding, 19:8, 21:4; costs/applications/advantages, 18:8, 26:34; curing/post-curing techniques, 18:17; development/introduction of, 19:4, 26:34; with honeycomb core, 21:4; pre-preg (UV-PPG) applications, 18:8, 21:4, 24:18, 48:35, 50:5; for repairs, 18:8; for resin-infusion molding applications (PLP), 32:28; sources/Sunrez, 18:8, 18:17, 19:8; vacuum-bagging (UV-VARTM) applications/technology/testing, 18:8, 48:35, 50:5. See also Livesay, Mark (Sunrez Corp.)

photography: for catalogs/advertising/marketing, 2:17, 2:37, 4:50, 22:42, 38:11, 38:12; digital cameras, 79:94; for editorial coverage, 18:40; for owners' manuals, 27:46; for survey reports, 30:26, 79:86; videotape production, 16:2, 16:26, 22:42, 22:45

Pickering, Gardner: on Marinedeck cork decking, 128:6

Picotte, Jay, photographer: "Temporary Architecture," 101:24

piezo-electric devices:

sensors/actuators/"smart" composites, 46:45; vibration measurement, 74:85, 163:93

Pike, Dag, author: "Coal-Fired," 134:6; on High-Speed Handlebars and downside to use of, 160:4; "RIB Tubes," 78:86; "RIB: The origins and evolution of the rigid inflatable boat," 131:60; "Sportfishing in an SES," 48:6; "The Tecno 40," 46:38; "Two-Speed Gearboxes," 71:123; "A Veteran's Thoughts on Helm Design," 48:79

Pike, Dag, Associates: consulting services, 60:11, 65:11

pilot boats: C. Raymond Hunt and  
 Gladding Hearn pilot boats, 150:34,  
 151:52; *Leopard*/cold-molded Pilot  
 Schooner 60/elliptical hull, 139:54; Los  
 Angeles pilot boats/Willard Marine,  
 150:34  
 Puget Sound pilot boats, 67:90; San  
 Francisco Bar Pilots, 70:21; Spanish  
 pilot boat with extruded monomer  
 closed-cell foam collar, 78:86; waterjet  
 drive *Swift*/Kvichak Marine, 96:52  
 PILOT (Product & Information LLocator  
 Tools): database for locating  
 parts/components, 49:96, 60:136  
 pilothouse: powerboat design/windows,  
 114:30, 115:88; sailboat  
 design/windows/*Reindeer V*, 57:110;  
 retracting pilothouse on towboat/Tim  
 Graul design, 110:68. *See also*  
 windows; wheelhouse  
 pine, Southern: custom industrial plywood,  
 23:54  
 pine, sugar. *See* sugar pine  
 Pingsha Yacht Building District (China),  
 128:38  
 Pinheiro, Carlton: curator/Herreshoff  
 Marine Museum, 54:82  
 PipeMaster, pipe and tubing profiler tool:  
 69:13  
 Pipe Painter curved roller tool, 83:14  
 piping, engine: resilient hangers/expansion  
 joints, 34:22, 34:27. *See also* engine  
 exhausts  
 piping, plumbing: holding tank pumpout,  
 50:69; physics/calculating size, 24:4; 3-  
 D CAD model, 40:50  
 Pippin, Scottie: NBA All-Star and Burger  
 Boat Company, 72:10  
 Piranha Propellers: plastic replacement  
 propeller, 12:60  
 Pirelli Pzero highspeed runabout, 122:12

Pittsburgh Paint and Glass (PPG): early  
 resin formulations, 38:30; paint  
 system/aluminum boats, 21:26, 37:36,  
 37:42; paint system/DFX-7 catalyst for,  
 37:42  
 Plancick, Gordon: on CAD/CAM systems,  
 8:35; on NC lofting/cutting, 7:18  
 Placid Boatworks: profile, 97:60;  
 lightweight canoes, 97:60, 99:4  
 plane, edge: Stanley #95, 16:52  
 planer, face: Turbo Shear, 27:70, 31:10  
 planer, gelcoat. *See* gelcoat  
 peelers/planers/shavers  
 planers, portable: review/sources, 12:60;  
 Ryobi AP-10, 12:60; Williams & Hussey,  
 12:60  
 planing catamarans: planing vs.  
 displacement, 72:84; symmetric- and  
 asymmetric-hull powercats, 72:84;  
 planing hulls: bottom-loading, 58:26, 67:31;  
 chine walking, 145:30; designing and  
 building chines, strakes, steps, and  
 transom corners/FRP construction,  
 58:79, 60:5; drag/resistance, 55:32,  
 58:6, 58:26, 60:5, 67:31;  
 drag/resistance/shallow vs. deep water,  
 58:26, 60:5; dynamic instabilities,  
 145:30; dynamic lift/performance  
 problems/hull changes, 45:86, 85:76,  
 145:30; dynamic stability, 31:20, 31:28,  
 33:4, 34:5, 44:38, 64:46, 75:140; lifting  
 strakes, 45:86, 58:54, 58:79, 60:5;  
 model testing, 55:32, 58:6, 58:26, 58:79,  
 59:56, 60:5, 89:85; 126:64, 128:18;  
 porpoising, 145:30, 163:68; power  
 catamarans, 47:16, 64:46, 74:54;  
 propulsion efficiency, 44:38, 44:46, 46:5,  
 58:6, 58:26, 85:76, 107:82; Series  
 50/planing hulls/U.S.Navy, 128:18;  
 Series 62, 49:42; 126:64, 128:18, 130:6;  
 snowmobiles, 54:18; stepped bottoms,

5:52, 7:5, 34:5, 46:16, 49:42, 58:79, 163:26; Stolkraft hullform, 49:42, 58:6; surface drives for, 2:52; tunnels, 44:38, 44:46, 46:5, 46:16, 49:44, 59:10; trihedral hull, 49:42, 59:10; variable deadrise, 128:18; Yeh's Series 64, 128:18. *See also* design/engineering considerations/parameters; drag/resistance; lifting strakes; model testing; powerboats; propulsion/drive systems

planking: plank removal/specialized tools, 21:42. *See also* strip planking; wood construction *entries*

plans. *See* designs/plans

Plant, Mike: *Coyote* capsize, 23:24

plant/facilities. *See* production boatbuilding, plant/facilities

PlasDECK, peel-and-stick PVC deck material, 125:20; vs. Flexiteek, 126:6

plaster master: in tooling, 61:102

plastic, linear: polyethylene boat recycling program (plastic kayaks), 15:4, 54:112

plastic, polyethylene. *See* polyethylene plastic

plastic cleaner: Plexus, 55:99

plastic components: custom-engineered/thermoformed, 35:58

plastic-faced-plaster (PFP) tooling, 60:96, 60:103

plastic fastenings: applications/sources, 9:57; plastic nails, 9:57, 31:68, 32:52

plastic filler: alumina trihydrate (ATH), 25:59

plastic film: protective/AC 940-blue, 39:98. *See also* film, engineering, textured high-temperature; masking film; shrink-wrapping; vacuum bags/film

plastic masters, use of in tooling: 61:111

plastic-media blasting:  
     applications/equipment/techniques, 7:8;  
     reclaimer, 12:60

plastic resin: Wedlwood adhesive, 51:36

plastics: catalog of, 25:59. *See also specific types*

plastics, bonding: manual, 26:56; to metal/adhesives, 41:44; structural adhesives for, 41:44

plastics, welding: non-molded thermoplastic construction, 10:40

plastic tenting. *See* polyethylene plastic; tents

PlastiCraft polyester fiberglass boats, 103:186

Plastimo (France): double-reading compass, 149:68

plastic waste: *Plastic Whale* boat/fishing for plastic, 163:98

*Plastic Whale*: a crowdfunded boat, 163:98

Platinum Marine Services: *Spirit of 2010*/refit of decommissioned yacht, 120:4; in-the-water service center, 120:4

Platt, William, author: "Secondary Bonding Revisited," 39:27

Platzer, Gregory: on custom wheels, 111:4

Platzer, Gregory, author: "Custom Wheels," 110:34

*Play Station*: catamaran, 62:46; and finite element analysis (FEA), 78:29; rebuilding of, 63:10, 72:84

pleasure boat market/design  
     considerations: balancing comfort and speed, 6:2; fuel efficiency/environment, 15:80, 129:18, 16:4; making boats unsinkable, 140:80, 142:4, 141:4; paint job/finish, 37:47; quality of design and construction, 2:34, 2:38, 2:60, 3:72, 5:7; and real-world stability, 112:120; 113:4; tracking consumer trends, 51:11; trailerable small power cruisers, 39:67.

See *also* canoes; design/engineering considerations/parameters; jet boats/jet skis; kayaks; marketing/promotion; market research; megayachts; personal watercraft (PWCs); powerboats, motoryachts; powerboats, offshore sportfishing yachts; powerboats, sportfishermen; sailboat market/industry  
Pleasurecraft Marine Engines (PCM): gas inboard engines, 17:44; Pro Boss engine, 16:52

Plexiglas: structural adhesive for, 41:44

Plexus: methacrylate adhesives/manual, 26:56, 27:70, 42:5, 60:11, 60:104, 75:58, 87:46; plastic cleaner, 55:99

pliers, locking: Vise-Grip 12LC Large Jaw, 35:58; Strong Hand Expandable Pliers, 104:12

plotters: for CAD/CAM systems, 7:18

Plourde, Mike: on luxury boat tax, 16:4

PLP (progressive lamination process): UV-cured resin-infusion system, 32:28

plug (bung) cutter: for removing wood screws, 23:20

plug (male mold): CNC-cut, 46:16, 109:180, 128:8; Formica/polystyrene foam/*Cogito*, 39:30; Formica/Styrofoam/for plastic-faced-plaster (PFP) tool, 60:96, 60:103; laser cut MDF, 115:162; lofting and construction, 3:34, 115:162, 145:78; materials for, 61:102, 128:8; Medite (particle board), 67:128; modifiable, at Westport Shipyard, 62:26; no-male plug/mouldCAM, 145:78; for one-off construction/New Zealand, 55:58; print-through/troubleshooting, 21:50; for room-temp/high-temp tooling, 59:76; for RTM mold, 27:34; using extrudable paste/Axson Technologies, 128:8;

wooden/advanced-composite minesweepers, 53:40

Plum, John (Danish inventor): stepped planing boat design, 88:82, 97:164; stern stabilizer for balancing a stepped hull, 85:76; Fantail boat, 85:76

Plum Creek Manufacturing: Marine Tech custom industrial plywood, 16:12; Marine Tech-PTP (pressure-treated plywood), 27:42; Ultra-Core plywood, 26:54

*PlumDuff*, motoryacht: 68:44

plumbing systems: ABS/LR classification, 39:80; accessibility of/good vs. poor layout, 124:32, 152:48; ball valves/installation/maintenance, 146:62; components, 61:10; faucets/shower mixers, 30:60; Flow-Rite plumbing kits for OEMs, 141:6; physics/terminology, 24:44; piping, 24:44, 141:6, 152:48; pressurized, 24:44; pumps, 24:44, 24:48, 29:58; Qwik-Lock polypropylene fittings, 141:6; standards of comfort/yachts, 40:24; systems manual, 43:83; systems technician training/certification, 57:98, 57:99, 57:100. See *also* bilge pumps; head, arrangements/design; holding tanks; pumps; sanitation hose; showers; toilets, marine; water tanks

ply/fiber orientation: 66:78, 127:8; composite failure criterion, 133:46; fiber simulation/composites modeler/Dassault Systems, 127:8; ply failure/Tsai-Wu plot, 133:46; stiffness values, 133:46

plywood, as core material (FRP sheathed): cold-molded plywood powerboat/*Ghost Rider*, 134:62; engineroom, 54:62; vs. fiberglass/structure/stringers, 40:54, 41:5, 42:5, 46:28, 71:52, 102:34; grades and standards, 90:13; plywood/epoxy-

built sailing dinghy/DragonFlyer 3.2, 148:18; podcat/Russell Brown, 130:52; product evolution, 54:112, 69:156; strength/stiffness, 40:54, 42:5, 69:156, 72:22; transom/problems, 6:5, 29:8, 32:44, 32:45, 40:54, 41:5, 69:70; waterlogged: prevention/repairs, 32:44

plywood, custom industrial: grades and standards, 90:24; Southern pine, 23:54; selection guide, 31:68; sources, 16:12, 28:8, 42:5; types/manufacturing/applications, 16:12, 16:20, 26:54; workstations/tables for, 22:56. *See also* hardboard substrate

plywood, custom industrial, pressure-treated (PT): Douglas-fir, 16:12, 16:20, 28:8, 40:54, 42:5, 90:24; vs. fiberglass/structure, 40:54, 41:5, 42:5; foam-and-plywood/Schooner Creek Boatworks, 79:48; marine vs. furniture grade, 90:24; gluing/laminating, 27:42, 90:24; sources, 27:44, 28:8, 42:5; keruing plywood/Sockeye 45 motoryacht, 85:10; Lloyd's Register Type approval certificate, 90:24; nontoxic formulation (ACQ), 27:42; selecting and buying, 90:24; types/pressure-treating process, 16:12, 23:50, 27:42

plywood, doorskin: for one-off tooling, 10:42

plywood, hardwood: Hardwood Plywood & Veneer Association buyer's guide, 23:54

plywood, marine: apitong, 22:56, 85:10; carbon footprint factors of vs. kiln-dried wood, 169:88; cored flat-panel construction, 45:54; Bruynzell plywood/Van de Stadt Timber, 119:6; default values for/ISO standards, 102:100; development of, 38:30, 54:112; dry laminate problems with, 119:58;

interior structures/kit boats (Kit Systems), 7:18; market/manufacturing, 16:12, 16:20, 150:10; for one-off tooling, 10:42; for plywood sportfishermen/commercial skiffs, 23:37; plywood laminated keel/Seaway Boats (California), 99:20; Resopal plastic laminate coating/Hanse, 91:136; Select Boat Panels, 9:56; workstations/tables for, 22:56. *See also* plywood, custom industrial

plywood construction: Glen-L Marine/pkywood do-it-yourself boat designs, 150:10; Nexus Marine/Chinook 23 sportfisherman, 23:37; Seaway Boats, 99:20; Vicem Yachts, 102:34

plywood panels manufacture: Toubois panel products, 89:8

plywood wet-out box/Zimmerman Marine, 119:58

PMS (paramethyl styrene): styrene substitute, 10:8

pneumatic tools. *See* compressed-air (pneumatic) tools/systems

Pocock Racing Shells: post-curing system, 14:45

podcat: wood and epoxy podcat/Russell Brown, 130:52, 133:6

Poirier, Jean-Yves, author: "Amel," 144:48; "Axson Technologies," 128:8; "Bateau Bleu Award, 101:12, "The Better to See You With," 154:12; "Cautionary Notes on the Next New Thing," 107:36; "Coming Soon: Biocomposite Boatbuilding," 125:8; "Cork as Core," 120:4; "Direction Assembled," 149:68; "Franck Roy: Success With Replicas," 131:12; "Interieurs Francais," 158:8; "Kite-Flying Motor Cruiser," 134:6; "Microperf'd Foam," 110:12; "More Semi-Friendly



Epoxies,: 123:10; “New Approach to Hull Liners,” 109:17; “New French Hatch,” 107:14; “606,” 109:40; “The Poncin Experiment,” 115:142; “Pumping Out Prototypes,” 161:8; “Readable Monitor Displays in Sunlight,” 118:8; “A Sprayable Lightweight Core,” 108:20; “Solo Infusion,” 103:142; “Tiny Coach,” 103:14; “Zero-Emission Mission,” 144:10

Poirier, Jean-Yves: on nanoparticles environmental and health problems with/Magic Nano Cleaner, 109:6

Pokela, John: interior designer, 87:53

Poland, Dan: Derakane vinyl ester resin additives/delayed gel time/SCRIMP, 4:30

Polar-Star Group, Inc.: flying inflatable boat (FIB), 59:10

polar voyage: Antarctic

circumnavigation/AeroRig, 60:11; *MS Endeavour* ice-class ship, 89:16

POL-E-BOND: epoxy coating for polyester hulls/blister protection, 2:72

Polimex Klegecell: Ductile closed-cell foam, 10:52; Featherboard panels, 11:52; K-Lite core bedding putty, 9:36

polish, liquid: Micro-Gloss, 12:60

Poliza, Michael: owner *Starship Millenium*, 58:9

Pollard, Mike: on finite element analysis, 80:3Pollard, Stephen (Steve), author: “Loftsman’s Liability,” 38:14

Pollard, Steve (boatbuilder): 63:145, 100:12

*Polluting For Pleasure*, 77:82

pollution, air. See air-filtration/air-makeup systems; Clean Air Act/Amendments; Environmental Protection Agency (EPA), regulations/guidelines/compliance;

NAAQS (National Ambient Air Quality Standard); Rule 1162, compliance; ventilation systems; VOC emissions, reduction/compliance

pollution, noise. See noise pollution; noise/vibration control

pollution, water. See water pollution

Polomylx: spray-on textured paint, 34:28, 34:32

polyacrylonitrile (PAN): used in manufacturing of carbon fiber, 58:36

Poly-Bond: polyester structural adhesive, 42:5

polycarbonate acrylic alloy: Carbonlite 2000/Eddyline Kayaks, 60:11

Poly-Craft Systems: HVLP plural-component spray gun, 18:54

polyester barrier coat: Zycon, 49:59

polyester bondcoat: for epoxy laminates, 49:59, 51:6

polyester bonding putty: for bonding molded integral structural grid/liner, 46:28, 73:40; commercial/applications, 58:54; core block test, 73:40; evolution/shop-made, 58:54; PolyLite Profile, 16:52, 32:45; price per pound/gallon, 58:54, 58:58; properties/applications, 58:54; pump suppliers, 58:65; shrinkage/cracking/secondary bonding, 58:54; shrinkage/painting, 52:54; strength/flexibility, 58:54; structural gun-applied/pumpable, 58:54

polyester compound: Quick Fill, 18:54

polyester fabric. See Trevira

polyester gelcoat:

compatibility/bonding/epoxy-based laminate, 42:52, 43:5, 44:5, 49:59, 49:60; compatibility with epoxy resin/ECT 120/SYBO Composites, 139:30; compatibility/vinyl ester-based

laminate, 42:52; styrene emission estimates, 53:73; urethane tie coat for, 49:59, 49:60. *See also* blistering, gelcoat/osmotic; gelcoat, application/shop practices/troubleshooting; gelcoat, formulations/applications/performance; paint shop/spray booth

polyester (GP/general-purpose) resins: applications manual/*Cook Book*, 10:52, 20:8; blister potential, 15:60, 51:108; bonding to epoxy, 2:72; catalyst ratios/temperature/gel times, 1:6, 33:46, 50:46; glycols, 15:60, 16:42; invention/development of, 41:58, 60:116, 60:120, 103:186; isophthalic, 8:28, 15:60, 18:8, 51:108; vs. lab-grade, 50:46; low-styrene/DCDP-blended, 1:30, 2:4, 2:67, 7:50, 8:28, 15:13, 18:8, 25:8, 40:22, 50:46, 55:26; Marco Chemical/Dr. Irving Muskat. 103:186' vs. new epoxy laminate, 71:6, 96:6; orthophthalic, 7:50, 8:28, 15:60, 18:8, 19:44, 51:108; photo-initiated, 18:8; repairs, 20:32; post-curing, 2:6, 4:22, 4:27, 7:50, 12:27, 12:30, 17:11, 18:17, 21:50; pre-pregs, 24:18; promoters/accelerators, 33:46, 35:4; secondary bonding, 19:44, 19:48, 20:32; shrinkage, 7:50, 13:11, 21:50, 32:18, 45:68, 69:132; strength testing, 4:22, 50:46; styrene emission estimates, 53:73; syntactic foam from, 28:60, 30:18; thermoforming/vacu-forming, 10:34; vs. vinyl ester and epoxy resins, 6:10, 15:60, 42:52, 53:20; water permeation/osmosis, 15:60; as wood preservative/balsa core, 55:5. *See also* DCPD (dicyclopentadiene)-blended, low-styrene resins; fiberglass (FRP) construction; laminates, marine; print-

through, control/prevention; resins; styrene; styrene emissions, monitoring/reduction/compliance

polyester resins, low-styrene. *See* DCPD (dicyclopentadiene)-blended, low-styrene resins; polyester-urethane hybrid resins

polyester structural adhesives: Poly-Bond, 42:5

polyester syntactic foam: Core-Bond putty (core installation/vacuum-bagging), 9:36, 9:44, 30:18; mechanically foamed, 28:60; resin drainout, 33:46; temperature, 33:46

polyester tooling resin system: Polylite Profile, 16:52, 32:45

polyester-urethane hybrid resins: Hybri-Chem, 21:60, 28:60; Xycon/skincoat, 28:60

polyester-vinyl ester hybrid resin: Hydrex/megayacht, 32:18, 32:21

polyethylene foam collars: for Defender-class RB-5 boats, 85:64; Norseman Marine Products, 85:64; vs. polystyrene, 85:64

polyethylene, linear. *See* linear polyethylene

polyethylene side tubes: for monohull pilot boat, 96:52

polyethylene, ultra-high molecular weight (ULMW-PE): bottom reinforcement/Husky airboat, 53:12; Strong sail track/slide system, 39:98

polyethylene film. *See* vacuum bags/film

polyethylene fuel tanks. *See* fuel tanks

polyethylene hulls: blow-molding technology, 29:33; canoes, 4:40, 10:34, 11:20; Crosslink 3, 10:34, 11:20; kayaks, 4:40, 15:4, 29:33, 54:18; linear vs. cross-linked, 29:33; recycling programs, 15:4, 29:33, 37:66, 54:112;

roto-molding technology, 4:40, 10:34,  
 11:20, 56:10, 135:46; Technothrene,  
 54:18  
 polyethylene plastic sheeting: for boat  
 covers, 38:55; for boat sheds/shelters,  
 35:15, 36:4. *See also* shrink-wrapping  
 polyethylene ultra-high molecular weight  
 bottom reinforcement: Jetcat rescue  
 catamaran/SPJ Yachts, 165:10  
 polyethylene wraps for wire bundling:  
 TechFlex sleeves, 77:10  
 Poly-Fab: custom water tanks, 20:56  
 Polyfoam Products: HFC-134a foam, 24:62  
 polyisocyanurate foam: CO2-blown, 24:62  
 Polymer Corporation: Nyaflow high-  
 pressure hose, 4:58  
 Polymer Development Laboratories (PDL):  
 Hybri-Chem polyester-urethane hybrid  
 resins, 21:60, 28:60; PDL 729-2 water-  
 blown rigid flotation foam system, 26:51  
 PolyPhaser: impulse suppressors, 43:64  
 polypropylene filter cloth: for vacuum-  
 drying blistered hull, 9:50  
 polypropylene honeycomb. *See*  
 honeycomb cores  
 polypropylene hose: Hi-Tech Techflex  
 HTR, 45:105  
 polypropylene water tanks: Poly-Fab,  
 20:56  
 polystyrene foam: cutting, 39:30; EPA  
 rule/exemption, 28:54; plug/class C  
 catamaran/*Cogito*, 39:30; secondary-  
 bonding problems, 13:67  
 polysulfide sealant: vs. polyurethanes,  
 28:27; for integral tanks, 74:20; 3Ms 101  
 Marine Sealant, 74:20  
 polyurethane adhesive/sealants: for  
 bedding/deck repair/waterlogged foam,  
 37:48; laminate testing, 28:27; Pliogrip  
 7700, 29:8, 30:60; Sikaflex 241, 28:27,  
 33:75; Sikaflex 252, 29:8, 33:75;  
 Sikaflex 292, 33:75; sources, 28:30; 3M  
 5200, 1:46, 15:21, 20:32, 28:27, 29:4,  
 37:48; types/applications, 28:27, 29:4,  
 29:8, 20:60. *See also* adhesives,  
 structural  
 polyurethane foam: EPA rule/exemption,  
 28:54; soundproofing/aluminum boats,  
 21:26; vs. Hypalon collars, 153:58  
 polyurethane foam, non-CFC:  
 performance/testing, 2:28, 2:31;  
 sources, 2:28, 2:30  
 polyurethane gelcoat: combined with epoxy  
 pre-pregs, 43:5  
 polyurethane resin: for RTM processing,  
 38:55  
 Polywerx (the Netherlands): RTM-Worx  
 software for resin-flow simulation, 71:6  
 Poncin Yacht Group: Harmony Yachts  
 sailboats/automated processing,  
 115:142  
 pontoon boats: fiberglass pontoon boats,  
 143:52; pedal-powered Shuttle Bike Kits  
 with inflatable pontoons, 153:8  
 pools, exercise: sideline/TPI, 33:36  
 Pop Fasteners: Pop Plus blind rivets, 13:70  
 POR: Crystal TopCoat gelcoat finish, 15:44  
 P.O.R. 15, Inc.: POR 15 rust-preventive  
 paint, 8:54  
 porpoising. *See* stability, dynamic  
 Porsche, F.A.: Porsche speedboat, 114:94,  
 116:4  
 Porter, Aaron: response on “Bertram Is  
 Back,” and propeller nut installation,  
 172:4  
 Porter, Aaron S., author: “A Design  
 Challenge III Sampler,” 135:36; “The  
 Adaptive Boatyard,” 101:92; “Adventure  
 Ready,” 133:40; “Antifouling in a Frail  
 Ocean,” 105:106; “Beware the Unknown  
 Known,” 147:3; “Boats in the Age of  
 Mechanical Reproduction,” 135:3; “A

Brief Personal History of Deck Leaks," 165:3; "Building And Keeping a Workforce," 171:3; "Business or Pleasure?," 166:3; Buyer/Builder Beware," 142:3; "Case In Point," 100:36; "Confronting the FRP Zombie Boat," 160:3; "Cruising at a Slow Burn," 129:18; "Depth," 132:3; "Design Challenge: Designs From A Competition," 122:24; "Do You Know Your Source?" 155:3, 156:4; "Doing More With Less," 127:4; "Don't Beat Yourself Up," 141:3; "Early Exposure," 172:3; "Editors' Picks of New Tools and Technology," 150:72; "Embracing Change," 173:3; "The Enduring Allure of the Not-So-New," 159:3; "Fair Warnings," 156:12; "From Scratch," 104:78; "A Home for Old Plans and Drafting Tools," 167:3; "If You See Something, Say Something," 150:3; "It Takes A Province," 100:24; "Job Shop," 103:54; "KKMI: The Business of Clean," 140:18; "Make One Not Like All the Others," 139:4; "Making the Best of the Bad," 163:4; "More Than Good Ideas," 131:3; "A Moving Target: Building for the Leading Edge," 153:3; "New Tools, New Trades," 136:3; "Not Just for Show," 164:3; "Not Only the New," 169:4; "On the Rode," 111:30; "Old School, New Tricks" (Rovings), 144:10; "Outsourcing Complexity," 168:3; "Pain in the Gas," 102:24; "Power That Fits," 137:6; "Powerless Advances in Propulsion," 134:3; "Pragmatic Reverence of the Refit Mind," 170:3; "ProBoat at 25," 151:4; "Process Control Refined," 125:54; "Remembrances of Problems Past," 138:3; "Restorative Therapy," 133:4; "Revisting

Conventional Practices." 146:3; "Right Questions at the Right Time," 157:4; "Rybovich Rebuild X 2," 170:20; "Shifting Into Fiber Drive," 154:3; "School of Hard Knocks," 149:03; "Sharing Builds Better Boats," 145:4; "Show and Tell: Making Disposable A Virtue," 141:30; "Showstoppers: Quantum 2KA two-part aerosol polyurethane topcoat," 168:80; "Showstoppers: Scanstrut ROKK modular-device-mounting system," 168:68; "Simplicity Then and Now," 137:3; "Some Like It Hot," 123:32; "The Solutions Trade," 128:3; "Speed Endured, Speed Considered," 150:10; "Stability Basics for the Security Detail," 162:3; "Success by Any Other name," 129:3; "Temporary Architecture," 101:24; "The Tech of Teak," 165:22; "The Test of Time," 161:3; "The Thrill of the New," 156:3; "The Trumpy Specialists," 109:60; "Three Efficient Cruisers for Four," 127:20; "Through Clients' Eyes," 144:3; "Unconventional Wisdom," 130:3; "Unintended Benefits," 140:3; "A Vulnerable Lightness of Regulation," 158:3; "Water, Like Trouble, Runs Downhill," 152:3; "What to Make of Change," 143:3; "When A Lobster Yacht Is Not," 109:208; "Working Cats of the Caribbean," 119:28; Porter-Cable Corp.: hammerdrill line, 1:68; Model 360-series belt sanders, 13:70; Model 505 heavy-duty finisher, 20:56; Sand Trap 73505, 20:56; Porter, Michael, author: "Down East Hullforms," 73:88; Portland Yacht Services: Maine Boatbuilders Show, 77:3

portlights: aluminum/Freeman Marine, 41:62; EC (EU) certification, 41:38; casting resin to create portlight/Dave MacPherson, 88:62; sandwich construction, 5:58

Possin, John: Bates Technical College/vocational training program, 20:21

post-curing carbon pre-pregs, 120:62

post-curing, epoxy resins:

- applications/techniques, 14:45, 14:48, 53:20, 55:58, 59:76, 79:114, 125:54;
- blister repairs/barrier coats, 17:11;
- composite tooling, 39:30, 59:76, 60:96, 60:103, 136:56; concerns, 15:4, 70:44, 136:22; cure cycle recommendations, 14:48, 59:76, 63:151, 64:82, 136:22;
- digital-scanning calorimeter, 14:48;
- hydronic blankets/mouldCAM, 145:78;
- large-scale cold-molding/124'
- motorsailer, 51:52; ovenless post-cure/portable plywood box heater/Brooklin Boat Yard, 136:22;
- ovens/heaters/systems, 8:54, 14:45, 42:52, 55:58, 63:151, 64:82; 81:110, 136:22; print-through prevention, 14:45, 14:48, 34:18, 34:21, 59:76, 136:22;
- ramping up/ramp rate, 14:45, 17:11, 34:21, 42:52, 42:59, 125:54, 136:56;
- solar, 14:45; SPRINT laminates, 79:114, thermocouple sensors and temperature-indicating stickers, 115:162. *See also* laminates, marine, advanced-composite; ovens/autoclaves; print-through, control/prevention

post-curing, polyester resins: blister repairs/barrier coats, 17:11; catalyst ratios and, 2:6, 50:46; catalytic heater for, 8:54; laminate strength and, 4:22, 4:27, 50:46; photo-initiated resins, 18:17; of test coupons, 2:6, 48:16,

50:46; of tooling/preventing print-through, 7:50, 12:27, 12:30, 21:50. *See also* ovens/autoclaves; print-through, control/prevention

post-curing, vinyl ester resins: laminate strength and, 4:22

potable water systems: ABYC accepted materials list for, 152:48; ABYC Standard H-23 installation standard, 152:58; deep storage of, 122:52; fiberglass tanks, 153:36; filter and ultraviolet light treatment, 152:48; importance of accessibility to components, 152:48, 153:36; materials, design, and installation for, 152:48, 153:36; polyvinylchloride (PVC) hose/polyethylene (PEX) tubing/copper tubing, 152:48, 153:36; roto-molded linear polyethylene (LPE) custom welded tanks, 153:36; sealants, 152:48; winterizing fittings, 152:48

Potter, Nick: Dyer 29, 28:72

PowerBoat Design Challenge (*Professional BoatBuilder* Magazine: Jolley, Eric/PT skiff, 122:24; Lathrop, Tom/Pamlico skiff, 122:24; Stimson, David/plank-on-frame power dory, 122:24; Devlin, Sam/Pelicano 18; Morabito, Margaret/retro 1900 outboard motorboat, 122:24; Nazarov, Albert/Picnic 550 Classic, 122:24; Jonsson, Sigurdar Olafs/Arctic Circle Design aluminum fishing boat, 122:24; Miguels, Ronaldo Fazanelli/Niteroi wave-piercing powerboat, 122:24

*Powerboat Reports*: consumer-advocate publication (review), 8:9

powerboats: ABS classification, 39:80, 39:86; battery selection/use, 18:44; boat noise/legal limits, 43:75; comparative fuel consumption for three powerboats,

151:44; designing/building chines, strakes, steps, and transom corners, 58:79, 60:5, 138:32; design mock-ups, 9:28, 95:64; development/advanced composites, 51:22; development/construction of stepped hulls, 5:52, 7:5, 46:16; Dyer 29 as pilot launch, 150:34; First Chesapeake Powerboat Symposium, 116:40; fuel efficiency/market strategy, 15:80, 16:4; Greenline Powerboats/parallel hybrid cruisers, 164:58; hull-to-deck joints, 60:104; ISO standards/stability, 48:14, 112:120; lightning protection systems, 43:64; model testing, 55:32; molded structural grid/liner, 46:28, 46:37, 58:54; overpowered powerboats, 80:3; Pilot power cruisers/Mark Ellis/Bruckmann Yachts, 138:32; production check lists, 95:64; profit/pricing, 47:66; propeller matching, 46:52; replica/reproduction/reconstruction of, 81:72; Revenge 35 Light Tackle, 102:86, 149:56; reviewed in consumer-advocate publication, 8:9; systems audit, 59:21; transatlantic passagemaker rally, 83:14; twin-screw rudder installation/tuning, 45:96; wide chine flats on deep-V hullforms, 138:32. *See also specific types including:* airboats; catamarans, power; excursion vessels; ferries; fishing boats, commercial, construction; flats-boat market/flats skiffs; hydroplanes; jet boats/jet skis; lobsterboats; megayachts; personal watercraft (PWCs); planing hulls; pleasure boat market/design considerations; powerboats *entries below*; rigid inflatable boats (RIBs); Subchapter T boats; *etc.*

powerboats for people who don't like powerboats: Nigel Irens' Design 027, 80:68  
powerboats, high-performance  
  offshore/raceboats: around-the-world record, 50:11, 55:16; composite welded aluminum, 51:11; F-Service runabout/Prowler boats/Forest Johnson, 134:4; FB Design/Red EPT/Cesa, 133:84; hydroplanes, 2:12, 56:40, 59:10; panel strength/smart composites, 46:3, 46:45; performance testing, 52:43, 133:84, 134:36; polyester vs. epoxy laminate, use in Predator-model powerboats, 71:6; slamming loads, 52:4, 52:30, 53:4, 53:20, 55:5; structural limits, 52:43; structure/scantlings, 49:54; Tecno 40 RIB, 46:38, 46:43; 133:84. *See also* hydroplanes; performance prediction; speed, estimating  
powerboats, motoryachts: Fox Project 86/design elements of, 118:22; interior layout/decoration, 6:34; interior layout/wheelchair-accessible, 57:15; lightning protection systems, 43:64; plug for, 60:11; reducing powering requirements for/Patrick Bray research, 118:22; Sparkman & Stephens designs, 59:44, 59:48; speed prediction, 59:56, 59:57, 101:82, 102:4; superyacht/Vitters Shipyard, 58:13; trawler/Northern Marine, 57:123  
powerboats, offshore sportfishing yachts: accessories/hardware/ancillary equipment (Rybovich), 14:26, 14:32; *Boca Jima*/tuna tower, 101:38; Calyber 35 Carolina-style express sportfishermen/Boksa Marine, 115:18; comfort vs. speed, 6:2; fully retracting bridge electronics modules, 101:38; Hines-Farley, 54:56, 54:62; Hunt

hullform, 50:32; interior layout/decoration, 6:34; lightning protection systems, 43:64; outrigger latch arrangement, 101:38; SES (Surface Effect Ship) hullform, 48:6; semisoft bridge surrounds/EZ2CY, 101:38; Sirius Boatworks/Jamie Lowell-designed sportfisherman, 100:24; tower pod/Halmatic sportfishermen, 104:4; unexposed transom door hinges/Steve French Enterprises, 107:14; wooden/construction details (Rybovich), 25:42, 25:49; welded aluminum, 21:26. See *also* powerboats, sportfishermen

powerboats, runabouts/cabin cruisers: CapeLine automatic convertible canvas top, 108:16; fizzboats, 54:43; Kazulin Boats, 65:52; sliding-top, 54:18; Sea Craft boats, 91:116; trailerable, 39:67, 54:43, 58:79, 60:5

powerboats, runabouts/cabin cruisers, replica/reproduction: Alsberg Junior speedster, 60:11; 24' Chris-Craft, 2:12; design/tracking market trends, 51:11; Kazulin Boats, 65:52; market niche/builder profiles, 18:20, 20:4; new classics, 62:12; Nigel Irens' Design 027 traditional weekender yacht, 80:68; replica/reproduction market, 2:12, 18:20, 20:4. See *also* powerboats, motoryachts

powerboats, small runabouts/racers: jetsprint boats, 57:15. See *also* jet boats/jet skis

powerboats, sportfishermen: acoustic signatures, 46:50; air chamber/2600 Sportfish, 2:12; balancing comfort with speed, 6:2, 144:36; boulevardier's boat, 64:11; Cabo Yachts sportfishermen, 91:96; Carl Moesly and F&S Boatworks, 144:36; catamarans, 45:120, 47:5, 47:16, 54:43, 54:44; center-console, 8:2;

cored-fiberglass construction, 1:22, 2:12; Dave Martin design, 103:160; design/tracking market trends, 51:11, 79:36; design criteria/Tom Fexas, 1:22, 1:28; DuFlex panel construction, 63:162; exterior wood and quality joinery/Vicem Yachts, 102:34; fighting chair features, 78:56, 79:36; fish boxes/live wells, 78:56, 91:96; gamefisherman/*Reel Trick*, 58:13; guide fisherman, 3:11; Hunt hullform, 50:32; layouts for, 78:56, 79:36; Jimmy La/L&B Technologies vs. Out Island Sport Yachts lawsuit, 93:112; kitted Willis Marine 34 outboard-powered sportfishermen, 125:8; lifting strakes/improved performance, 45:86; Maverick 21 modified-V/Garlington 78'/K-value, 126:38; Merritt's Boat and Engine Works, 62:62, 149:56; military-style lobsterboat, 51:96; performance and analyst tests on, 79:68; plywood/Chinook 23, 23:27; portable testing equipment/Janelle's PowerMate System, 79:68; powering, 1:22, 1:28, 45:86; remote-controlled bait chambers, 58:13; reverse bow, 58:13; saltwater options, 7:3; Southport 26, 95:38; spray/squatting, 45:86; strip-built/*Boomer*, 57:110; structure/framing/plywood vs. fiberglass, 40:54, 41:5; tackle storage, 78:56; transom doors, 78:56; trim measurements, 79:68; ultimate, 1:22, 1:28, 78:56; Viking 80 CC sportfisherman/lighter faster boat/R20 process, 173:6; wave piercers, 54:43, 54:44; welded aluminum construction, 21:26. See *also* flats-boat market/flats skiffs; lifting strakes; planing hulls; powerboats, offshore sportfishing yachts

powerboats, utility skiffs: all-FRP "RIB" design, 52:12; aluminum jon boat, 16:4; Boston Whaler, 2:34, 2:37, 2:38, 2:40, 6:42, 27:42, 37:48, 38:3, 40:66, 42:34; Navy specwar FRP utilities, 52:43; roto-molded polyethylene, 11:28; SAFE Boat, 52:12; yard boats, 42:34. *See also* flats-boat market/flats skiffs; Navy boats/contracts; U.S. Coast Guard

power management/usage, 137:34

Powermatic: Artisan 43 Bandsaw/rip fence accessory, 21:60; Artisan 73 Dust Collector, 18:54; numerically controlled Accu-Router, 2:70

Powerquest: boat shows, 36:60, 36:64; low-VOC gelcoats, 55:99

PowerStar: inverter supplier, 25:34, 25:40

power tools. *See* tools, power

powertrain coupling, 131:12

Powlas, Jerry: on composite flat-panel construction, 48:4

POX-E-GEL: epoxy gelcoat, 2:72

PPG Industries: SprayVeil, 13:70

*Practical Sailor*: consumer-advocate publication (review), 8:4

Precision Boat Repairs: gelcoat maintenance/restoration, 15:44

Precision Boat Works: Colgate 26 sail training vessel, 164:46; profile of/trailerable sailboat builders, 164:46; structural hull liners, 164:46

Precision Shapes of Virginia (PSOV): startup of, 66:110

Precision Light Systems (Maine): hybrid Laser/Gas Metal Arc welding process, 103:44

Predator Custom Yachts: acquired by Egg Harbor, 87:16

Predator Express 35: walkaround sportfisherman, 87:16

Predator-model powerboats (Formula Cruisers, New Zealand): structural weight loss in, using epoxy laminate, 71:6

Preferred Data Corporation: custom accounting software, 57:74, 57:92

Premier Marine: recycled polyethylene, 37:66

pre-pregs: bonding honeycomb cores to carbon skins, 169:6; carbon-fiber, 24:18, 24:21, 39:3, 39:30, 55:58, 62:46, 63:151, 85:46, 153:20; at Baltic Yachts, 85:46; at Green Marine, 123:32; carbon unidirectional tape, 119:50; combining with SPRINT fabrics, 79:114, 131:28; at Comp Millennia, 120:62; at Composite Design Inc., 70:21; costs, 24:18, 24:21, 63:151; epoxy, 18:8, 25:59, 39:30, 53:20, 55:58, 55:61, 58:36, 72:5, 79:114, 95:16; epoxy/A-staged (wet-pregs), 58:36, 97:174; epoxy/B-staged (wet pregs), 95:16, 123:32; film adhesive for, 39:30; frozen/B-staged, 24:18, 64:82; generating a pre-preg product, 131:28; at Goetz Custom Sailboats, 73:54; Hodgdon Yachts pre-preg project/*Commanche*, maxi ocean racer, 153:20; with honeycomb cores, 22:8, 39:3, 55:61, 70:21, 129:40; hot-melt process for, 64:82; just-in-time (JIT), 24:18; low-temperature-cured (LTC-PPG), 48:35, 64:82, 70:21, 70:44, 72:5; for mast/spar construction, 55:58, 55:61, 64:64, 120:62; mechanical values of epoxy pre-preg laminates chart, 133:46; for one-off construction, 55:58, 55:61; photo-curing, 18:8, 24:18; pitfalls of pre-pregs without conventional custom built ovens, 131:28; pitfalls of pre-pregs, 131:28, 153:20; pre-preg manufacturers, 131:28, 169:6; pre-pref



plotter machines/Automated Tape Laying (ATL) North Thin Ply Technology, 169:6; with PVC foam cores/bonding problems, 43:96, 47:58, 48:8, 55:61, 70:44, 72:5, 131:28; resin systems for, 39:30, 53:20, 79:114; single-sided, 58:36; sources, 14:55, 18:8, 39:42, 70:21; spray chop vs. infused bi-axial, 119:50; storage/handling/curing, 24:18, 24:25, 39:30, 53:20, 55:58, 55:61, 63:151, 95:16; thin ply pre-pregs, 169:6; tool for preparing, 58:36, 123:32; TPT Quartz, 169:6  
 types/applications/technology, 14:55, 18:8, 24:18, 39:30, 55:58, 55:61, 58:36, 123:32; UV-cured (UV-PPG), 18:8, 21:4, 24:18, 48:35; vs. unidirectional lamination with DuFlex strip, 63:162; unidirectional stitched pre-preg/McCann Manufacturing Co./Lazarra Yachts, 169:44; WARTM, 58:36; at Westerly Marine, 61:52; vs. wet-pregs, 55:58, 55:61, 58:36, 61:34, 65:66, 69:3; Z Preg, 131:28. *See also* fabric impregnators (wet-pregs)  
 press release: as news/information, 3:16, 6:5, 6:42, 9:2, 16:22, 18:40; writing/sending, 2:17, 2:20, 18:40, 36:73  
 pressure-fed resin rollers. *See* resin rollers, pressure-fed  
 Pressure Marine Systems, Inc.: Max-Pro-Coat vinyl ester antifoulant, 19:59  
 pressure-wash systems: bottom prep/environmental compliance, 31:10; Jet-Pro, 2:70; Recyclean, 33:75; RGF Marine wastewater treatment/recycling system, 44:54; Ultrasorb Mariner water recycler, 31:68  
 Prestovac: vacuum-assisted molding process/small parts, 32:28

Prevailer: marine batteries, 18:44  
 Price, Bill: on functions of automatic test/alarm system, 70:5  
 Price, Mick, designer: Eastport 32, utility-type luxury powerboat, 123:10. *See also* Weaver, Tom  
 Price, Terry: Cerritos College/vocational training program, 21:12  
 price/value/profit: costing/pricing small craft, 47:66; designing for production, 2:60; lessons in marketing/Boston Whaler, 2:34, 2:38; in market downturn, 9:13, 12:4; megayacht market, 12:50, 70:120; paint job, 37:36, 37:47; profitability/productivity, 12:10, 21:4, 25:64, 28:72, 32:64, 39:70, 40:24, 48:35, 54:43, 55:58, 57:74; profitability/waste reduction, 55:26, 74:30; quality and the market, 3:72, 32:64, 70:120. *See also* profitability/productivity  
*Pride of Baltimore*, replica schooner, 126:8, 162:3  
 Priest, Ken: double-level steel rail system for heavy engine removal, 168:28; and Front Street Shipyard, 168:28; and Kenway Boats, 168:28; plan for extraction of V-8 marine diesel engine from motor yacht, 168:28  
 Prijon: blow-molded polyethylene kayaks, 29:33  
 primers: for aluminum/DP90 two-part epoxy chromate, 37:36, 53:31; epoxy/in-mold coatings, 49:59, 51:6, 52:54; epoxy/water-reducible (System Three WR-155), 22:55; Organoil wood finishing system, 96:6; vinyl ester (Duratec), 34:21; vinyl ester substrate/secondary bonding primer (ATPRIME), 20:32, 42:5, 52:67

priming: of foam cores, 9:44; HVLP applications/systems/techniques, 34:35; secondary-bonding applications, 20:32

Princess Yachts: Viking distributor for, 46:16; production management/lean management techniques, 129:3, 26

*Principles of Yacht Design*, (fourth edition): review, 148:10; comparison of YD-41 and YD-40 (third edition)/Jay E. Paris, Jr., 149:04

print blockers: applications, 7:50

printing, of catalog: cost estimates, 4:55; production tips, 4:50

print-through, control/prevention: bedding foam cores, 9:36, 31:34, 31:42; catalyst ratios/temperature, 2:6, 33:46, 50:46; with DCPD (dicyclopentadiene)-blended resins, 7:50, 8:28; epoxy-chop solution, 3:54; epoxy syntactic tooling foam/slurries, 6:52, 7:50, 31:34, 31:39; heat-distortion temperatures, 7:50, 14:45, 14:48, 18:3, 29:8, 33:46, 42:52, 64:22; with honeycomb core/Nida-Core, 36:78; laminate thickness and, 50:46; post-curing, 7:50, 8:54, 12:27, 12:30, 14:45, 14:48, 21:50, 34:18, 34:21, 64:22; print blockers, 7:50; in repairing cored hulls, 25:25; shrink-wrapping (caveats), 18:33; in tooling, 7:50, 12:27, 12:30, 21:50; with vinyl esters, 6:10, 42:52. *See also* post-curing

prismatic coefficient; in displacement hullform, 78:46; 81:58

Privateer Manufacturing Company: boatyard fires/insurance, 1:50, 7:28; epoxy syntactic foam-cored tooling, 6:52; resin storage/delivery, 28:48

proa: Pacific proa/John Harris, 135:36

Proa 2000, motoryacht: 67:13

ProblemSolvers: Perma-Sand sandpaper, 18:54

Proctor, Rick: on battery charging/cycling/capacity, 19:50, 41:5

product catalogs/brochures. *See* catalogs/product brochures, builders'; product literature

product data sheet (PDS): interpreting/strength testing of composites, 4:22, 4:27, 6:5

product defects. *See* product liability; product recalls

product liability (builder's liability): blister repairs, 16:42; defects/Federal Boat Safety Act, 39:12; defects/litigation/forensic engineering, 39:12, 50:18, 50:20, 50:25; defects/product warnings, 44:13; design/engineering documents/"discovery" process, 33:13, 42:26, 45:14, 50:20, 65:11; insurance coverage, 36:13, 40:12, 81:146; laminate strength/testing, 3:27, 5:12; litigation/lawsuits, 15:50, 16:4, 32:11, 33:13, 42:26, 44:13, 45:14, 50:18, 50:20, 50:25, 63:38; marine wiring/electrical systems, 8:24, 20:50; negligence/ordinary care, 32:11; occupant protection/ejection prevention, 34:13, 38:11, 38:12, 44:13; owners' manuals and, 27:46, 44:13; product warnings/safety labels, 15:50, 21:12, 27:46, 36:50, 44:13, 45:14; stability, 42:26; survey reports and, 30:26. *See also* insurance, liability, product/builder; liability; product recalls; warning/safety labels

product lines: engineering documents, 33:13; introducing new model/boat shows, 36:60; introducing new product/marinized wind generator, 56:18; in market downturn/recession, 45:120, 143:52; market trends (reader questionnaire analysis), 7:17; patent

protection, 42:68; streamlining/racing shells/kayaks, 41:28; trade dress/trademark protection/product identity, 42:68, 43:13; upgrading/product development, 11:34, 11:39, 12:10, 26:20, 29:8, 35:34, 39:70, 46:16, 46:26. *See also* patents; pleasure-boat market/design considerations; trademarks

product literature: catalogs/brochures, 3:16, 4:50, 4:55, 6:5, 23:37, 36:60; press kits, 2:17, 2:21, 36:73. *See also* catalogs/product brochures, builders'; press release

product quality/quality control: vs. commoditization, 53:96; 112:88; concerns/importance of maintaining, 3:72, 5:72, 10:20, 11:36, 11:52, 12:10, 13:2, 23:50, 29:8, 34:72, 35:4, 74:30; finish standards/yacht market, 40:24, 40:36; of laminates/chemistry, 5:12, 6:64, 10:64, 14:2, 14:64, 45:76, 74:30; lessons in marketing/Boston Whaler, 2:34, 2:38; materials audit and test lab, 112:88; paint jobs/aluminum boats, 37:36; and product liability, 32:11; and profitability, 13:80, 32:64, 53:96; quality-control (QC) systems/standards, 3:72, 5:72, 10:20, 11:52, 13:54, 26:20, 34:72, 38:14, 46:16, 64:128, 74:30, 74:32, 112:88, 127:30; of spars/rigging, 34:72; Total Quality Management (TQM)/lofting/liability, 38:14, 38:38. *See also* product liability; production boatbuilding, manufacturing/production

product recalls: defining/discovering defects, 39:12. *See also* product liability

product specifications/engineering information: and customer support, 137:34; for resin formulations, 20:4; for SCRIMP, 31:42; standardized/PILOT system, 49:96; standardized testing, 4:22, 32:3. *See also* product data sheet (PDS)

product testing: in-house, 46:16. *See also* composites testing

product warnings. *See* warning/safety labels

product warranties: claims/limited-warranty provisions/language, 35:8, 41:15; claims/litigation, 50:18, 50:20, 50:25; claims/service, 46:16; for components/ancillary equipment, 35:8, 41:15, 141:80, 142:4; emissions-related warranty, 121:72; and internal mold-release additives, 13:11; high-performance resins and, 42:52; warranty card/market research, 26:64. *See also* repairs, warranty

production boatbuilding, business of: aftermarket accessories/equipment, 14:26, 14:32; Bavaria Yachtbau/economic downturn/recession, 173:3; builder-designer relationship, 3:27, 40:24, 77:104; builder-loftsman relationship, 25:4, 38:14; builder-owner conflicts (arbitration/negotiation/litigation), 12:40, 12:47, 35:72, 37:60, 37:61; bidding/builders' contracts/work orders/change orders, 12:40, 12:72, 31:80, 35:25, 37:60, 37:61, 40:24, 40:36, 46:16, 48:50, 58:66; bidding/estimating, 1:38, 12:72, 21:38, 25:42, 35:25, 37:60, 37:61, 40:24, 49:96; Shenyang Mechanical and Electrical/diversification/Manchuria, 163:14

bidding/undercutting/large vs. small builder, 58:66; Cluster Concept/Viareggio, Italy, 108:62; customer service/relations, 2:80, 3:5,

8:64, 12:40, 19:72, 20:8, 29:54, 31:80, 35:25, 40:24, 97:82, 107:52, 127:42, 169:116; customizing, 46:16, 103:208; designing a process/documentation/training, 112:88; diversification/sidelines, 7:17, 9:13, 12:4, 13:80, 14:26, 14:32, 22:32, 33:36, 33:40, 41:28, 46:72, 47:34, 51:11, 54:18, 56:40, 58:36, 58:52, 60:116, 143:52; 173:3, 16, 173:3, 18; diversification/sidelines/J & J Marine, 104:78; diversification/sidelines/Knight & Carver Yacht Yard, 127:42; education/training, 22:51, 35:25, 35:30, 35:31; equipment, storage tools, 87:46; 67:110; 107:52; expansion/growth, 10:20, 11:34, 26:20, 46:72, 47:5, 58:66, 69:114, 163:114; financial management/planning, 69:114; Hanse Yachtzentrum/doubling production output, 106:10, 163:114; industry profile, 44:3; Innovation Awards/IBEX Show/marketing opportunities, 128:80; outside designers, 40:24; 77:104, 127:42; outsourcing, 32:64, 35:4, 35:34, 40:24, 40:28, 127:42; owners' representatives, 12:72, 37:60, 40:24, 40:40; product quality vs. commoditization, 53:96; quality control (QC) Systems, 169:116; repair/maintenance vs. new construction, 14:26, 127:42; Revenge Advanced Composites build book plan, 112:88; selling to venture capitalists, 58:66, 135:46; survival strategies, 12:4, 13:80, 29:8, 46:72, 47:5, 103:208; transition from commercial to yacht market, 40:24; troubleshooting process control system, 112:88; . See *also* boat owners/customers; boatshops, small; builder's contracts; estimating/bidding;

marketing/promotion; outsourcing; product liability; product lines; production boatbuilding, financial planning/management; production/boatbuilding, diversification/sidelines; production boatbuilding, management  
production boatbuilding, diversification/sidelines: Admiral Marine/carbon fiber components for aircraft, 51:11; American Expedition Yachts/Bayview Edison Industries, 106:92; carbon fiber laminates, 58:36, 58:52; Composite Engineering, 41:28; Consolidated, 47:34; fabrications for Disney World/Disneyland, 54:18, 60:116; Fabrication Specialties, 56:40; Hood, 33:40; Luke/accessories/hardware, 14:26, 14:32; North End/SCRIMP, 44:35; Padden Creek/shower-tub units, 37:16; Rybovich/accessories/hardware, 14:26, 14:32; Scarano Boatbuilding, 164:22; TPI/exercise pools, 33:36; as survival strategy, 9:13, 12:4, 13:80, 46:72, 47:34; trends, 7:17  
production boatbuilding, financial management/planning: accounting/inventory software, 3:60, 18:54, 21:38, 23:50, 27:70, 28:32, 35:25, 57:74, 57:80, 80:48; basics, 1:38, 9:13, 13:22; commercial bank loans, 13:22; cash flow, 9:13, 10:20, 12:10, 13:22, 35:25, 57:74, 59:10; Chris-Craft turnaround, 80:48; debt load, 9:13, 10:20, 58:66; economics/devaluation (American Marine), 19:28, 19:32; estimates/work orders/billing/billable hours, 31:80, 35:25, 37:60, 37:61, 57:74, 74:30, 127:128; fiscal crisis/failure/Chapter 11 bankruptcy,

9:13, 10:20, 57:15, 58:66; handling rapid growth, 10:20, 11:34, 58:66; inventory/parts control, 3:60, 12:10, 18:54, 21:38, 23:50, 26:20, 27:70, 28:32, 29:22, 33:36, 35:25, 39:70, 50:59; just-in-time (JIT) manufacturing, 12:10, 18:54, 26:20, 28:32, 29:22; in market downturn/recession, 80:48, 9:13, 11:34, 13:26, 21:4, 46:16, 127:42; payment/collections, 27:61, 29:54, 35:25, 37:60, 37:61; payroll/wages, 1:38, 5:32, 9:13, 18:54, 32:64, 33:36, 41:72, 50:59, 57:74, 57:80, 127:42; product quality vs. commoditization, 53:96, 80:48, 106:92, 123:10; profitable compliance, 21:18, 25:3; profit margin/paint job, 37:36, 37:47, 97:82; profit/pricing/productivity, 12:10, 21:4, 25:64, 28:72, 32:64, 39:70, 40:24, 47:66, 48:35, 57:74, 73:54; for small businesses, 1:38, 57:74, 57:76, 57:80. *See also* accounting; economics, impact on marine industry; overhead; payroll/wages; price/value/profit; professional boatbuilding, business of; profitability/productivity; taxes, corporate income/capital gains; work force (employees)

production boatbuilding, information exchange:  
 construction/engineering/safety, 6:5, 33:88, 47:34; environmental compliance/benchmarking, 20:40, 27:61; pricing/profit, 9:13, 33:88; laminate schedules/blister repairs, 17:11

production boatbuilding, management:  
 communication/team-building/worker empowerment/incentives, 13:54, 14:4, 23:13, 29:8, 39:52, 39:54, 39:55, 41:28, 41:72, 46:16, 51:52, 53:28, 58:66, 71:52; Boston BoatWorks wet-preg

epoxy lamination, 157:50; diversification/sidelines, 33:36, 33:40, 46:72; education/training, 22:51, 35:30, 35:31, 41:28; environmental manager/styrene emissions, 53:73; managing growth, 10:34, 11:20, 11:34, 26:20; managing production flow, 11:34, 12:10, 29:22, 64:11, 127:30. 163:114; optimizing laminates/finite element analysis, 133:46; outsourcing, 37:16; owner-operator vs. outside ownership, 39:70; production manager-builders, 12:10, 58:66; product quality vs. commoditization, 53:96; safety programs, 17:2, 23:13, 23:14, 28:54, 157:50; skills/standards/effectiveness, 8:64, 19:72, 101:62; at Stingray Boats, 127:30; as team, 47:34; Total Quality Management (TQM), 25:52, 38:38. *See also* work force (employees)

production boatbuilding,  
 manufacturing/production: aluminum construction, 4:42, 26:20, 59:71; aluminum vs. fiberglass construction, 21:26; at Baltic Yachts, 85:46; at Bavaria Yachtbau, 94:70, 173:3; at Bayview Edison Industries/American Expedition Yachts, 106:92; bill of materials/labor tracking, 50:59; boating niche market/Mark Ellis Designs, 138:32;  
 communication/efficiency/productivity/production flow, 17:34, 26:20, 29:22, 29:29, 32:18, 33:69, 41:28, 41:72;  
 communication/empowerment/stress/occupational health, 39:52, 39:54, 39:55, 48:104, 58:66; components, 35:34, 46:16, 47:80, 143:40; composite flat-panel construction, 45:54, 45:62, 45:68; cored bottoms, 51:22; at Cruisers Yachts/ business planning/inventory/

deck first build process/Flevo Jachtbouw, 132:18; designer-builder agreement/royalties/Mark Ellis, 138:32; Global Solutions control system software, 114:68; DuraKore construction, 15:34; fiber-to-resin ratios/part fit, 59:30; at Gunboat International, 144:58; high-performance resins (epoxies/vinyl esters), 42:52; just-in-time (JIT) manufacturing, 12:10, 26:20, 94:70; machining/milling, 48:56; manufacturing systems/Japan, 29:22, 39:52, 39:55, 41:28; manufacturing systems/New Zealand, 54:43, 55:58; megayacht project, 32:18; outsourcing vs. in-house fabrication/components, 32:64, 35:34, 37:16, 37:18, 39:70, 46:16, 48:56, 95:38, 106:92, 114:68; plywood construction, 23:37; plywood use/elimination, 16:12, 40:54, 41:5; quality control (QC) systems, 3:72, 5:72, 10:20, 11:2, 11:52, 13:54, 26:20, 29:22, 32:11, 38:14, 39:70, 41:28, 71:38, 93:46; production engineering, 39:70, 71:38, 106:92, 144:58; production manager-builders, 12:10; self-improvement/professionalism, 137:80; Storm Hawk Boats/vacuum infusion processing, 103:208, 106:92; systems audit, 59:21; Total Quality Management/liability, 38:14; vacuum-bagging, 29:22, 30:18, 41:28, 103:208, 106:92, 144:58; wood construction, 23:32, 23:37, 25:42, 25:49; work stations, 54:43, 93:46. *See also* aluminum construction; aluminum construction, welded; boatshops, small; composites testing, shop; custom/semi-custom construction; fiberglass (FRP) construction; fiberglass (FRP) construction, cored/sandwich; metal

construction, CAL/NCC (computer-aided lofting, numerically controlled cutting) applications; styrene emissions, monitoring/reduction/compliance; systems; VOC emissions, reduction/compliance; wood construction, production methods/marketing; work force

production boatbuilding, plant/facilities: electrical service, 48:56; fire prevention/preparedness, 1:50, 7:28, 17:34, 26:18, 39:44; hurricane damage/preparations, 20:8, 27:18, 27:21; lease negotiations, 3:49; machine shop, 48:56; metal buildings, 17:34, 26:18; plant layouts, 17:34, 28:48, 29:22, 48:56, 93:46, 95:38; property/fire/liability/risk insurance, 1:50, 7:28, 12:4, 29:54; overhead, 1:38, 9:13, 45:76, 57:74; reconstruction/fires, 1:50, 17:34, 28:18; reconstruction/hurricanes, 27:18; waste reduction/management, 27:8, 28:48, 28:52, 55:26, 55:27, 129:26. *See also* boat lifts/hoists; boat sheds/shelters; boatyard waste disposal/reduction/compliance; overhead; paint/spray booths; ventilation systems; work space

production boats: active noise control, 5:42; balancing comfort with speed, 6:2; designing for production, 2:60, 3:27, 47:66; efficient designs, 16:4; handsome lines, 1:80; look-alike, perform-alike syndrome, 17:8; reviewed in consumer-advocate publication, 8:9; safety standards, 8:24. *See also* custom/semi-custom/one-off construction; design/engineering considerations/parameters; pleasure-boat market/design considerations;

production boatbuilding,  
 manufacturing/production; product lines  
 productivity (production efficiency). See  
 production boatbuilding,  
 manufacturing/production;  
 profitability/productivity

Products Research & Chemical Corp.  
 (PRC): molded polyurethane rubrails,  
 52:43; PR-365 polyurethane  
 adhesive/sealant, 28:27; Rapid Seal 365  
 urethane/silicone sealant, 28:27

Pro/Engineer: Parametric Technology  
 Corporation surface modeling program,  
 61:66

*Professional BoatBuilder*: readership, 3:16,  
 60:136; digital *ProBoat Online*, 124:3;  
 10-year retrospective, 60:3, 60:27,  
 60:136; Emarine training program, 96:6;  
 meeting diverse information needs of  
 boatbuilding industry, 148:3, 157:4; ;  
 20<sup>th</sup> anniversary retrospective, 121:120;  
 25<sup>th</sup> anniversary retrospective, 148:3,  
 151:4;

professional engineers (PE) license: 67:13,  
 71:136, 72: 5; 72:112, 74:5, 84:102,  
 100:4, 108:6, 110:4, 114:4,7, 116:4,  
 117:88; new SNAME advisory  
 committee on P.E. licensure issues,  
 72:112

Professional Mariner: high-amperage DC  
 circuit breaker, 38:55; ignition-protected  
 DC fuses, 38:55. See also Ajeman, Bob

professionalism: in design and construction  
 of boats, 95:104; education and self-  
 improvement for, 137:80

profitability/productivity: using advanced  
 composites, 48:35; high-tech skills and,  
 25:64, 73:54; in South Africa, 104:4;  
 paint job, 37:36, 37:47; and product  
 quality, 13:80, 28:72; profit  
 margins/financial planning, 12:10, 21:4,

28:72, 32:64, 57:74; profit margins/large  
 vs. small boats, 39:70; profit  
 margins/one-offs, 54:43, 55:58; profit  
 margins/repairs, 57:74. See also  
 price/value/profit; professional  
 boatbuilding, financial management

Progress Products: Boa-Constrictor  
 universal clamp, 33:75

Project Amazon (Open Class 60 design):  
 free-standing carbon fiber spars,  
 159:10; L keel, 96:72; rudders-in-a-  
 drum, 96:72; swinging keel, 96:72

project management system: Townsend  
 Bay Marine, 68:44

Pro-Line Boats: fuel-flow meters, 26:54;  
 Pro-Lite boats, 117:8

ProLines software: Prolines Basic, 30:60,  
 33:69; Prolines design/fairing software,  
 8:35, 17:58, 33:69, 66:90, 68:5

promoters (cobalt solutions): adding to suit  
 temperature conditions, 35:4; with vinyl  
 ester resins, 6:16, 35:4, 44:30. See also  
 accelerators/promoters; cobalt  
 naphthenate

promotion. See marketing/promotion

propane: as refrigerant (R-290), 27:4, 28:6

propane cylinders: recall of Lite Cylinder  
 propane tanks, 145:20; side-opening  
 and top-loading lockers for, 152:58,  
 154:4

Propco: Y-10 cleaning gel, 15:44

Propeller Dynamics Pty. Ltd.: Prop Scan  
 system/propeller pitch, 42:74

propellers: aftermarket niche/Paul E. Luke,  
 14:26, 14:32; analysis software/propeller  
 matching, 46:52, 46:62; analysis  
 software, 5:58, 36:78, 45:105, 46:52,  
 46:62, 93:10; blade/disc area ratio,  
 72:46, 110:23, 111:4; Brunton Autoprop,  
 124:54; cavitation/vibration, 44:38,  
 44:43, 44:45, 46:52, 65:106, 72:46,

110:34, 136:32, 113:32; copper propeller/Allison Boats, 94:18; custom/limited-edition sportfisherman, 54:62; damage to, 76:49; Duoprop/Volvo Penta, 122:12; efficiency/performance/tuning, 44:38, 44:43, 44:45, 45:96, 45:105, 46:5, 46:52, 48:86, 54:62, 110:34, 111:4, 144:4; efficiency of larger propellers, 150:50, 158:4; eight-bladed, 4:58; feathering/Cruising Design, 13:70; feathering/Paul E. Luke, 14:26, 14:32; Flex-O-Fold 3-blade folding propeller, 124:54; forward-facing propellers/Volvo Penta, 106:42, 115:32; Gori 3-blade folding propeller, 124:54; vs/ aft-facing propellers, 106:42; Hale Propeller's Measurement Recording Instrument, 93:10; high-performance/Ballistic, 48:86; high-speed propulsion, 136:32; history of, 110:34, 119:6; mass and torque/big propeller vs. small propeller, 150:50, 158:4; MaxProp, 4-blade feathering propeller, 124:54; metal failure/fatigue, 51:56; more load/engine efficiency/standard design point, 157:40; noise/vibration control, 5:42, 5:48, 72:46; pitch/ISO standards/Prop Scan system, 42:74; pitch/skew/efficiency, 44:38, 44:43, 45:105, 46:52, 46:55, 65:106, 72:36, 83:12, 110:34, 136:32; pitch and two-speed gearbox effect, 71:123; 80:76; pitchometer, 46:52; pockets and tunnels for, 72:46; propeller struts, 72:46; propeller nut installation protocol, 121:9, 122:6, 124:6, 149:10, 172:4; PropScan digital propeller balancing system/Marine Group Boat Works, 127:8; replacement/Piranha plastic, 12:60; repowering with e-drive, 138:3; right-hand-rotation/hydroplanes,

56:40; Scimitar prop/Diamond back series/Sonny Levi, 136:32, 137:4; selection/matching to engine, 46:52, 46:55, 46:61; selection/station-wagon effect, 39:79; series tests/tank-testing/torque and thrust, 59:56; sizing, 44:43, 110:34, 111:4, 144:4; slip, 46:5; surface-piercing/selection, 2:52; surface propellers/Delta Fast Commuter/Sonny Levi design, 135:26; tools for mounting/removal, 48:86, 62:12, 72:46; torque/gear ratio, 4:38; 80:76, 150:50; torque/port-flopping/dynamic stability, 33:4; tuning/twin-screw rudder installation, 45:96; tunnels, 44:38, 44:45, 46:5, 46:16, 64:52; *Vamarie*, big prop, 68:11, 70:5; Varifold 4-blade folding propeller, 124:54; VEEM propellers/polymer re-pitching strips for, 119:6; ventilation, 46:52; warning labels, 44:13. See also computer software, propeller/propulsion analysis; propeller shaft/drive shaft; propulsion/drive systems

propeller shaft/drive shaft: Acquadrive double constant velocity (CV) joints, 72:46; alignment techniques/Straight Line Marine, 159:36; cast/AquaMet 22/limited-edition sportfisherman, 54:62; "cladding" for worn, pitted or damaged shafts, 159:3; efficiency /strut eliminated, 53:37, 67:110; efficient/strut-supported, 46:5, 54:62; hydraulic powered, 68:81; shaftlog alignment, 159:36, 161:3; tools for removal, 48:86; metal failure/fatigue, 51:56, 146:48; Sea Torque enclosed shaft system, 36:78; using masonry string vs. piano wire, 161:3



propeller shaft couplings: coupling flange removal, 5:8, 6:5; DriveSaver discs, 72:46; resilient, 34:22, 34:27

propeller shaft seals, dripless/watertight: lip, 29:14, 32:4; mechanical/face, 29:14, 32:4; PYI, 3:60; sources, 29:21, 32:4

propeller shaft stuffing box: Buck Algonquin stuffing box for Chris-Craft vintage Commander 27, 156:54' drip-free packing, 29:14, 29:21; dripless alternatives, 29:14, 72:46; dripless-stuffing box and long-term storage, 122:52; flexible self-aligning, 72:46; installation/maintenance, 29:14; Teflon impregnated packing vs. flax, 72:46

property insurance. See insurance, property/fire/builder's risk

PropSmith: prop-mounting tool, 62:12

propulsion/drive systems: ABT TRAC's get-home hydraulic-propulsion system, 147:10; analysis software/AutoPower for Windows, 36:78; analysis software/EasyProp, 5:58, 17:58; analysis software/NavCad, 17:58, 26:54; Aquadrive system/vibration reduction/Elling Yachts, 158:54; Aussie Sterndrive with six moving parts, 88:14; bolt-on propulsion system (BOSS)/Seatorque Control Systems, 128:8; CMD's Zeus system, 103:17, 106:42, 115:36; complexity of, 59:21, 59:44; controllable pitch propeller, 111:4; conventional hull data and performance of hybrid propulsion system experiment, 124:54; Diamond Back series/Levi Sidewinder/Scimitar propellers, 136:32; diesel-electric technology, 92:12, 107:82, 108:82, 109:140, 111:4, 127:30; 134:18, 142:26, 144:4, 150:80, 164:58; electric propulsion, 69:52, 77:82, 97:10,

115:128, 118:64, 137:6, 138:3, 147:10, 164:58; electronic drive-by-wire controls/high-speed craft, 159:56; energy displacement analysis, 142:26, 144:4; ergonomics of controls for, 115:36, 159:56; feathering-propeller gear mechanisms, 139:86; forward-facing propellers/Volvo Penta, 106:42, 109:17, 167:54; vs. aft-facing propellers, 106:42; fuel cell viability, 69:38, 111:82; fuel comparisons, 142:26; "get-home" propulsion system/Bayview Auxiliary Tug (BAT), 106:92; "get-home" systems/expense and complexities, 139:86; get-home system for Monaro planing hull/KAD 44 diesel I/O, 140:4; high-speed propulsion/innovative elements/Sonny Levi, 136:32; Hinckley DS42 diesel-electric sailing sloop, 92:12; hybrid marine propulsion, 142:3, 143:40, 144:10, 145:100, 147:10, 152:80, 168:68; hybrid and wind propulsion/ECOTROLL, 134:6; HybriDrive system/Northern Lights, Hybrid, 138:6; Hybrid Power System for J-Class Yachts, 143:40; hybrid propulsion/serial and parallel, 164:58; Inboard Performance System (IPS) units on Lazzara LSX 75 boat, 106:42, 115:32; jet drives, 49:42, 67:70, 67:90; for high-performance boats, 78:72, 108:16, 159:56; jet drives/JetStick, 57:110, 67:70; jet drives/Turbodrive, 8:54; jets vs. props for crew transfer vessels (CTVs), 166:48, 168:68; Levi Step-Drive/Levi Drive Unit, 136:32; magnetic levitation (maglev) technology, 59:56; metal failure/fatigue, 51:56; operational cost savings/hybrid vs. traditional screw propeller propulsion system, 152:80; outdrives/stray-current

corrosion/galvanic isolators, 43:5; pod drive/Artisan Boatworks/Watch Hill 15 daysailer, 137:6; pod drives for pilot boats, 150:34; pod drives/ZF Marine, 134:18; power prediction/efficiency/performance, 44:38, 44:46, 46:52, 49:8, 49:42, 54:96, 65:106, 67:5, 72:46; 124:54; 134:18; propeller matching, 46:52, 65:106, 72:46, 78:46, 144:4; prototype permanent-magnet DC generator/Homewood Products Corp, 142:26; rim-drive propulsion units, 144:4; sail drive/shaft drive, 91:136; serial and hybrid electric propulsion, 109:140, 111:14, 118:40, 122:64, 127:4, 127:30; 133:24, 134:18, 138:6; series-connected 3-phase propulsion motor/variable speed inverter drive, 143:6; shallow water quietness, 61:10, 137:6; Siemens ELFA diesel-electric system, 108:82; single engine, twin drives/Geared Up Systems, 122:12; solar power driven, 161:48; speed prediction, 59:56, 89:85; in sportfishermen, 1:22, 1:28; stand-alone wing engine, 139:86; station-wagon effect, 39:79, 115:18; steam propulsion/Cyclone Power Mark V, 134:6; suitability of hullforms for hybrid propulsion, 145:100; surface-piercing drives, 2:52, 18:54, 46:38, 136:32, 171:10; surface-piercing/T-Torque, 18:54; surface-piercing/Trimax, 46:38, 46:43, 133:84, 134:36; surface propulsion/short history of, 136:32; Swamp Shark drive/Metal Shark, 171:10 systems technician training/certification, 57:99; 10-kW retractable pod drives/GreeneMotion/African cats, 127:30; through-the-transom drive

system/Caudwell Marine Axis Drive, 117:8; thrust and torque, 46:52, 79:68; Torqeedo's Deep Blue electric outboard, 142:8; Torqeedo electric outboard, 115:128; trihedral/stepped-cavity hullform, 49:42; trimable surface drives/Pulse Drive/Harry Schoell, 160:16; variable pitch propulsion system/Vari-Pitch Propellers System, 78:12; vibration control/damping systems, 5:42, 5:48, 35:4, 38:55, 46:50, 72:46, 74:85, 120:42, 122:6; Voith Schneider propeller, 117:26; Voith Linear Jets/*Trearddur Bay*/waterjet hybrid, 168:68; Volvo's Next Generation V8s/5.3L gasoline engines for sterndrives, 161:8; Volvo Penta Duo Prop sterndrive, 86:74; Volvo Penta's Inboard Propulsion System (IPS), 93:20, 103:14, 117:66, 129:54, 150:34; Volvo Penta Saildrive, 167:54; waterjet propelled response boats, 145:86; weight monitoring/reduction and, 44:38, 137:6; Whisperprop, 92:12, 97:10, 99:10, 101:4; Wider diesel-electric propulsion for 150' aluminum motoryacht, 164:12; ZF Trimax 3500 Surface Drive/SAR 60 search and rescue boat, 164:34. *See also* engines, marine; jet boats/jet skis; jet propulsion/jet drives; planing hulls; propellers

propylene carbonate (PC): recycling, 33:20; solvent/acetone replacement, 33:20, 33:26

PRO-SET, 125:36; 129:54; evaluation of ECT 120 bonding to spoxies, 139:30; expandable two-part epoxy foam/PRO-SET for filling sailboat appendages, 139:18; reformulation of advanced composite epoxies, 141:66

Protect-A-Boat: shrink-film, 18:28  
 protective suits/gear. See clothing/work clothes; personal protective gear  
 Protimeter: Aquant moisture detector, 19:8; Surveymaster moisture meter, 60:48  
 prototyping technology: Whale water pumps/3D printing, 161:8  
 PT boats: fiberglass replica/Keith Otis, 83:13; parent hullform for Series 62/Eugene P. Clement, 128:18; Sparkman & Stephens PT810, 67:31; stepped hulls, 5:52, 5:57  
 PT Skiff, 130:52; tooling/Turn Point Design, 137:12  
 public relations. See marketing/promotion  
 publicity. See catalogs/product brochures, builders'; marketing/promotion; press release  
 Puget Sound. See Washington state/Puget Sound  
*Puget Sound*: pilot boat (Tim Nolan Marine Design), 67:90, 67:98, 87:104  
 Pugh, Reichel, designer, 122:80  
 Pulsifer, Richard: strip-planked Hampton launches, 15:38, 106:3, 106:6  
 Pultruder of the Year Award, 122:12. See *also* Martin Pultrusion Group, 122:12  
 pultrusion process, 122:12, 154:48  
 pumpout boat service: Edson International, 158:18  
 pumps: ABS/LR classification, 39:80; Flow-Rite plumbing kits for OEMs, 141:6; long-life impellers, 53:89; maintenance manual, 43:83; redundant pumps for black- and gray-water tanks, 137:34; selection/installation/troubleshooting, 24:44, 24:48, 57:48, 57:99; types/technology, 24:44, 24:45, 26:45, 57:48, 161:8. See *also specific types of pumps including*: bilge pumps; dispensing pumps/systems; fuel pumps;

helm pumps; oil-change pump/system; pumps, centrifugal; pumps, deep-well; pumps, diaphragm; raw-water pumps/systems; resin pumps; vacuum pumps  
 pumps, bilge. See bilge pumps  
 pumps, centrifugal: Centri-Max, 29:58; Homelite AP-125, 30:60; for flooded/oily bilge, 31:59, 40:66; fuel polishing system, 137:34; priming, 31:59, 152:48; selection/installation/troubleshooting, 24:44, 24:48, 57:48, 152:48; ; technology, 24:44, 24:45, 26:4, 57:48. See *also* bilge pumps  
 pumps, deep-well: for bilge pumping, 31:59  
 pumps, diaphragm: for bilge pumping, 31:59; Bone Dry 120/high-capacity, 44:54; multi-chamber diaphragm, 152:48; pneumatic, 33:64; water pumps/wiring/voltage drop, 152:48  
 pumps, putty: suppliers, 58:65  
 pumps, sump: installation/piping, 24:44  
 pumpout systems: Pump-Out Cart, 29:58; simplified, 50:69  
 Purcell, Cindy: on building replicas, 20:4; on cored bottoms, 53:4  
 Purcell, Steve: on traditional vs. no skills/boat design, 133:6  
 purchasing per project vs. inventorying: 87:46  
 purchasing. See inventory/parts, computer tracking; inventory/parts, purchasing/control  
 pushboat: at New England Boatworks, 131:12  
 Push-pull Tapper: American Gator Tool Company specialty tool, 84:18  
 putties, auto-body (Bondo): for hollow-stake construction/FRP, 58:79; vs. marine-grade putties, 33:46; and

osmotic blistering, 51:108; for plug/high-temp tooling, 59:76

putties, bonding/bedding (mastics):  
 application tools, 9:47; 75:58; “Big Willie” ball-valve gun, 75:58; for bonding molded integral structural grid/liner, 46:28, 58:54, 70:92; for core closeouts, 97:130; for cored bottoms, 51:22, 51:29; at De Vries Scheepsbouw, 91:82, 120:38; dispensing pumps/systems for, 31:68; Divilette, 9:36, 9:44, 31:34; K-Lite, 9:36, 31:34; filleting putty, 97:130; for PVC foam cores, 9:36, 31:34, 3:46, 51:22, 51:29, 70:92. *See also* epoxy putty; epoxy syntactic foams/slurries/putties; polyester syntactic foam; polyester bonding putty; putties, syntactic

putties, engineered. *See* epoxy syntactic foams/slurries/putties; putties, fairing; putties, syntactic

putties, fairing: delivery/fairing system (Extender), 27:70; mixing and handling tips, 67:49, 91:82; for plug construction, 3:34, 67:49; secondary bondline contamination/taping and tabbing, 39:19, 42:5; shrinkage/painting, 52:54; at Vic Franck Boat Co., 64:96

putties, syntactic: BaltekBond, 31:34, 33:46; for bedding contour-cut foams, 31:34, 34:5, 34:42, 55:5, 70:92; Core-Bond, 9:36, 9:44, 30:18, 31:34, 31:39, 33:46; dispensing pumps/systems for, 31:68; filling large gaps, 70:92; secondary bondline contamination, 39:19, 42:5; storage, 33:57; temperature/hot weather/resin drainout, 33:46; types/applications, 9:36, 9:44, 30:18, 31:34, 34:42. *See also* epoxy syntactic foams/slurries/putties; polyester syntactic foam

putty fillets: 65:84. *See also* foam wedges

Putz, George: obituary, 21:10

Putz, George, author: “Designing for Production,” 2:60; “Fire!”, 1:50; “Tooling for Production,” 3:34

PVA (polyvinyl acetate): coupling agent (blister potential), 12:27, 15:60; mold-release agent, 10:42, 12:27, 12:30, 22:12, 41:50, 45:68, 62:62; with pre-pregs, 18:8; spraying techniques/dusting, 12:27, 41:50

PVC foam cores. *See* foam cores, PVC

PVC hose: types/standards/installation, 49:16, 51:6

PVC well casing: for rigid-hull-not-inflatable, 52:12

Pygmy Kayaks: CAD/CAM applications, 7:18

PYI Inc.: PSS Shaft Seal, 3:60, 29:14, 29:21

Pyranna/Seda: linear polyethylene kayaks, 29:3

pyrometer, 170:60

---

A B C D E F G H I J K L M N

O P **Q** R S T U V W X Y Z

---

Quadrant Marine Institute (Sidney BC), 79:77; apprenticeship program/Liquid Metal Marine, 164:12; whole-boat training and Marine Service Technician (MST) Program, 162:12

quality/value. *See* product quality/quality control

quality control. *See* product quality/quality control

Quality Woods Ltd.: teak supplier, 54:18

QualTech Enterprises: Jiffy-Cleaner system, 33:20; Replacetone emulsifier, 20:56, 25:8, 33:20, 33:26

Quantum Marine Engineering: MagLift System/*Mary P* sportfisherman/Trinity Yachts, 114:10  
 Quay, Bert: on survey reports, 30:26, 30:35  
*Queen Mary*, passenger liner: feats and facts, 153:8  
*Questar*: airex-cored boat/Jay Paris, 88:62; Questar 26 prototype/hydro-sponsons/Glasply, 120:4  
 Quickstep process: vibrating liquid mold for advanced composite parts, 72:10  
 Quintrex Boats (Queensland): stretch-form process for shaping aluminum, 90:13

---

A B C D E F G H I J K L M N  
 O P Q **R** S T U V W X Y Z

---

R-12 (CFC-12) refrigerant (Freon): phaseout/replacements/retrofitting, 16:35, 17:4, 18:4, 18:54, 26:8, 26:17, 28:6, 30:54, 31:4; recovery/recycling, 16:35, 18:54, 26:8, 26:17. *See also* refrigerants; refrigeration, marine  
 R-134a. *See* HFC-134a  
 R-22 (HCFC-22) refrigerant: conversion to, 26:8, 26:17; phaseout schedule, 26:8, 28:6  
 R-290 (propane): as refrigerant, 27:4  
 Raabe, John, II: on “Moisture Meters Revisited,” 61:5; on “More on Moisture Meters,” 71:5; obit, 102:46  
 Racal Health & Safety: Delta disposable respirator, 30:60; Power-Plus respirator, 16:52  
 racing boats/events. *See* *America’s Cup* contenders; Around Alone Race; BOC Challenge; kayaks/kayaking; Little *America’s Cup*; Millennium Round the World Race; Olympics; powerboats, offshore high-performance/raceboats; sailboats, offshore cruising/racing;

sailboats, offshore racing/performance; sailboats, racing skiffs/daysailers; shells, rowing/racing; Trophee Jules Verne round-the-world race; Whitbread Round-the-World Race  
 Racor: Lifeguard fuel separator, 16:52; permanent engine-oil filters, 49:79  
 Racz, Michael: on advertising/marketing, 6:42  
 radar reflection: radar-absorbing material (RAM), 53:40  
 Radian Corporation: report on industry VOC emissions, 10:8  
 radio, VHF. *See* VHF radio  
 radio frequency interference (RFI): and lighting, 87:80  
 Radojicic, Dejan: on resistance/shallow-water effects on planing hulls, 60:5; on Series 62 and slenderness ratio as a parameter for semi-displacement and planing regimes, 130:6  
 Radovich Boats Unlimited: gamefishing boat/*Reel Trick*, 58:13  
 Raffles Yacht: Proa 2000 motoryacht, 67:13  
 Rafter ehF: Flengur 850 Tender and Leifur 1100 Tender RIBS, 171:20; recreational boats and the OK hull, 171:10  
 raft sofa: FB Design SAR 60 boat, 164:34  
 rags: cautions/bondline preparation/structural repairs, 43:62  
 railings: 3-D CAD model, 40:50  
 railings, bow: design/safety, 42:88, 69:92, 69:95  
 rail system: for heavy engine removal/Front Street Shipyard/Ken Priest, 168:28  
 RAMCAP (rapid mold core assembly process): assembly for Pro-Line fishing boat hardtop, 102:96; at Boston Whaler, 102:96  
 ram effect, 78:46

- Ramirez, Manny: on SAFE Boats International, 87:4
- Rampage Sportfishing Yachts: 30'/38' sportfishermen, 59:10
- Ramusino, Antonella Cotta: on Green Star/Registro Italiano Navale (RINA) and Royal Institute of Naval Architects (RINA), 119:4
- Rand, Robert: vacuum-bagging tips, 30:22
- Randall, Peter, author: "Trimming the Product Safety Standards Bureaucracy," 64:128
- Rander, Steve: profile/Schooner Creek Boatworks, 55:79, 172:56
- Ranger bassboats: distributed power system for/Megalink, 99:82
- Ranger Boats (Flippin, Arkansas): computerized measuring device/Faro Arm, 78:94
- Rapid Expandable Modular Molding System (REMMS), 101:12; tri-hull patrol boat, 101:12
- Rappaport, Stephen, author: "The Maritime Lien," 101:54
- Raritan: battery chargers, 27:24
- Rasmussen, Einar: Flyak, hydrofoil kayak, 98:12
- Raspo, Pablo: Design Challenge, 129:18
- rates, boatyard/boatshop: small-business financial planning, 1:38, 57:74. *See also* boatyards/marinas, management; price/value/profit; production boatbuilding, business of; production boatbuilding, financial management;
- raw-water pumps/systems: dearth of reinforced plastic fittings for, 155:10; dezincification in, 155:10; flow detectors/cooling-water supply indicators, 45:5, 131:12; flushing and stabilizing for storage, 122:52; hoses, 49:16; Groco Safety Seacock, 111:66; installations/siphon break (vented loop), 43:44; for limited-edition sportfisherman, 54:62; long-life impellers, 53:89; raw-water supply for wing engines, 139: strainer, 39:98, 46:5, 61:115, 111:66. *See also* plumbing systems; pumps
- Raybould, Ken: on building strakes, steps, and chines, 60:5; on cored and single skin repair, 112:4; on core boundary wedges, 112:4; engineering/application of Kevlar composites, 56:61, 58:6, 62:5; on damage tolerance, 83:6; on hot-weather resin systems, 35:4; on Kevlar/glass hybrids, 58:6; on Kevlar laminate failure/coefficients of thermal expansion, 59:5; on shingled/transverse plies for damage tolerance, 96:4; skincoat workshop, 47:57, 66:5
- Raybould, Ken, author: "Guidelines for Choosing Adhesives," 41:48; "The Membrane Concept," 150:22; "The Stepped Repair," 111:82; "Testing: Clear as Glass," 131:80
- Raymer, John: on internal-mix spray equipment, 24:4
- Raypan foam batts, 104:100
- RD Boatworks: 40' trimaran/DuraKore strip planking, 15:34
- RDI Marine: and Alaskan salmon fishery market, 157:26; customization and options, 157:26; dealer for MAN diesel marine engines, 157:26
- Rea, John: on Hawkeye Industries as a sponsor of Andre Cocquyt's DVD *CMT: Closed Molding Technology*, 104:4; reaction injection molding (RIM): polyurethane-based RTM variation, 38:55
- real-time monitoring system: Alternatives Energies (Alt.En), 144:10

Reagan, Bruce: NC plasma cutting/Northwest Plasma Cutting, 42:74, 55:16; Northwind Marine, 55:16

REBS (Rapid Entering and Boarding System (Norway) at HSBO, 166:64. *See also* Henriksen Group (Norway)

reconstruction: of Petersburg cargo boat, 26:51. *See also*

refits/retrofits/remanufacturing;

replica/reproduction boat market;

wooden ship building/restoration

recreational boating industry: passion for, 133:128

Recreational Craft Directive (RCD): DIN-rails requirements, 154:56; exporting boats/harmonized European Standards, 129:72, 154:56, 157:40, 160:8; and ISO standards, 154:56, 159:22. *See also* European Union.

recycling programs: aluminum hulls, 54:43; composites, 54:43; fiberglass boats/use for artificial reefs, 135:4; fiberglass car bodies/boats/sheet molding composite (SMC), 60:82, 134:6; fiberglass hulls/decks, 37:66, 54:43, 60:82, 134:6; fiberglass waste for fuel, 167:6; Geocycle/old boats processing, 167:6; metal hardware, 60:82; open-loop fiberglass recycling/R.J. Marshall, 60:82; Netherland's ban on FRP scrap in landfills, 60:82; polyethylene hulls/thermoplastics, 15:4, 29:33, 37:66, 54:112; renamed to European Water Craft Directive (WCD), 160:8; shrink-wrapping, 18:28, 18:33, 21:12, 33:69; solvents, 16:52, 27:70, 28:48; special problems of recycling boats, 60:82; StarBoard, 35:58; in Europe and U.S./overview, 60:82. *See also* European Union, European Watercraft Directive (WCD)

Reddington, James R.: on common Systems-Installation Errors and side-load vs. top-load propane lockers, 154:4; on Diesel Fuel in Flux and biodiesel/spontaneous combustion safety procedures, 160:4; on Service Manual Lament and question of diagram illustration/nut installation or removal, 158:4

*Red Jacket*, sailboat, 115:100

*Red Tornado*, vintage Bertram Nautec boat, 162:76. *See also* *White Tornado*

Redtree Industries, Inc.: The Fooler disposable paintbrush, 29:58, 81:22

Reed, Gordon E.: on secondary bonding/troubleshooting, 39:19

Reed, Gordon E., author: "The Great Escape (Hatch)," 42:71

Reeder, Gordon, author: "Case In Point," 106:36

Reef Industries: Grifolyn TC-1200 polyethylene sheeting, 38:55

Reefing: single line/Hanse, 91:136

Reel Quick, Inc.: Rapid Reel hose reel, 48:86

refits/retrofits/remanufacturing: Bandy Boats refit of two Rybovich sport fishermen boats, 170:20; by Jarrett Bay Boatworks/Hines-Farley sports fisherman *Reel/Steel/Refit Excellence Award*, 168:14; economics/financial management/Slane Marine, 57:74, 57:76, 57:80, 75:112; economics of refits, 167:40; fish boat *Tamanawas*, 165:56; 172' yacht, 51:11; modifying a mold, 66:113; molding new sections for existing hulls, 66:110, 66:113; *M/Y Lady Diane II/Sovereign* superyacht, 165:56; 1956 Chris-Craft motor yacht Anita, 165:56; at Philbrook's Boat Yard, 165:56, 167:40; piecemeal upgrades vs.

- consistency, 75:112; at Rybovich Spencer, 70:120; Townsend Bay Marine, 68:44. *See also* repairs/maintenance
- refrigerants: phaseout proposal for Virgin R-22 refrigerant, 154:28; R-1234yF and other alternatives, 154:28; recovery/recycling, 16:35, 18:54, 26:8, 26:17; 90:64, 154:28. *See also* HFC-134a; MP 39 refrigerant; propane; R-12 refrigerant; R-22 refrigerant
- refrigeration, marine:  
 compressors/lubricants, 16:35, 26:8, 154:28; AC-powered, 91:34; air-cooling vs. water-cooling, 91:34; DC-powered, 18:44. 26:8, 91:34; engine-driven refrigeration, 91:34; flat plate evaporators, 91:34; heat load calculations, 90:64, 91:34; holding plate, 91:34; keel coolers, 91:34; R-12 phaseout/replacements (HFC 134a/MP 39), 16:35, 17:4, 18:4, 22:56, 26:8, 31:4, 90:64, 154:28; legal framework for, 154:28; powerduct kit, 91:34; servicing, 26:8, 26:17, 154:28; Supercool subassemblies, 7:64; systems manual, 43:83; systems technician training/certification, 57:99. *See also* refrigerants
- Regal Marine: acetone reduction/replacement, 33:26; production flow, 33:69; women's dealer advisory board, 38:51
- ReGen Nautic: E Fusion all-electric outboard, 143:52
- regulations, government, international. *See* Montreal Protocol
- regulations, government, Norway:  
 boatshop safety, 1:30, 2:67
- regulations, government, U.S.: and Keefe Kaplan Maritime, 140:18; California/air-quality regulations, 25:8, 140:18; marine trade associations and, 4:9, 4:18, 64:128; new in 1988-89, 1:30. *See also* Clean Air Act/Amendments; Coastal Zone Management Act; Environmental Protection Agency (EPA), regulations; Maximum Achievable Management Practice (MACT); NAAQS; OSHA, regulations; resins, low-styrene (DCPD); Rule 1162, compliance with; safety standards, for boats; VOC emissions, reduction/compliance
- regulator, voltage. *See* voltage regulator
- Regulator Marine: money for expansion of company, 63:29; plant/layout, 17:34, 19:4; process control. 74:30; Regulator 28 FS/Lou Codega/"fishability boat," 128:8
- Reichel, John: designer/Bonner Aero Marine sport diesel, 60:11
- Reichhold Chemical Company: ATPRIME secondary-bonding primer, 20:32, 42:5, 52:67; ATPRIME 2, 52:67; DCPD-modified resins (33-430), 39:27; Dion VER9100 epoxy vinyl ester resin, 12:4; Hydrex polyester and vinyl ester resin, 32:18, 32:21; laminating resin (33-072), 39:27; on low-styrene resins, 1:30; manufacturing practice/waste reduction study, 55:26; Polylyte Profile 33530-00 polyester tooling resin system, 16:52, 32:45; on Rule 1162 development, 26:34; secondary bonding resins/techniques, 19:44, 19:46, 19:48; standardized lab testing, 50:46; training videos, 4:58
- Reidl, Sebastian: Around Alone Singlehanded Race, 55:44
- reinforcements. *See* carbon fiber; fiberglass fabrics/reinforcements; Kevlar



Reisner, Ron: on If You See Something,  
Say Something/marketing vessel-  
construction consultation and oversight,  
151:6

release agents. See mold-release  
agents/systems

release fabrics. See Peel Ply/peel ply

Renaissance Yachts: laminating frames,  
13:8

repairs/maintenance: do-it-yourself, 31:18,  
31:80, 70:120; industry profile/market  
trends, 7:17, 44:3, 97:174; at Irish Boat  
Shop, Inc., 97:174; market for/vs. new  
construction, 14:26, 40:40, 85:96;  
mobile repair units/environmental  
compliance, 31:18; pollution prevention,  
6:8, 7:8, 7:28, 12:60, 20:8, 21:60, 27:8,  
29:4; price/value/profit, 70:120, 127:128;  
refit contracts, 85:96; as  
sideline/Consolidated, 47:34; vocational  
training programs, 20:18, 20:21, 79:77.

See also boatyards/marinas,  
management; fiberglass construction,  
repairs; insurance, boat/marine;  
refits/retrofits/remanufacturing; repair  
techniques

repairs, warranty: claims/service/litigation,  
46:16, 50:18, 50:20, 50:25, 141:80,  
142:4; provisions for, 35:8, 147:80

repair techniques. See blister repairs;  
engines, marine, diesel; fiberglass  
(FRP) construction, repairs; fiberglass  
construction, cored/sandwich, repairs;  
keels, ballast; laminates, marine, repair  
techniques; patches/patching  
techniques/materials;  
refits/retrofitting/remanufacturing;  
repairs/maintenance; restoration work;  
wooden ship building/restoration  
repair units, mobile: environmental  
compliance, 31:18

repetitive-motion injuries: elimination of/air  
tools, 33:58. See also worker  
safety/occupational health

replica/reproduction boat market:  
definition, 164:22; *Friendship of  
Salem/Scarano* Boatbuilding replica,  
164:22; runabouts/sportfishermen, 2:12,  
18:20, 20:4, 51:11; 81:72

Research Chemicals, Inc.: RC Hand  
Cleaner, 21:60

research vessel: *Starship*/Northern Marine,  
57:123

residual current devices, 164: 12. See also  
ELCI (equipment leakage circuit  
interrupter)

resin additives: cause of osmotic blistering,  
51:108. See also accelerators;  
promoters/accelerators; resin inhibitors;  
resin surfactants; resin thixotropes;  
styrene suppressants

resin applicator/gun: Binks Super Slave,  
1:68

resin cleaners, emulsifiers: AquaClean,  
33:20; BBA Solvent F302, 33:20;  
recycling, 33:26; Replacetone, 33:20,  
33:26; Templex, 33:20; water-based,  
33:20

resin cleaners, solvents: diacetone alcohol  
(DAA-FRP), 25:59, 33:20; DBE (dibasic  
ester), 6:10, 10:8, 10:17, 33:20, 42:62;  
for epoxies, 42:62; propylene carbonate  
(PC), 33:20, 33:26; N-methyl-  
pyrrolidone, 33:20; ShipShape, 4:58,  
33:20; for vinyl esters, 42:62

resin dolly: at Goetz plant, 73:54

resin drainout: controlling/troubleshooting,  
33:46, 42:62, 51:85, 51:88, 59:30;  
drips/line bubbles, 59:30

resin-infusion molding/processing  
(vacuum-assisted resin-transfer  
molding, VARTM): bagged-laminate

infusion process (BLIP), 29:38, 32:18, 69:132, 133:114; air-operated low-speed drum mixers, 88:26; balsa core/structural core, 52:30, 108:100; carbon fiber infusion/Gunboat International, 144:58; *Cinderella II* hull bottom repairs, 126:18; for composite flat-panel fabrication/co-curing, 45:68; core materials/print-through prevention, 31:34; Corsair Marine, 29:22; destructive testing with Automatic Adhesion Tester from DeFelsko, 161:36; development of, 38:30; disbanded core, 161:36; fatigue loading/specwar RIBs, 52:43; flammability of, 85:4; geltimer for, 88:26; at Gold Coast Yachts, 124:42; GRPguru.com/Andre Cocquyt, 78:12, 79:114, 88:26, 103:208; hammer tap-testing, 161:36; infusion processing/Robert Fischer, 103:142; Leadership 44 hull/Morris Yachts, 133:114; leak detectors, 88:26, 108:100; non-destructive examination (NDE), 161:36; post wet-out aeration, 132:50; progressive lamination process (PLP), 32:28; Hinckley Co., 31:42, 38:3; Nordlund Boat Co., 87:46; nylon mesh facilitated resin flow, 144:58; process-monitoring hardware, 88:26; vs. pre-pregs, 58:36, 79:114; resin chemistry/content/vinyl ester, 44:30, 58:36; resin volatilization/Steven Brandis, 132:50; at Ryder Boats, 132:3; sources, 32:34, 66:128; resin feed lines/plumbing/layout, 44:30, 144:58; single-shot infusion/North End Composites, 44:30; training, 32:28; ultrasonic flaw detection, 161:36; VOC emissions reduction, 31:42, 44:30, 66:128, 68:5; weight reduction, 32:28, 53:20. *See also* bagged-laminate

infusion process (BLIP); photo-curing resins; SCRIMP (Seemann Composites Resin Infusion Molding Process); resin-transfer molding (RTM)  
resin inhibitors: extending gel times, 33:57; 113:22  
Resin Injection Recirculation Method (RIRM): process/applications, 32:28, 48:48, 69:132; 101:62  
resin mixers/dispensers: Material Mixer, 21:60; at Goetz plant, 73:54; Variable-Ratio Mini Machine, 15:70. *See also* catalyst, mixing/metering; resin pumps  
resing, plant-based: Sicomin's GreenPoxy InfuGreen810, 123:10, 173:34  
resin pumps: for dispensing catalyst, 30:57; for testing catalyst ratios, 1:6  
resin rollers. *See* rollers/bubble-busters  
resin rollers, pressure-fed: Magnum Industries, 28:32; solvent-free (SOFA), 16:52, 20:40, 21:18; VOC emissions/waste reduction, 20:40, 21:18, 55:26; 68:54  
resins: additives/secondary bonding, 20:32, 125:54; for carbon-fiber reinforcements, 28:18; catalyzation graph, 29:51; controlled radical polymerization (CRP)"/"fufu dust" additive/Arkema, Inc., 125:54; engineering information, 20:4, 83:84; ENVIREZ, bio-based resin/Ashland Inc., 116:10, 143:52; fiber/resin ratio/pre-pregs, 24:18, 131:28; fire-retardant/moisture meter readings, 60:48; Greenpoxy 55/Sicomin/France, 123:10, 173:34; for Kevlar reinforcements, 28:18; matching to fiber reinforcement (elongation/brittleness), 13:33, 13:36, 28:18, 29:38, 39:19, 48:16, 133:114; Multipreg 8020 resin system/Amber Composites, 139:18; for

noise-reducing laminates (visco-elastic), 32:4; plant-based resin/EcoPox/eternity shelf life, 123:10, 124:6; R2080/Resoltech/France, 123:10; for repair patches, 36:34, 111:82; resin-to-fiber distribution, 80:40, 111:82, 131:80; for secondary bonding applications, 19:44, 19:46, 19:48, 20:4, 36:34, 39:19, 39:27, 42:5; solvent/resin ratio, 20:40; specific gravity/catalyzation, 29:51; styrene-based/equal cost, performance, and handling capabilities, 123:26; technical assistance/process control (resin manufacturers), 39:27, 42:52, 43:96; toughness/fatigue, 28:18, 49:54; viscosity and flow rate/styrenated resins/Derakane 8084, 133:114; viscosity vs. ramp rate graph, 131:28; wet strength retention (WSR) values, 6:5. *See also* catalyst, mixing/metering; catalyst ratios; DCDP (dicyclopentadiene)-blended, low-styrene resins; epoxy resins; finishing resin; photo-curing resins; polyester resins; polyester-urethane hybrid resins; polyester-vinyl ester hybrid resins; *specific* resins *entries below*; resins, curing/exotherm cycle

resins, air-cured: epoxies/secondary bonding, 39:27. *See also* epoxy resins

resins, air-inhibited: primary vs. secondary bonding, 39:27. *See also* DCPD (dicyclopentadiene)-blended resins; photo-curing resins; polyester resins; vinyl ester resins

resins, curing/exotherm cycle: air inhibition/polystyrene, 13:67, 19:48, 39:27; catalyst ratios/elongation/tensile strength, 50:46; catalyst ratios/flexural properties, 50:46; chemical reaction monitor, 52:12, 115:142; core bonding,

9:36, 33:46; epoxy resins, 1:6, 33:46, 33:57, 39:27, 136:22; epoxy vs. vinyl ester for carbon laminates, 61:38; hardness testing/print-through, 2:6, 5:12, 33:46, 50:46; and laminate strength, 4:22, 50:46; and laminate thickness, 50:46, 125:54; low-profile resins/puddles/resin content, 59:30; monitoring rate/differential-scanning calorimeter, 14:48; photo-initiated resins, 18:8, 18:17; resin content/drainout, 33:46, 51:85, 59:30; secondary bonding, 13:67, 39:27; shrinkage/mold release, 13:11, 32:18, 50:46; shrinkage/open- vs. closed-molding/co-curing, 45:68, 50:46, 90:84; shrinkage/print-through, 7:50, 50:46, 136:22; specific heat/warping/flat-panel fabrication, 45:68; standardized lab testing, 50:46; T<sub>g</sub> (glass transition temperature), 34:18, 34:21, 42:52, 50:46, 64:11, 64:82; tooling, 21:50, 125:54; undercooked/blistering, 51:108; vinyl ester resins, 1:6, 39:27; wax migration, 21:4. *See also* cross-linking; heat-distortion temperature (HDT); heat/hot-weather boatbuilding; photo-curing resins; post-curing; print-through, control/prevention; temperature, of laminate

resins, fire-retardant: blistering/moisture meter readings, 60:48

resins, flammability: Derakane brominated resin, 85:4; “the hot hut” fireproof disposal site/Viking Yachts, 131:54

resins, high-solids: chemistry/performance, 8:28, 36:4; dynamic mechanical analysis (DMA), 125:36; secondary-bonding tests, 36:4

resins, high-T<sub>g</sub> (glass transition temperature): and extrudable

- pastes/Axson Technologies, 128:8;  
 PRO-SET 125/126, 34:18, 34:21, 42:52,  
 115:62; 116:40, 125:36
- resins, low-styrene: AME 5000, 21:60;  
 introduction/Rule 1162 compliance,  
 25:8, 26:34, 60:3; performance  
 problems, 8:28, 25:8, 26:34;  
 performance/shop  
 practices/troubleshooting, 25:8;  
 secondary-bonding performance, 8:28,  
 25:8; vs. styrene-suppressed resins,  
 25:8; waste reduction, 55:26. *See also*  
 DCPD (dicyclopentadiene) blended,  
 low-styrene resins; resins, styrene-  
 suppressed; polyester-urethane hybrid  
 resins
- resins, phenolic: fire-retardant/Ampreg  
 21FR, 120:38; flying car/Brandt  
 Goldworthy, 122:12; used in RIRM,  
 48:48; in special edition architectural  
 projects, 81:90
- resins, photo-curing. *See* photo-curing  
 resins
- resins, silicone: Axson SVB20 two-part  
 sprayable silicone, 128:8
- resins, styrene-suppressed:  
 introduction/Rule 1162 compliance,  
 25:8, 26:34, 60:3; vs. low-styrene resins,  
 25:8; performance problems, 25:8,  
 26:34; secondary-bonding performance,  
 20:32, 25:8; waste reduction, 55:26
- resins, summer-grade/diluted: catalysts/hot  
 weather, 2:6, 15:13, 33:46, 33:57,  
 42:62, 44:30. *See also* heat/hot-weather  
 boatbuilding
- resins, thermoplastic. *See* roto-molding;  
 thermoplastic resins; thermoplastics  
 (TP)
- resins, thermosetting. *See* thermosetting  
 resins
- resins, thixotropic: blistering potential,  
 15:60; introduction of, 38:30; vinyl ester,  
 6:10, 6:16
- resin (gram) scale: for measuring  
 catalyst/additives by weight, 30:57,  
 42:62; sources, 1:18, 30:57; for testing  
 catalyst ratios, 1:6
- resin shrinkage. *See* laminates, marine;  
 resins, curing/exotherm cycle; *also*  
*specific resins*
- resin storage/drums: heated storage  
 locker, 52:81, 55:5; heating drums,  
 15:13; inert-gas cap, 15:13;  
 grounding/static discharge, 22:12; large  
 vs. small drums/waste reduction, 28:48;  
 temperature, 33:57. *See also* drums,  
 resin/gelcoat/chemical
- resin surfactants: and secondary bonding,  
 8:28, 20:32;  
 types/formulations/performance, 8:28
- resin thixotropes: for controlling resin  
 drainout, 33:46, 42:62, 59:30; storage,  
 59:30. *See also* Cab-O-Sil; fillers; fumed  
 silica; microspheres/microballoons;  
 resins, thixotropic
- resin-transfer molding (RTM):  
 alternative/Prestovac, 32:28;  
 development/Marco method, 19:4,  
 26:44, 32:28; development/patent  
 protection, 69:132; infujection/Poncin  
 Yacht Group, 115:142; at Larson Boats  
 Pulaski plant, 168:14; light RTM  
 operation/Princess Yachts, 129:26;  
 polyurethane-based/Baytec RTM-081D,  
 38:55; RTM-Worx simulation software,  
 71:6; for small parts, 46:16, 71:6,  
 114:68; Spartan II PLC automatic touch  
 screen control for fabrication processes,  
 108:26;  
 technology/applications/economics,  
 26:44, 27:34, 27:39, 46:16, 69:132,

71:6; tooling for, 6:52, 26:44, 27:34, 46:16; vacuum degassing resins/Steven Brandis, 132:50; VOC emissions/waste reduction, 28:48. 28:52. *See also* resin-infusion molding

resin-transfer molding (RTM),  
 systems/equipment: Gemini-VR combination gun, 10:52; Hydrajector injection pump, 26:54; Little Willie system, 17:58; Magnum Industries unit/monitors, 10:52; Megaject II injection system, 13:70; SMARTweave resin monitors/sensors, 46:45, 57:88

resin-transfer molding, vacuum-assisted (VARTM). *See* resin-infusion molding/processing

resistance, hull: added, 58:26; appended, 58:26; frictional, 58:26; predicting, 55:32, 56:26, 58:26, 59:56, 59:57; residuary, 58:26; small-craft data sheets, 58:26, 59:56. *See also* drag/resistance

resorcinol: for cold-molding, 51:36

Resources International: apitong marine plywood, 22:56

respirators: Delta disposable, 30:60; Easi-Air 7800S, 3:19, 9:56; hooded 3M "Type C," 1:68; importance of, 60:5; North, 3:19; Power-Plus, 16:52; review/sources, 3:19; SATA air-supplied (HVLP paint system), 23:54; SideKick air-supplied, 19:59; and styrene exposure compliance, 41:58, 42:5; 3M's respirator for workshops, 76:10; training videos, 15:70; use and safety, 16:4, 69:13; VOC reduction/eliminating, 21:18

restoration, gelcoat. *See* gelcoat, weathered/deteriorated, causes/caveats/restoration

Restoration Technology: gelcoat restoration system, 15:44

restoration work:  
 Apprenticeshop/vocational training program, 21:12; Hickman Sea Sled, 51:6; J-boats, 52:12; redecking/square-rigger *Balclutha*, 56:10. *See also* reconstruction;  
 refits/retrofits/remanufacturing; wooden ship building/restoration

retrofits. *See*  
 refits/retrofits/remanufacturing

Reusable infusion port: closed molding device, 106:92

Revenge Advanced Composites:  
 carbon/epoxy 49' prototype one-off for U.S. Special Operations Command, 149:56; composites engineering/David E. Jones, 149:56; Revenge 45 Light Tackle sportfishermen, 149:56.

Revenge Yachts: 62:3, 62:62, 62:73; composites engineering/David E. Jones, 149:56. *See also* Revenge Advanced Composites

reverse osmosis: principles and technology of, 66:26

Reverso: OP-503 oil-change pump/system, 40:66

Rex-Cut Products: Cut-N-Finish grinding discs, 26:54; Type-27 depressed-center grinding wheels, 40:66

Reynolds Aluminum Company: 69:52

Reynolds Number, 140:60

Reyse Marine Ltd.: fabricator of welded aluminum hulls/*Naiad Explorer*, 61:10

RGF Marine Environmental Technologies:  
 MRS 10 wastewater treatment/recycling system, 44:54; Ultramat waste-water collection system, 21:60; Ultrasorb Mariner 1 water-recycling system, 31:68

Rhebergen Compositiet Constructies (Amsterdam): profile, 96:36, 132:34

- Rhino software: Rhinophoto  
photogrammetry plug-in, 132:6; 3-D renderings, 57:15; 96:36, 97:28, 98:28, 107:52, 109:180, 132:24; for Rybovich 36 sport fishermen rebuild/engine mounting hangers, 170:20; 3D Studio Max/Mark Bonnette, 109:180; 2-D version/Southport Boat Works, 95:16
- Rhinoceros: computer modeling program, 63:10, 74:68
- Rhode Island: marine diesel excise tax suspension, 45:21; sales tax repeal/impact on marine industry, 37:66, 45:21
- Ricard, Robert V.: on estimating speed, 51:6; periodical index, boat design/construction/safety, 36:74
- Rice, Tammy: on designing/upgrading interiors, 32:15
- Richards, Mark: and Palm Beach Motor Yachts, 165:36; professional sailor, 165:36. *See also* Palm Beach Motor Yachts
- Richards, Raymond H.: on the "View from the Helm, Part I," and on Florida's landmark professional engineer (PE) licensure decision, 116:4
- Rickborn, Chris and Harold: Big-T Tele-flex steering cable for flying bridge, 166:12; ellipsoidal V-hull, 166:12; flying bridges, 166:12; 26-footer center console boat/better ride, 166:12
- Ricklefs, Hans: on manufacturing/market for marine plywood, 16:12, 16:20
- Ridder, Sven: B&R rig, 53:50
- ride-control systems: 61:83
- Rifkin, Capt. David and Shafer, James D.: on new technology for testing grounding circuits, 102:4; on other stray current methodology/Dick Troberg, 107:4
- Rifkin, David E.: on American vs. European Marketing at boat shows, 115:6; on boatbuilding in advanced economies vs. economically undeveloped nations, 103:6; on scoop-strainer equipped engine seacocks on sailboats and anodic protection for metal strainers, 128:6; on transformers and earth ("ground") leakage detection systems, 111:4
- Rifkin, David E.: author: "Ground Fault Detection: Avoiding A Train Wreck," 171:76; "Protecting Aluminum Appendages," 123:22; "Transformers," 108:114
- rigging, stainless steel, rod: fatigue/failure, 54:70
- Rigging Solutions: custom rigger's trailer with pivot point on brace, 130:10
- rigging, stainless steel, wire:  
corrosion/quality control, 34:72, 54:79, 154:48; corrosion/swaged terminal fittings, 15:21, 15:23, 54:70; maintenance manual, 43:83; surveying/survey reports, 30:26; weight reduction, 154:48
- rigging, standing: angles and line-ups of backstays/straps/turnbuckles, 171:34; braiding machine for multi-strand carbon fiber rigging/Future Fibres, 164:12; carbon fiber rigging, 154:3, 164:12; forestays/stayed vs. unstayed rigs, 55:44, 55:46, 57:7, 79:48; conventional continuous rigging vs. discontinuous rigging, 154:48; innovations/short-handed sailing, 51:100, 53:50, 53:61, 58:13; loads/displacement, 50:18, 53:50, 55:44, 57:7; modern rigging fiber, 154:48; Navtec sling-wound PBO stays, 154:48; Nitronic 50/sizing and weight reduction, 154:48; product quality, 34:72

, 54:79, 55:44; stretch and creep, 154:48; surveying rigging for chainplate deterioration, 157:12, 159:50; synthetic stays and roller foilers, 154:48. *See also* sailing rigs

Riggleman, Jack: obit, 128:8

Right to Know Act: chemical hazards/workers' rights, 1:30

rigid inflatable boats (RIBs): all aluminum non-inflatable, 61:10; all FRP non-inflatable, 52:12; aluminum/EXTREME, 55:16; aluminum Alustar U.K. rescue/dive boat, 78:86; Atlantic 21, 46:38; bidding process, 48:50; chafe problems, 131:60; closed-cell ionomer foam collar, 40:66; development of fleet for Royal National Lifeboat Institution (RNLI), 131:60; diesel-powered RIB, 131:60; extruded monomer closed-cell foam collar/Viking Fender Company, 78:86; fabric flotation collars for, 65:97; Flatacraft (UK) pioneer in RIB design, 131:60; flying (FIB), 59:10; inflation pressure, 131:60; Interceptor 70, 69:13; materials available for construction, 78:86; Naiad Inflatables' design, 61:10, 78:86, 131:60, 135:4; Navy specwar, 52:43; origins and evolution of, 131:60, 146:24; production, 48:50, 131:60; Ribbed 2000 Boat Show (U.K.), 64:11; rotomolded tube sections, 78:86; saddle seating, 131:60; self-righting capability, 131:60; and South Africa, 83:50; Tecno 40 raceboat, 46:38, 46:43, 85:3; U.S. Coast Guard's Defender-class rapid response boat, 85:3; Zodiac-Hurricane Technologies, 48:50, 78:86, 153:58

rigs. *See* masts and spars; rigging; rigging, stainless steel; rigging, standing; sailing rigs

Riise, Norm: daggerboard and rudder design/catamaran hull shapes, 124:12

Rijk, Nickel G.: on lip shaft seals, 32:4

Riley, Michael R.: on practical impact exposure testing, 145:4

Riley, Michael R., author: "Analyzing Accelerations, Part 2," 141:36

Riley, Noel T.: on the need for professional engineering licensure, 90:4

RIM. *See* reaction injection molding (RIM)

RINA (Registro Italiano Navale): Green Star certification, 117:26, 119:4

RINA (Royal Institute of Naval Architects): Concept Boat contest/refuse recovery boat/ADS Proyectos Navales, 109:30; Green Star Certification, 117:26, 119:4; handbook, *Infusion as a Composite Construction Technique for Pleasure Vessels: Guidelines*, 111:12; *On the Structural Design of Planing Craft*, 157:80; publishers of annual booklet, *Significant Small Craft*, 61:10; Ribbed 2000 Boat Show, 64:11; RINA Services, 156:4

Rip Tide Designs: Rip Tide 44 sailboats, 74:68; Rip Tide 55 sailing fast cruiser, 45:54, 74:68; RIRM. *See* Resin Injection Recirculation Method (RIRM)

Rising, Benjamin: on dimpled bottoms, 60:11

Ritchie Navigation Instruments: marine compass, 2:70

Riva, Carlos, 149:10

Riva runabouts: Monte Carlo Offshorer/three plane, two-step hull, 149:10; restoration of/Kazulin Boats, 141:6; restoration of wooden Rivas, 149:10

River Boat Works: hydraulic hoist, 36:20

riverine patrol craft, 61:5; Advanced Composite Riverine Craft, 146:24;

assault support patrol boat (ASPB), 146:24; carbon/epoxy 49' prototype one-off for U.S. Special Operations Command/Revenge Advanced Composites, 149:56; need for all-purpose riverine craft, 146:24; patrol boat, river (PBR) and patrol boat, craft (PCF), 146:24.

Riverside Marine (Fort Pierce, FL): and hurricane damages, 156:54

rivets/riveting: aluminum boat construction, 4:42; failure/*Titanic*, 58:13; Pop Plus blind rivets, 13:70

Rizvi, John, author: "A Primer on Patents," 110:118

R.J. Marshall Company: recycling/open-loop fiberglass, 60:82

*Roanna* (lugsail schooner): 63:86

Robbins, Allan D.: on new-boat surveys/quality control, 35:4

Roberts, David: Nexus Marine builder profile, 23:37, 27:41

Roberts, Josh: on fire protection/compliance, 44:18, 44:25

Roberts, Kim, author: "John Merrifield, 1940-2005," 99:120

Roberts, Kim: on post-curing, 14:45; on pre-pregs, 14:55

Roberts, Ron: plastic waste recycling, 21:12

Roberts, Steven K.: "microship physical substrate" trimaran, 62:12

Roberts, Tad: on creation and installation of complex systems, 139:5; on the use of UHMW-PE (ultra-high-molecular-weight-polyethylene for sistering tired wooden hull ribs/advocates multiple bilge stringers instead, 168:4

Roberts, Tad, author: "Passagemaker Lite," 81:58

Robertson, Bruce: slap chisel, 23:20

Robertson & Caine (South Africa):

catamarans, 83:50; joint venture boatbuilding agreement with Flying Eagle BoatBuilding (China), 119:6

Robertson, Kenny: on core installation, 9:36; on plywood transom installation, 6:5

Robinhood Marine Center: battery-operated tensile tester, 131:54; FRP hatch/pre-molded boss, 42:71; management, 35:25, 64:112; marine batteries, 18:44; secondary bonding, 39:19

Robinson, Dee: on interior design, 6:39

Robinson Model Basin/model testing, 56:26; 56:38

Robinson, Robby: on molded integral grid systems, 48:4

Robinson, Robby, author: "Boston Whaler: The Unsinkable Legend," 2:24; "The Child Series," 53:50; "Winged Skiffs," 49:74

RoboSail (software): 70:38

Robitaille, Susan: on low-temp pre-preg construction, 64:82

robotic cutting: at Precision Shapes of Virginia (PSOV), 66:110

robotics: AAB robots/Pearson Precision Tooling, 112:10; injection-molding-machine arms/builder sideline, 41:28; for laminating, 20:8, 6854; nine-axis robot for hull painting, 91:20; use of in FRP tooling, 66:110

Rochian, Andrei, designer: aluminum sailboat for Southeast Asia and GH1 (South Korea) Yachtsl; Beneteau-inspired retractable transom and swim platform, 171:10; X43 Flybridge Express fiberglass motoryacht/Manchuria, China, 163:14



Rockett, Tom: on barrier-coating, 15:13; on blistering/moisture detection, 23:42; on secondary bonding/X-layer, 19:44; on water permeation/blistering, 15:60, 15:63

Rockler Woodworking and Hardware: cast iron router table, 142:8; steel brackets for workbench supports, 132:6

*Rod on Sailing: Lessons From the Sea*, book, Rod Stephens, author, 119:3

Rodger Martin Yacht Design: Design Challenge/3 Nines camp-cruiser, 135:36

rod holders: avoiding pitfalls of weak misaligned rod-holder installations, 168:68

Rogalski, William: on professional engineering licensure, 47:24

Rogers, Mark W.: on high-current DC circuits and configuring an NC-3 panel to meet varying requirements, 93:4

Rogerson, Cameron: Prestovac process, 32:28

*Rogue Wave*, trimaran, 122:40, 125:3; online "golden oldies" 158:86

Rohan, Neil: secondary-bonding workshop, 47:57

Rolla Propellers USA/Switzerland: eight-bladed propeller, 4:58; tank research/efficiency, 44:38

roll chocks: 67:128

roll-damping: keels/ballast, 23:26; stabilizer systems, 15:70, 36:78

roller, vibrating: for application of bonding putty (foam cores), 9:36

roller brake: making/using, 8:52

rollers, pressure-fed. *See* resin rollers, pressure-fed

rollers/bubble-busters: candy-stripe, 45:80; cleanup/blister prevention, 15:13; effectiveness/vs. vacuum-bagging, 50:46; for laminating, 6:52, 45:76, 50:46, 59:30; source/guide/catalog, 25:59

Rollin, R.G., Co.: Solo control cable, 29:58

rolling systems, for hull. *See* hull lifting/rolling/turning systems; roto-molding

Rolls: deep-cycle marine batteries, 18:44, 19:4

roll stabilizers: 61:83

roll test: as alternative to stability test, 44:5. *See also* stability, dynamic (positive)

ROMARC: plastic waste recycling, 21:12

ROM Development Corp.: PowerBoard sanding/fairing tool, 24:66

Rome, Cliff: profile/Northern Marine, 57:123. *See also* Northern Marine

Rondal: manufacturer of spars/fittings/furling systems, 45:47

Ronstan: genoa track-fitted/shackle cars/safety harness, 150:72

Ronzatti, Gerard: designer of waterborne and waterfront structures, 62:12. *See also* Seine Design.

Roodberg Holland: boat-handling equipment manufacturer, 72:10

rogue waves: the Max Wave project, 93:10

Rosenfield, Paul: on spar design/technology, 3:42

Rosenfeld, Peter: on Common Systems-Installation Errors and wiring batteries in parallel without overcurrent protection, 154:4; on managing high current DC circuits, 91:10; on Plumbing the Depths/diagram employing a relay switch for large capacity pumps, 148:4

*Roseway*, cutter: on-station vessel for Boston pilots, 150:34 *See also* *Timberwind*, cutter.

Rossel, Greg: on speed measuring, 63:5

- Ross, Neil: environmental workshops, 38:51; on waterborne waste reduction, 29:4
- Rosvold, Marius: on impact tolerance/aramid (Kevlar) vs. carbon fiber, 45:5
- rotating systems. *See* hull lifting/rolling/turning systems; roto-molding
- rotational molding. *See* roto-molding
- Rotenberg, Jon: on sailboat market, 6:20
- Roth, McKie Wing Jr.: boatbuilder, architect, 66:3
- roto-molding: computer applications, 29:33; Crosslink 3 system/Old Town, 10:34, 11:20; kayak construction, 29:33; largest fully-rotating hull mold/Delta Marine Industries, 94:32; LLPDE/world's largest/Logic Marine Corp., 56:10; Old Town Discovery canoe, 4:34, 4:40; polyethylene tanks, 52:18; Technothrene/multihulls/playboats, 54:18; tooling for, 10:34, 11:20; Windrider trimaran, 52:12; WindRider 17, 135:46
- Rousmaniere, John: on design of *Australia II*, 122:6
- router, air-driven: Festo (DiaTrim), 5:26
- router bit: split-helix/for Kevlar laminate repairs, 43:83
- routers, numerically/electronically controlled (CNC): Accu-Router, 2:70; CAD/CAM systems/applications, 7:18, 24:26, 24:32, 38:38, 40:42; alternatives to, 61:110; five-axis, 40:42, 61:102; Hitachi, 1:68; for in-house fabrication, 46:16; for metal construction, 38:38; Motionmaster, 40:42; outsourcing/kits, 37:16, 37:18; Powermatic, 40:42; seven-axis, 61:102; ShopBot, 57:15; for small shop (woodworking/cabinetry), 13:43, 57:25; Techno Isel 599/Univ. of Kansas School of Engineering, 106:10; three-axis, 40:42, 106:10; for wood interior joinerwork, 40:42, 46:16. *See also* numerically controlled (NC) lofting/cutting equipment
- rowboat: offshore voyaging rowboat/Eric Sponberg design, 161:56. *See also* Murden, Tori
- rowing shells. *See* shells, rowing/racing
- Royal Crown Yachts: advanced-composite high-speed ferry, 75:78
- Royal Denship (Denmark): 65:11, 67:13
- Royal Huisman Shipyard: *Athena* schooner yacht, 101:32
- Royalex: composite canoes/We-no-nah, 49:36; vacu-molded boats/Old Town, 11:20
- Royal Huisman Shipyard: builder profile/megayacht *Anakena*, 45:47; paint booth technology, 42:20, 42:24
- Royal National Lifeboat Institution: Tamar class lifeboat/Green Marine, 123:32
- Royal Ocean Racing Club (RORC) rule: 61:77
- Roy, Franck: classic small boats replicas, 131:12; Joli Morgan design, 131:12
- RTA (ready-to-assemble) techniques/applications: interior cabinetry/furniture, 40:42
- RTM. *See* resin-transfer molding (RTM)
- RTM Systems, Inc.: composite roller-cutter, 10:52; Megaject II RTM injection system, 13:70
- R20 process (Road to Optimization), 173:6. *See also* VectorLam Cirrus 2.0
- rubber: hose, 49:16; structural adhesive for, 41:44
- rubrails: glow-in-the-dark rails/Barbour Plastics, 115:18; molded polyurethane, 52:43

Rubrail Tool, 71:6

rudder/rudder assembly: Aeromarine

50/independently controlled trim tab,

88:62; articulating hold-and-raise

machine/Nautor's Yard, 84:52;

articulating rudder/Bayview Edison

Industries, 106:92; *Bagatelle* rudder,

96:72; Bieker's hydrofoil-rudder, 74:68;

bulge rudder/Boesch Motorboats,

143:10; carbon composite rudder/GMT

Composites, 119:6; carbon fiber

rudders, 76:60; carbon

rudderstocks/Competition Composites,

153:8; cassett rudder/3 Nines camp-

cruiser/Rodge Martin design, 135:36;

cast/Aquamet 22/limited-edition

sportfisherman, 54:62;

cassette/retractable, 53:50; combined

load calculation, 96:72, 100:92;

composite/RIRM, 48:48; composite

design/survey/repair, 34:52;

configuration for planing hulls, 99:34;

construction/Pacific Seacraft, 10:20;

corrosion prevention, 54:70; design

principles of, 95:76; fishtail rudders,

102:60; foil/foil lift and drag

characteristics/applications, 95:76,

102:60; formulas for calculating water

pressure on rudder/rudderstocks/rudder

bearings, 99:34, 100:92; "get-home"

propulsion system/Bayview Auxiliary

Tug (BAT), 106:92; iroko, plywood, and

glass epoxy rudder/Didi 38

design/Dudley Dix, 149:20; Harrison

Patent Rudder, 102:60; high-lift rudders,

102:60; inboard vs. outboard rudders,

98:76; installation/Pacemaker, 29:72;

Kitchen Rudder, 102:60; Kort nozzles,

102:60; MacLear Thistle Rudder,

102:60; pendulum/Warren Luhrs/Hunter

Marine, 53:50; rudderstock metal failure,

51:56, 100:92; sacrificial pin/safety

rudder/Fabio Buzzi, 141:6; safety

rudders/SAR 60 refugee rescue boat,

164:34; size/geometry/angle/location,

45:96, 98:76, 100:92, 104:4; sizing the

rudder, 78:72, 80:4; skeg-hung rudders,

153:8; skeg load considerations, 96:72;

spade rudder/boat leveler/Bill Hazelett,

111:30; stainless steel/sportfisherman,

57:110; toe-in and toe-out rudders/Craig

Loomes Design wave-piercer

sportfisherman, 74:54; tuning/twin-

screw/floating differential, 47:5;

ventilation/vibration, 45:96; water

weeping from rudder/Fuji 40 sailboat,

151:12, 153:8; wedge-section rudders,

78:72; with tubercles, 162:52. *See also*

steering systems

rudder bearing: Strong ultra-high molecular

weight polyethylene (ULMW-PE), 39:98,

46:26; single-bearing installations,

116:18

rudder blades: RTM production of, 27:39;

propeller apertures for, 100:92; rusted

weld in rudder blade failure, 80:40

rudder/rudderstock: flat-bar installed on

wrong side of rudder/Chris-Craft

Commander 27, 156:54

Rudow, Lenny: on sportfishing boat

layouts, 79:8; on *Boating's* performance

tests, 85:4; on changing boat test

data/powerboat performance

tests/*Boating* magazine, 89:4

Rule 1106.1: amendment, 60:11

Rule 1162, compliance: Cabo Yachts,

91:96; Catalina Yachts, 25:8;

exemptions, 25:8, 26:34; fabric

impregnators, 5:34; legislation

development, 26:34, 31:3, 60:3; low-

styrene resin formulations, 1:30, 2:4,

8:28, 20:32, 25:8; MacGregor, 25:8;

Pacific Seacraft/Singmarine, 10:20, 25:8, 91:96; photo-curing resins, 18:8, 18:17; process changes/reverse MACT, 31:3; SCAQMD record-keeping, 25:8, 26:34; VOC credits/allowances, 25:8, 25:58, 60:3; Westerly Marine, 25:8; Willard Marine, 25:8

Rumery's Boat Yard: bottom paint removal/waste collection, 31:10, 31:16; repairs and refits, 75:112

runabouts. *See* powerboats, runabouts/cabin cruisers; powerboats, small runabouts/racers

running lights: Extended Range, 36:78

Rushton canoes: double-paddle sailing canoe *Vesper*, 97:60

Rusinek, Ken: on meeting Augusto "Kiko" Villalon, 115:6

Russell, Mike: on secondary bonding/Navy specifications, 20:37

Russell Yachts: 48' cat-ketch/DuraKore strip planking, 15:34

Russia: internship program, 35:52; stepped hulls, 49:42

rust: rust-preventive paint, 8:54

Rust, Randy: Westport Shipyard/outourcing, 37:16; Westport Shipyard/transition to yachts, 40:24; 62:26

Rust, Rick: on bedding putties (foam cores), 9:36; buyer of Westport Shipyard, 62:26

Rutherford's Boatshop: varnishwork, 19:36

Ryan, Jim: B&R Designs, 53:61

Ryan, Peter: on rudderstock calculations for Brave-class fast patrol boat, 104:4

Rybovich, Michael and Sons; boatyard today, 170:20

Rybovich/Rybovich Spencer: accessories/hardware/ancillary equipment, 14:26, 14:32; builder

profile/construction details, 25:42, 25:49; Express 42 walkaround sportfisherman, 87:16; Hargrave designs, 43:36; management/in-house training, 35:25; 172' megayacht refit, 51:11; *Miss Austria* refit, 69:13; new custom sportfishermen, 170:20; plant layout, 25:44; Rybovich Rendezvous, 114:10; Rybovich today, 170:20; sportfishermen, 25:42, 25:49, 170:20; stepped 30' Rybo Runner, 5:52; stolen model hull, 114:10; varnishwork, 19:36; weight reduction, 29:8. *See also* Michael Rybovich and Sons

Ryder Boats: simple infusion set-up, 132:3

Ryds Batindustri AB: recycled-fiberglass boat construction, 60:82

Ryobi: AP-10 portable thickness planer, 12:60

---

A B C D E F G H I J K L M N  
O P Q R **S** T U V W X Y Z

---

S&J Products: Elektralink terminals, 30:60

S&S Specialists: secondary-bonding techniques/ATPRIME primer, 20:32

SMC (Sheet Molding Composite): molding for car body parts, 60:82; vs. boat recycling problems, 60:82. *See also* recycling programs

S Number: origination of, 129:8; and multihulls, 131:12

S2 Yachts: design mock-ups, 9:28; honeycomb cores, 22:20; plant layout/air filtration system, 28:48

Sabine-Neches Boatworks: 56' cat-ketch/DuraKore strip planking, 15:34

Sabre Yachts: air tools, 33:58; designing for production, 2:60; design mock-ups, 9:28; laminating techniques, 3:54; North End Composites acquisition, 44:35;

OSHA compliance (emissions), 11:34;  
 profile/handling rapid growth, 11:34,  
 11:39; ventilation/shop safety, 3:19  
 SAFE Boats International: Defender-class  
 RB-5, 85:64; defense contracts for  
 aluminum boats, , 85:64; 87:4  
 Safeguard Technology Inc.: nonskid  
 step/walkway covers, 45:105  
 safety factors: in calculating stress and/or  
 deflection in boat structure or part,  
 72:22; for interior design, 118:30; in  
 pilothouse or helm station functions,  
 114:30, 115:36, 159:56, 160:4; implicit,  
 72:22  
 safety gear. *See* personal protective gear  
 safety glasses: importance of, 60:5;  
 review/sources, 3:19, 66:5  
 safety information: warning labels/owners'  
 manuals, 15:50, 21:12, 27:46, 44:13.  
*See also* product data sheets; material  
 safety data sheets (MSDS); product  
 liability; worker safety/occupational  
 health  
 safety inspections: liability issues/Bayliner,  
 15:50; Site Safety Inspection Report,  
 125:72. *See also* OSHA (Occupational  
 Safety and Health Administration),  
 regulations  
 safety standards, for boats: ABYC/Coast  
 Guard, 4:10, 8:24, 39:12, 63:38, 114:30;  
 defects/Federal Boat Safety Act, 39:122;  
 fire/NFPA, 5:64; passenger weight  
 capacity/increase adjustment, 137:12;  
 whole body vibration/monitoring impact  
 exposure, 144:80. *See also* boating  
 safety; National Fire Protection  
 Association (NFPA); product liability;  
 product recalls; *specific safety features*  
 safety standards, for boatshops. *See*  
 OSHA (Occupational Safety and Health

Administration), regulations; worker  
 safety/occupational health  
 Safetytech Corp.: Safe-T-Foil, 15:70  
 sailboards: honeycomb core construction,  
 24:4  
 sailboat market/industry: advanced  
 composites, 51:22; advertising, 6:42;  
 aluminum megayachts, 12:50, 53:28;  
 ASAP (American Sail Advancement  
 Program), 30:48; boat show/Sail Expo,  
 30:48; classification process/rules,  
 39:80, 39:86, 39:88; vs. cruising boat  
 market/market downturn, 16:4;  
 design/versatility, 37:66; designing for  
 production, 2:60; EC (EU) certification  
 process, 41:41;  
 expanding/promotion/securing future of,  
 2:4, 6:20, 6:31, 7:5, 20:64, 21:4, 21:72,  
 23:4, 30:48, 37:66; experience-oriented  
 marketing/promotion, 21:72; "hotspots,"  
 10:20; multihulls, 22:64, 23:4, 30:48;  
 one-design classes/Olympic class,  
 49:74; product development/market  
 niches, 11:34, 11:39, 30:48, 65:11;  
 product development/upgrading/product  
 support, 35:34; sidelines/diversification,  
 33:36; small sailboats/daysailers/  
 dinghies, 6:31, 23:32, 30:48; spar  
 technology, 3:42; sports boats/racers,  
 30:48; trailer-sailers, 30:48. *See also*  
 pleasure-boat market/design  
 considerations  
 sailboats: *Amoco Procyon* concept boat,  
 6:20, 10:42, 37:66; auxiliary engine,  
 2:70; battery selection/use, 18:4; bilge  
 pump installations, 57:48, 57:56, 57:73;  
 bow redesign/improved performance,  
 45:86; bow/transom design, 25:55;  
 carbon-fiber reinforcements, 28:18;  
 checklist for/seaworthiness, 73:102;  
 components/in-house vs. outsourcing,

35:34, 37:16; designing for production, 2:60; design innovations, 6:20, 37:66; design mock-ups, 9:28; Didi 38 (*Black Cat*) stability in knockdown, 149:20; galvanic/stray-current corrosion, 32:36, 32:41; heeling/driving forces, 55:44, 60:66; holding tank setup/system, 50:69; hull-to-deck joints, 60:104; keel/ballast/heeling moments, 47:44, 57:48; keel fasteners/attachment/corrosion, 38:20, 39:4; *Inspecting the Aging Sailboat*/book review for, 100:4; keel innovations/ballast, 23:24, 23:26, 37:66, 47:17; keel repairs/resetting, 4:6; lightning protection systems, 43:64; lightweight steel/Waterline Yachts, 83:72; model testing/performance prediction, 55:32, 55:44, 60:66; molded structural grid/liner, 46:28, 46:37; outsourcing, 35:34, 37:16; pilothouse, 57:110; propeller matching, 46:61; reviewed in consumer-advocate publication, 8:9; rigs/masthead, 35:34; small sailboats/daysailers/lightning protection, 43:64; spars/masts for, 3:42, 29:8; systems audit, 59:21; trailering/moorage fees, 24:4; weight reduction, 29:8; wet-exhaust system, 43:44. *See also* dinghies, sailing; keels, ballast; masts and spars; sailboats, offshore cruising/racing; sailboats, offshore racing/performance; sailboats, racing skiffs/daysailers. *See also* Cape to Rio Race.

sailboats, offshore cruising/racing:  
aluminum megayachts, 12:50, 53:28;  
Bill Tripp designs, 105:56; Cigale 18, 64:64; engine exhaust/back-pressure/horsepower ratings, 59:56;  
panel loads/structural cores, 52:30;

pilothouse, 57:110; retrostyle/cold-molded, 51:45; rigging loads/mast compression/hull strength, 50:18, 51:36, 53:50; small yachts/classification/scantlings, 39:80, 48:8, 48:9, 48:14; Sparkman & Stephens designs, 59:44, 59:48, 60:66; systems/complexity, 59:21, 59:44; tanks for, 52:18; ultralight wood-foam sandwich construction, 55:79

sailboats, offshore racing/performance:  
ABS classification, 39:80, 39:86, 39:88, 48:8, 48:9, 50:5; advanced composites, 51:22; advanced composites/Little America's Cup, 39:30; B&R rig/Child series, 53:50, 53:61; *Force Seven*/Bill Tripp design, 105:56; free-standing rigs/Around Alone Race, 55:44, 55:46; Hunt designs, 50:32; IMS scantling rules/standing rigging, 55:44; IMS scantling rules/PVC-cored sandwich construction, 43:96; International Offshore Rule (IOR)/measurement rules, 60:66; ISO scantling standards, 48:8, 48:9, 48:14; loads/structural cores, 52:30; model testing/maxi boats, 56:26; model testing/performance prediction/heeling forces, 55:44, 60:66; rating rules/evolution of, 55:44; resin-infusion/one-shot vacuum-bagging, 51:22; resin-infusion/SCRIMP applications, 44:36; rig innovations/short-handed sailing, 51:100, 53:50, 53:61, 55:44, 55:112; Sparkman & Stephens designs, 59:44, 60:66; stability, 42:26; strength/fatigue resistance/Whitbread Round-the-World Race, 34:42, 34:48; strength vs. speed/*America's Cup* contenders, 35:3, 51:36, 53:50; wave-piercing catamaran/*Goss Challenger*, 58:13; wet-

pregs/one-off construction, 55:61. *See also* America's Cup contenders; Around Alone Race; sailing rigs; Whitbread Round-the-World Race

sailboats, racing skiffs/daysailers: Aqua Cat, 53:12; 49er/Olympic class, 49:74, 51:6; Hunt designs, 50:32; litigation/centerboard housing, 50:18; market/product development, 30:48, 49:74; rigid-wing trimaran, 53:12; WindRider trimaran, 52:12. *See also* dinghies, sailing

SailBots: U.S. Naval Academy/Paul Miller, 126:8 *Petrel* (P-32)

sailcloth: Vectran, 41:58

Sail Expo: boat show, 30:48

Sailing Company, The: Sailing Industry Study, 65:11

sailing: education program/PACT 95, 31:62

sailing rigs: B&R rig/Child series, 53:50, 53:61; cat-ketch/free-standing (unstayed) wingmasts, 55:44, 55:46; costs/considerations, 154:48; crab claw, 57:15; custom rigger's trailer with pivot point on brace/Rigging Solutions, 130:10; elliptical plan form for a sail rig, 80:4; DynaRig/*Valsheda*, 141:50; Future Fibres nonmetal braided rigging, 164:12; fractional rig and *Petrel* (P-32) traditional keel center boarder, 171:46; Kelsall Cat Rig, 136:10; ketch vs. sloop rigs, 142:80; `rigid-wing, 53:12, 136:10; Semi-Rigid Sail (SRW), 163:14; triangular stayed rig/induced drag, 55:44; twin unstayed/wave-piercing catamaran, 58:13; weight control/simplicity/reliability, 55:112, 154:48; ; X-2 Concept/Harbor Wing Technologies, 136:10. *See also* fractional rig, masts and spars; rigging; rigging, stainless steel; rigging, standing

Sailorman: used marine hardware/recycling, 60:82

sails: China Sail Factory, 109:156, 145:66; Code Zero reaching spinnakers, 55:112; engineered cloth/Tetraneema, 145:66; Harken's Air Winches for solid sails, 162:12; hybrid wing sail/Fast Forward Composites/*Caliente* catamaran, 170:48; in-house sail loft/Catalina, 35:34; laminated sails, 145:66; laminated sails/*Adagio*/Meade Gougeon, 125:36; Navsail fabric vs. woven dacron, 76:60; photovoltaic sails, 161:48; properties of various sailmaking fibers, 145:66; rigid wing sails vs. soft sails, 170:48; Semi-Rigid Wing (SRW) sail/K8 sportboat/Johnston Brothers, 163:14; Sobstad molded sails, 66:11; string sails, 109:156, 145:66; Vectran fabric/Hood, 41:58; wing (solid) sails, 133:70, 96

sail-straight boats, 148:10

sail track/slides: Strong Sail System, 39:98

St. Joseph Sound launch: Design Challenge/Jon Ames, 127:20

sales: at boat shows, 36:60; pre-boat-show, 36:60. *See also* dealers/salespeople; marketing/promotion

salespeople. *See* dealers/salespeople

sales tools. *See* marketing tools

Salthouse Boatbuilders (New Zealand): AC72 catamaran/Emirates Team NZ, 140:7; Southstar 37 semi-custom picnic-style motorboat, 114:10, 140:7; Vaka Moto and Vaka Moana/sail and photovoltaic-powered catamarans, 161:48. *See also* Naval DC, Czap, David, De Stille Boot

Salthouse Brothers (Auckland): Carl Moesly designed ketch, 91:116

Salthouse, Delayne: on identifying names and duties of Greg Salthouse/Salthouse Boatbuilders, 142:4

Salish Sea Yachts: Pacific Northwest cruiser/Doug Zurn design, 134:6; salvage/internet auction website/MarineBidExchange.com, 80:12

SAMS. See Society of Accredited Marine Surveyors

Sandaro Industries: Top Cote, 24:62

sanders: Bosch high-speed, 1:68; Festo (DiaTrim) air-driven, 5:26

sanders, belt: Porter Cable Model 360-Series, 13:70; Toolympics, 50:11

sanders, disc: sanding-disc attachment systems, 23:54

sanders, finishing: Dynaline/for molding, 42:74

sanders, flexible: Flexisander, 150:72

sanders, hand-operated: Bulldog dust-free sander, 84:10

Sanding Sticks, 35:58

sanders, orbital: Black & Decker palm-grip, 3:60; Dynaorbital random-orbit wet-sander, 17:58; Super Hand 100 A pneumatic, 10:52

sanders, pneumatic DA (dual-action): applications/types/shop techniques, 33:58; Dynabrade, 33:58, 33:64; Fein portable vacuum, 84:10; Sioux, 33:64

sanders, right-angle: Dust Muzzle dust collector, 19:59

sanding discs: Bulldog sander and Abranet discs, 84:10; hook-and-loop, 23:54; pressure-sensitive, 23:54; simple plywood box for, 106:10

sanding/fairing tool: PowerBoard, 24:66

sanding techniques: for Sitka spruce spars/Artisan Boatworks, 168:44

sandpaper: long-lasting/Perma-Sand, 18:54; for LP systems, 19:12; for plug construction, 3:34

sanding techniques: for gelcoat restoration, 15:44; grinding box for in-the-water FRP repairs, 75:14; for plug construction, 3:34, 59:76; for repairing advanced-composite laminates (scarf-sanding/taper-sanding), 43:54; for revarnishing, 19:36; for secondary bonding, 20:37; wet, 15:44, 59:76. See also dust extractors/collectors

Sandridge, Glenn: on on-location video production/costs, 22:42, 22:45; on video production/use, 16:22

sanitation. See head, arrangements/design; holding tanks; toilets, marine

sanitation hose: best-to-use hose, 162:38; dip tubes, 162:38; holding tank discharge/pumpout, 50:69, 51:6, 52:4, 162:38; minimum bend radius, 162:38; types/quality/installation, 49:16, 51:6, 52:4, 162:38

San Juan Composites: retrofitting molds/San Juan powerboat, 121:62

SanJuan Yachts: profile of, 107:52

Sanok, Christopher: on Marine Maintenance Technology program at Skagit Valley College, Oak Harbor, WA, 81:6; Sanstad, Gordon P., Jr.: on Vic Franck Boat Co., 67:5; on Wood Construction Center educational programs, 67:5

San Pedro 25: and Northwest School of Wooden Boatbuilding, 137:44

Santronics, Inc.: AC tester, 34:59; DC tester, 34:59

Saraga Enterprises: Lenco trim tabs, 7:64

Sarin, Jack: designer/patrol boat, 60:11; and Westport Shipyard, 62:26



- Sassacus (Tricat fast ferry): 62:87
- Saunders Yachtworks: maintaining a personal touch/good customer relations, 148:38
- Sausalito Yacht Harbor: rolling boat cradles, 54:18
- Savitsky, Daniel (Dan): resistance prediction method, 56:26, 59:57; profile of, 126:64; floats for waterbased aircraft, 126:64; Russian WIG (wing-in-ground effect craft/"Caspian Sea Monster," 126:68; Savitsky's Calculation Procedure (1964), 145:30; Ski-Cat foil-assisted power catamaran, 126:64
- Savitsky, Daniel (Dan), author: "Savitsky's Own Rationale Regarding His 'Method'," 126:68; 128:3, 131:12; using concavity for lift vs. prismatic solution/Clayton Jacobson, 149:04
- saw, band-: Artisan 43/rip fence, 21:60
- saw, bench: Delta, 1:68, 45:105; Sidekick Saw Stand, 45:105
- saw, circular: Karbide Kutzall blades, 11:52; Portable Panel guide/tracking system, 19:59
- saw, cross-cut: Quik-Cut, 14:57
- saw, cutoff: extractor shrouds for, 28:38
- saw, hole-: cutting techniques for sample cutouts/coupons, 49:24, 49:25, 49:27
- saw, miter: compound, 3:60
- Saw, Nigel: on International Boatbuilding Standards Recreational Craft Directive, European Union, 109:6
- saw, rip-: Quik-Cut, 14:57
- saw blades: carbide-tipped/laminate repairs, 43:54; carbide-grit-coated/Sterling, 12:60; circular/Karbide Kutzall SSG, 11:52; diamond-grit/laminate repairs, 43:54
- Sawstop, safe saw, 120:4
- Scaffolding: snap-together system/Layher and Plettac, 144:48
- scale. See resin (gram) scale
- Scalvini, Roby, author: "The ABCs of UT," 150:60; "Carbon and Lightning," 128:50; "The Case of the Corroded Tanks," 130:66; "Designing for Testing," 133:104; "Infusion Gone Wrong Made Right," 161:36; "The Missing Dimension," 139:40; "Shearography in the Expanded Frame," 155:38; "Water Everywhere," 126:18; "White Castles," 144:38
- Scan Marine: cabin heaters/carbon monoxide protection, 45:32
- Scandinavia: boatshop safety, 1:30, 2:67
- Scandvik, Inc.: Andersen winches, 5:26
- Scanmix Corp.: marine faucets/shower mixers, 30:60
- scanning electron microscopy (SEM): 87:62
- scantlings, online: CompSIDE/YachtScant, 163:14
- Scarano Boat Building: *Adirondack II*, 164:22; *America* replica/T-boats, 36:22; *America 2.0* replica, 164:22; day charter business, 164:12; profile of, 164:22; schooner *Madeleine*, 164:22; transition to lines plans software, 164:26
- scarfed-seam repairs: for advanced-composite single-skin laminates, 43:54, 45:5; for deck, 37:48; for transoms, 69:70
- scarfing jigs: for composite panels, 13:43; Scarffer, 13:43
- scarf ratios: for patching/repairing composite hulls, 36:34, 42:5, 66:78, 69:5
- SCAT: foil trimaran prototype, 75:14
- Scaturro, Milt: titanium seminar/IBEX 2005, 132:62

- Schad, Robert: Husky Airboat, 53:12
- Schaefer, Jr., Kenneth L.: on two-speed gearboxes, 76:4
- Schaper, Ron: on salvaging drowned engine, 48:4
- Scheel, Henry A.*: Scheel Keels, 135:14; and Morgan Yachts/Disney World, 135:14
- Scheherazade* (ketch): Hodgdon Yachts profile, 70:58, 153:20; keel cast for, 96:72, 156:70
- Schenck, Frank, author: "The Rewards of Self-Analysis," 19:72
- Schickler, Doug, author: "Flight Engineering," 156:40
- Schickler Tagliapietra Yacht Engineering: Gunboat's G4 foiling catamaran project, 156:40
- Schieferman, Louis: three-legged hoist, 36:20
- Schiller Bikes: NuVinci three-speed transmission/Fallbrook Technology, 154:4; Schiller X1 marine-grade pedal-powered watercraft, 153:8
- Schindler, Bo: builder profile/Freeman Marine marine closures, 41:62
- Schleicher, Dean M., author: "Correcting Dynamic Roll Instability," 84:26; "Engineered Equivalents," 105:23; "100 Knots," 101:82, 102:4; "Two-Speed Gears," 80:76
- Schleicher, Dean: on analyzing accelerations, 140:34, 141:4; on wet balsa core, 99:4; 100-knots Yacht/graphs corrections, 104:4, 105:4; and First Chesapeake Powerboat Symposium, 116:40
- Schmidt Manufacturing Company: Accustrip soda-blasting equipment, 7:13
- Schmitt, G.G., & Sons: transom door hatch, 3:60
- Schmoke, L. Joseph: on used-boat market, 112:4
- Schnell boat: efficient underwater exhaust system for, 90:34
- Schoell, Harry: Alim V-20 design, 160:16; Delta Conic hullform, 155:20, 160:16; designer/Alsberg Junior, 60:11; on DuraKore construction, 15:34; and Jim Gardiner, 120:62; profile of/inventor/boat builder/designer, 160:16; Rankine-cycle steam engines/silent/multi fuel capability, 160:16; speed-estimating formula, 49:54; stepped powerboat designs, 5:52, 7:5; trimable surface drives/Pulse Drive, 160:16; Trojan 10 meter/Delta Conic hull, 160:16; water-powered test tank, 160:16
- Schoell Marine: Infinity Yachts, 47:34
- Schofield, Robert A. (Rob): on fiber orientation/taping and tabbing, 29:45; on plywood vs. fiberglass stringers, 42:5; profile, 40:3; proposal to Florida State Legislature/professional engineer licensure, 98:112; on scarf ratios, 36:34; on secondary bondline preparation/taping and tabbing, 39:19; on structural standards for recreational boats, 64:5; 65:5
- Schofield, Robert A. (Rob), author: "The Case for Plywood Structure," 40:54; "The Importance of Thickness in Single-Skin Laminates," 51:85; "An In-house, Low-Cost Program for Testing Laminates," 48:16; "Pseudocores," 83:84; "Structural Standards for Recreational Boats," 63:38
- Schofield Composites Technology: composite repairs/patching, 36:34 schools. See education
- Schooner Creek Boatworks: marketing, 172:56; profile/super-light wood-

- sandwich construction, 55:79; service and repair work, 172:56; tooling and techniques, 172:56; 25' ocean-going carbon fiber rowboat, 172:56
- Schramm, William (Bill): on DCPD resins, 8:28; on low-styrene resins, 1:30
- Schroth, Fred: on surveyors in the boatyard, 69:5
- Schubert, John J. (naval architect): obituary, 65:5
- Schulz, Walter: on damage assessment/repair, 25:18, 25:25
- Schumacher, Carl: *Cepheus IX* daysailer/Boston BoatWorks, 139:18
- Schuhmann, Richard J., author: "Green Watching," 169:88
- Schwarzel, Peter: on fabrication failure in aluminum and crater cracks, 139:5; on high-elongation resins, 63:5; on hull design loads for framing and structural analysis, 70:5; on repairing infused laminates and no-bleed infusion systems, 110:4; on repairing single-skin laminates, 69:5; on structural standards for recreational boats, 65:5
- Schwebke, Robert: founder of Mako Marine/obit, 158:8
- Schweikert, Gram, author: "Fourth Generation 44," 121:88. *See also* Miller, Paul and Pedrick, David.
- scissors, ceramic: for Kevlar, 16:52, 28:18, 56:61
- SCMVE (Seemann Composites Modified Vinyl Ester): hybrid vinyl ester, 58:36
- Scott, Marianne, author: "Cars, Boats...Same, Same," 106:10; "Made In Turkey," 102:34; "A Study in Consolidation," 163:114
- Scott, Edward: on professional engineer licensure, 101:4
- Scott, Marianne, author: "Hanse," 91:236
- Scott, Robert: *Fiberglass Boat Design and Construction*/review, 47:66
- Scout Boats, Inc., SC: Air-Assist hullform, 135:6; expansion of, 61:10; no-wood approach, 135:6
- scraper: Pro-Prep quick-change blades, 82:8
- scratch testers: for testing gelcoat hardness, 5:23, 5:26
- screw-pad trailers: 63:54
- screws. *See* fasteners
- screws, self-tapping: Click Bond, 147:6; length of vs. machine screws for applications, 152:58; for shoebox hull-to-deck joint, 60:104; tapping bar, 60:104; vs. adhesives for wiring and systems mounts, 145:48
- screws, square-drive: source, 35:58
- screws, wood, removing/extracting: Fuller plug cutter, 23:20; T & L extractor, 24:58
- scribe board: use of for aluminum frame welding, 151:82
- SCRIMP (Seemann Composites Resin Infusion Molding Process): applications/technology/emissions reduction, 31:42, 32:28, 44:30, 48:35, 53:20, 60:27, 68:64, 69:132, 69:136, 79:114, 99:52; C-Flex/unidirectional fiberglass rods & cloth, 163:106; at American Expedition Yachts, 106:92; at Pearson Composites/J Boats, 98:28, 115:100; builder sidelines, 44:35, 97:82, 106:92, 146:24; composite hybrid masts/superstructures/navy boats, 53:40, 58:36; J165 hulls, 98:28; license infringement, 69:154; at Lyman-Morse, 97:82; Mark V Motor Surfboat/Coast Guard, 37:3; development/patent protection, 31:42, 31:53, 32:28, 42:39, 69:132, 69:154; and Nautor's Swan (Finland), 79:114; patents, 69:132, 70:5,

110:3; resin chemistry/vinyl ester, 44:30; resin feed lines/plumbing/layout, 44:30, 69:132; SCRIMP Systems, 31:42, 79:114, 110:3; and Seaway (Slovenia), 79:114; single-shot infusion/North End Composites/Hunt 90, 44:30, 97:82; SMARTweave resin-flow sensors, 46:45, 57:88; TPI marketing/production, 33:36, 64:64. *See also* laminates, marine, advanced-composite; resin-infusion molding/processing

Scully's Aluminum Boats: crew boats, 173:6; effects on business/turbulence of oil and gas price fluctuations, 173:6; experimental boat for breached oil boat, 173:6

Sea, Roy L.: on Burger/Tacoma/Manitowoc Boat Works, 13:4

SeaArk Marine/SeaArk Boats: and C. Raymond Hunt Associates, 139:18; Dauntless 35 patrol rescue boat, 83:14, 153:58; fire/rescue boat, 2:12; 48' water taxi, 4:30; licensing rights to Willard Marine Inc, 153:58; profile/workboats, 42:16, 61:10

Seabubbles (France): electronic foil controls, 173:34; foiling water taxi with Torqueedo pod drives, 173:34

SeaBuilt aluminum inspection port kits, 172:36. *See also* fuel tanks, diesel fuel

sea chests: built-in/FRP, 54:62; custom sea chest with model filtering screen, 139:5. *See also* sea valves

seacocks. *See* sea valves (seacocks)

Seal Cove Boatyard:  
environmental/boatyard waste management, 27:8; HVLP spray system, 34:35. *See also* Vaughan, Robert.

Sea Craft: profile of/and Carl Moesley, 91:116

Sea Frost: HFC-134a refrigeration systems, 22:56

Sea Grip: aerosol-propelled solventless spray adhesives, 86:14

Sea Hydro: outboard hydroplanes, 59:10

Sea Island Boat Builders: Commuter 36 hullforms/Reuel Parker, 130:20

SeaKits: document- and boat-management program, 122:52

Sea Land Air Technologies (SALT): DC monitoring system, 33:75; ozone-clean marine refrigeration systems, 26:17

SeaLand Technology, Inc.: Vacuum Holding Tank, 55:99; Vacu-Flush marine toilet, 4:58

sealant remover: Sika, 2:70

sealants: acrylic (for gelcoat), 15:44; classification/definition, 28:27, 60:104; for marine hose installation, 51:6; mastic/vacuum-bagging, 1:58, 1:64; "nonbubbling" urethane teak seam sealant, 67:13; for threaded applications in wet environments, 126:6

SeaArk Boats: profile, 69:52; use of environmentally friendly Epaint, 105:106

SeaArk Marine: profile of 69:52: Commander and Dauntless military boats, 121:78

sea chest: custom sea chest with removable moenl screen, 137:34

Sea Craft: profile of Carl Moesley founder, 144:36

SeaDek, closed-cell EVA foam, 125:20

Sea Island Boat Builders: pilot schooner *Spirit of South Carolina*, 109:17

Sealegs (New Zealand): add-on wheels for boats, 156:12

Sea Level Yacht Design & Engineering: "young designer" award, 110:12

Sea Ray Boats: and Airpax ED&D systems for production boats, 105:78; Cornelius Nathaniel Ray, founder, 123:10

Sea Shepherd Conservation Society: *Cable and Wireless Adventurer/Brigitte Bardot*/Nigel Irens, 145:100

Sea Ski Australasia Ltd.: sea skis for small boats, 159:10

sea trials: goals/preparation/checklist for, 145:56

Seaway Boats (California): Bob Stapp, founder, 99:20

sealers: for metal/tools, 24:62; for varnishing, 19:36; Z-Spar, 19:36

Sealight Boats: non-molded thermoplastics, 10:40

Sea Nymph: switch to non-CFC foams, 2:28

seaplane: flightless/Xtreme Xplorer, 57:15; turbine-powered seaplanes and salt water, 126:64; slotted-nose hydro-ski/Daniel (Dan) Savitsky, 126:64

Sear, John D., author: "Developing a Warnings Strategy," 45:14

Sea Ray Boats: composite stringers/PRISMA, 41:62; custom industrial plywood, 16:12; dust-control systems, 28:38; EC (EU) certification process, 41:38, 41:41; interactive marketing, 36:74, 73:120; and ISO scantlings, 63:38; and *Powerboat Reports* controversy, 96:3; PolyLite Profile tooling resin system, 16:52; shrink-wrapping/recycling program, 18:28; structural adhesives, 28:27; two-speed gearbox option on 410 flybridge cruisers, 71:123; and wet-core problems study, 96:16

searchlight: remote-control (Ray-Line 255S), 7:64

Sea Recovery Corp.: watermaker, 3:60

Searles, Noel B., author: "Gelcoat Repairs," 90:94

Searles, Noel B.: on engineered putties, 42:5; on gelcoat maintenance/restoration, 15:44, 65:5; on secondary bonding, 20:32

Seatek engines: and co-developer Fabio Buzzi, 133:84, 134:36; 600-hp diesel, 13:70; Seatek 1,100-hp turbo diesels, 46:38, 46:43

Seaton, Stephen: designer/Long-Range Cruiser (LRCs), 57:123; *Ted K* trawler-yacht/Waterline Yachts, 83:72

Seatorque Control Systems: bolt-on propulsion system (BOSS), 128:8

sea trials: ABS/LR classification, 39:80; Bertram Yacht, 39:70; conducted indoors, 51:11; documentation, 12:10; measuring speed, 46:52; vs. model testing/resistance, 58:26

seats/seating: ABYC safety standard, 36:46; control-station/safety/ergonomics, 48:79, 141:62; design/occupant protection, 34:13, 75:14, 133:84, 140:34, 142:4; for Outerlimits performance boats, 133:60; Johan Ullman's "JockeySeat," 70:66, 141:62; outsourcing, 37:16; for RIB raceboat, 46:38, 70:66, 133:84; safety/liability (fastening), 15:50; saddle seating, 131:60, 141:62, 142:4; shock mitigating seats for 44-FCI (Fast Coastal Interceptor)/Tampa Yacht Manufacturing, 153:8; shock-mitigation air-ride suspension system, 142:4; shock-mitigating seat pedestals/Seasuspension, 155:10; STIDD Series 800 seats, 70:66; Storm interceptor suspension seats/Ullman Dynamics, 152:36; Tecno G10 and G12

modular seats/FB Design, 134:36, 142:4; three-way seats, 75:14

Seattle Central Community College: vocational training program, 20:26; Roy Kobayashi, 94:8

sea valves (seacocks): backing blocks for, 114:82, 149:10; design of, 114:82; Forespar Sea Valve, 33:75; gate valves as, 38:4, 114:82; Groco, manufacturer, 61:115; Groco BB Series fiberglass-like composite backing plates, 149:10; hose failure at, 52:4; installation/systems technician certification, 57:99, 115:6; labeling, 132:80; metal vs. plastic, 8:42, 10:4, 143:10; non-metallic seacocks, 143:10; placement/accessibility, 37:26, 114:82; preparation of for long-term storage, 122:52; selection/installation/maintenance, 8:42, 8:44, 57:73, 57:99, 114:82, 146:62; unattended boat/flooding/bilge pump systems, 57:73; valve position monitors, 143:10

Seawanhaka Rule, 61:76

Seaway (Slovenia): Greenline 33 Hybrid motoryacht, 147:10; and SPRINT technology, 79:114

SeaWolf Design Group Inc.: on blister prevention/resistance, 15:13, 15:60; impact-resistant filler (transom repair), 12:60; poured-core transom repair, 32:45; Seacore sprayable syntactic foam, 7:50, 7:62

Seawolf Industries: fiberglass grinder/recycling, 60:82, 134:6. *See also* Eco-Wolf.

seaworthiness: builder's contracts and, 37:60; definition/survey reports, 34:55, 36:74, 37:13; flooding and sinking resistance, 140:80; safety factors in cockpit design/swamping, 93:98

*Sebago*: racing trimaran, 62:46

secondary bonding: adhesives for, 20:32, 42:5; blister prevention/WSMs, 15:13, 67:49; bondline contamination, 10:8, 13:67, 20:32, 39:19, 43:54, 43:62; bondline preparation, 13:67, 19:44, 19:46, 19:48, 20:32, 20:37, 39:19, 43:54, 43:62, 68:64, 70:92; compression/shear stresses and, 13:36, 65:84, 69:5, 70:92; with DCPD resins, 8:28, 13:67, 39:19, 39:27, 52:67, 55:5, 75:58; failure in, 70:92; fatigue/skin-to-core bonds, 49:54; fiber orientation and, 39:19; foam cores, 9:36, 9:42, 70:92; with iso and ortho polyester resins, 8:28; with low-styrene/styrene-suppressed resins, 8:28, 13:67, 20:32, 25:8, 39:27; in megayacht construction, 32:18, 32:21; of molded integral structural grid/liner, 46:28, 46:35, 46:37, 68:64, 75:58; mold-release systems, 12:27; "peel," 39:19; peel ply applications, 9:42, 13:67, 19:48, 20:32, 20:37, 36:4, 39:19, 39:27, 70:92, 79:114; with photo-curing resins, 19:8; vs. primary bonding, 39:27; repair patches, 36:34, 50:18, 67:49, 69:5; repairs/advanced-composite single-skin laminates, 43:54, 43:62; repairs/cored hulls, 25:25, 36:34; resin performance, 8:28, 13:67, 19:8, 19:44, 20:32, 25:8, 39:19; solvent wipes, 10:8, 13:67, 20:32, 39:19, 43:54, 43:62, 52:67; troubleshooting/shop practices/testing, 19:44, 19:46, 19:48, 39:19, 39:27, 52:67, 55:5, 79:114; and ultraviolet radiation, 75:58; with vinyl ester resins, 52:67; workshop, 47:57. *See also* fiberglass fabrics/reinforcements, taping and tabbing; filleting; gluing

- Seemann, Bill: on aluminum-fiberglass hybrid construction, 17:19; SCRIMP, 32:28. *See also* SCRIMP (Seemann Composites Resin Infusion Molding Process)
- Seemann Composites: Advanced Composite Riverine Craft, 146:24; air transportable modular bridge/U.S. Army prototype, 146:24; VARTM fabrication technology/testing, 48:35, 79:114, 108:100; work with Materials Sciences Corporation, 146:24. *See also* SCRIMP
- Seideman, Tony, author: "Building Replicas," 18:20; "Resolving Conflict," 12:40; "Weathering Major Storms," 27:18
- Seifert, Bill, author: "Bird Nest Extractor," 111:12; "The Case for Crew-Friendly Yachts," 115:88; "Dirt-Simple Sandpaper Box," 106:10; "Hinckley Tricks," 127:8; "Teak Deck Rehab," 131:66
- Seifert, Bill: on corroded water tanks, 132:4
- Seine Design: designer of waterborne and waterfront structures, 62:10
- Seither, Erik, author: "Staying Upright by the Rules," 150:88
- Selden Mast (Gothenberg, Sweden), 82:58
- self-regulation/certification, 158:3
- SEMicro Corp.: PATTI (pneumatic adhesion tensile test instrument) meter, 49:59, 87:62; scanning electron microscopy (SEM), 87:62
- semi-tunnels on high-performance hulls, 108:16
- Semler, Kathleen: on Abaris Training Resources advanced composites seminar, 30:4
- Seng, Wong Kok: on purchase of Pacific Seacraft, 10:20, 10:33
- Senkewic, Walt: CAD/CAM systems implementation/study, 58:13
- Senning, John: on survey reports, 30:26
- Senter, Robert: comments, electronically controlled engines, 67:5; on Diesel Fuel in Flux, 159:4
- Sepel, Jim: on surveying standards and common sense, 122:6
- Seren, Dr. Daniel: on *Destriero*/fixed or variable trim tabs/directional stability fins, 111:4
- Series 62: study of the hydrodynamics of planing craft, 128:18; interview with Donald Blount, 128:18
- Service manuals: recalling those from previous eras, 157:14
- SES (surface-effect ship): FastCat ferry, 75:78; Harley and Burg designs, 48:6; minehunter, 65:84; catamarans, 96:6
- Setley, Claude: on vinyl esters/secondary bonding, 20:32
- Seven Marine: world's largest outboard motor, 138:6; and ZF Marine/joystick docking system, 138:6;
- sewage: illegal dumping, 27:61
- Sextant Systems: boatyard software, 3:60
- shackle cars: Ronstan genoa track-fitted, 150:72
- Shafer, James D.: on marina electrical safety, 105:4
- Shafer, James, Dr. and Rifkin, Capt. David: on new technology for testing founding circuits, 102:4
- shaft. *See* propeller shaft/drive shaft
- Shakespeare, Bill: on engine management systems, 14:34
- Shakespeare, Bill, author: "The Agonies of Building on a Fixed-Price Contract," 12:72
- Shannon Yachts: damage assessment/repair, 25:18, 25:25

- Shapco: self-pleating system (for curtains), 32:15
- sharks-teeth: painted bow  
symbol/Delaware pilot boats, 150:34
- sharpeners: for whetstones, 1:68
- Shaw, John: on composite flat-panel construction/Shaw Boats, 45:54, 45:59
- Shaw, William (Bill): on designing for production, 2:60; on interior design (Pearson), 6:34; obit, 104:12
- Shaw Boats: composite flat-panel construction/*Rocket Science*, 45:54, 45:59, 45:62
- Shea, Linda Brownell: Brownell Boat Works/boat-handling equipment, 22:32, 22:36
- shearography, 124:26, 128:50, 155:38; for honeycomb cores, 155:38; piezoelectric shearography, 163:93; stressing techniques/vacuum/heat load/dynamic excitation, 155:38; vs. ultrasonic testing, 155:38
- shears, ceramic: for Kevlar, 16:52, 28:18, 56:61
- shears, pneumatic: applications, 33:58, 33:64
- shears, power: Black & Decker Industrial, 21:60
- shed: see-through shed at International Yacht Restoration School, 101:24
- sheer, planar: lofting, 27:4
- sheet material. See countertops/panels
- Shell Chemical Co.: diacetone alcohol (DAA-FRP) resin cleaner, 25:59, 33:20
- Shell, Justin, author: "Love of the Game," 133:128
- shells, rowing/racing: design/tank-testing/composite engineering, 14:45, 41:28, 41:30; Composite Engineering, 41:28, 41:30, 57:30; Felker Racer, 4:30; Resolute/Eric Goetz, 54:18
- shelters. See boat sheds/shelters; paint shop/spray booth
- shelving, modular: W.W. Grainger, 17:34
- Shepard, David, author: "The Well-Tempered Wheelhouse," 48:66
- Shepherd, Maury: Quick Draw bagging film (VARTM), 32:28
- Sheppard, Kris: on power catamarans, 45:120; on productivity/Grady-White, 29:29
- Shepstone, Stephen: on keel attachment/fasteners, 40:4
- Sherman, Ed: on European whole-boat fault current protection, 98:4; on testing grounding circuits, 102:4; on isolation transformers and ground fault protection devices, 105:4; response to Peter Rosenfeld on overcurrent protection and destructive current flow, 154:4
- Sherman, Ed, author: "Battery Testing," 79:21; "Circuit Breakers," 85:114; "Common Systems-Installation Errors," 152:58; "Electrical Standards in a Global Marketplace," 75:22; "Electrical Troubleshooting," 91:56; "Getting Grounded," 82:80; "Ground Faults Revisited," 94:84, 98:4; "Intelligent Instruments," 73:120; "Let's Get Connected," 163:14; "New & Improved," 118:64; "Standards That Spark in the Night," 134:80; "Surveying Electrical Systems," 66:38; "A Technical Case For Isolation Transformers," 103:174
- Shidler, Steve: power trimaran, 50:11
- Shipbuilders Council of America (SCA): address, 4:20; efforts/membership, 4:9
- shipbuilding. See metal construction; wooden ship building/restoration
- ShipCAM: lofting/parts generation software, 17:58, 38:47, 61:102



ship motion simulator: introduction by  
     Feadship, 67:13  
 Ship of the Year Award: *MDV-1 Immanuel*  
     Dutch fishing vessel/Kramer Marine  
     Engineering, 170:10  
 shipping container: as traveling boatyard,  
     21:38  
 ship saw: at Lyman-Morse Boatbuilding,  
     115:56  
 ships: vs. boats/design and engineering  
     criteria, 47:24. See also wooden ship  
     building/restoration  
 shipwrights: job market, 21:42  
 Shipwrights, Inc.: Mermaid Turbo-four  
     engine, 15:70  
 shock-absorbing cockpit and hull, 143:10,  
     149:56; hull shape and angle, 149:56  
 shock-absorbing seats, 114:10  
 shock-mitigating seats, 70:66. 146:80,  
     149:56, 155:10; for 44-FCI (Fast  
     Coastal Interceptor)/Tampa Yacht  
     Manufacturing, 153:8, 161:20; at military  
     boat-and-equipment show/MACC,  
     121:78; impact testing/Boomeranger  
     Boats Oy, 142:52; new ISO working  
     group, 146:80; Seasuspension seat  
     pedestals, 155:10;  
 Shoemaker, Jim: on drawing and lofting,  
     106:4  
 Shook, Gerald D.: on photo-curing  
     resins/RTM development, 19:4; on  
     scarfed repairs/FRP laminates, 45:5; on  
     wax migration, 21:4  
 Shook, Michael: on AeroHydro's  
     *SurfaceWorks* for 3D solid modeling,  
     68:5  
 ShopBot Tools, Inc.: simple CNC router,  
     57:15, 61:102, 77:82  
 Shore "D" scale: testing laminate/gelcoat  
     hardness, 5:12, 8:4, 42:62  
 shore power: arcing faults/shore power  
     plug, 134:54; benefits of isolation  
     transformers, 103:174, 138:18; easily-  
     engaged lock (EEL) power cord, 138:8;  
     and galvanic/stray-current corrosion,  
     32:36, 105:96, 107:4, 138:18; Bender  
     Monitor/shore power cord, 94:84; in-the-  
     water electrical hazards, 94:84; toroid-  
     wound transformer, 103:174. See also  
     AC/shore-power systems  
 Shore tester (durometer): for  
     laminate/gelcoat hardness testing, 5:12,  
     8:4, 42:62  
 short beam shear test: ASTM D2344,  
     87:62  
 showers: head arrangements, 5:50;  
     mixers, 30:60; shower-tub  
     units/diversification, 37:16  
 shrink-wrapping: applications/techniques,  
     18:28, 18:33, 144:48; costs, 18:28,  
     18:36; effects on gelcoat, 15:44;  
     environmental concerns/recycling,  
     18:28, 18:33, 21:12, 33:69, 144:48; for  
     boat transport, 63:54; held by gunwale  
     strip, 28:32; materials/sources, 18:28,  
     18:36; moveable containment  
     structures, 144:48; plastic used for boat  
     shelters, 35:15. See also Yacht  
     containment systems.  
 Shyodu Instrument Co.: Matheson-  
     Kitagawa Toxic Gas Sampler, 7:64  
 Seidman, David: on powerboat  
     performance tests, 83:4  
 SIDER (Structural Irregularity Damage  
     Evaluation Routine), 124:26  
 Siewert, Greg, author: "Industrial Design,"  
     92:88  
 Siewert, Greg: Sterling Atlantic 43  
     motoryacht, 103:14

- Sigma Technology Labs: standardized composites testing, 4:27, 28:27, 34:42, 50:46
- Signature Productions: videotape production, 16:22, 22:42
- Sika Corp.: Sikaflex 241 adhesive/sealant, 28:27, 33:75; Sikaflex 252, 29:8, 33:75; Sikaflex 255C, 29:8; Sikaflex 292, 33:75; Sika Sealant Remover, 2:70; SikaTack Ultrafast, 29:8
- Silent Boat: De Stille Boot, 161:48; Salthouse Boatbuilders/sail and photovoltaic-powered catamarans, 161:48; using NASA data, 161:48
- silicone bag: for SCRIMP, 31:42
- silicone caulk: cautions (marine wiring), 8:12; remover, 2:70
- silicone grease: for electrical systems, 8:12
- Silk, George: on Richard Fisher (Boston Whaler designer), 2:37
- Silver Mist*, Whal fishboat: conversion to pleasure cruiser/Commodore Boats, 167:14
- Silvia, Walt: 87:46
- Simmons, Bob: on paint booth design/construction, 37:42, 42:20, 42:24, 45:47
- Simmons, Jack: on recycling FRP laminates, 60:82
- Simons, Eldon: yard tugboat, 42:34
- Simpson, John: on Best of Inclinations and calculating GM (center of gravity and metacenter) formula, 166:6 “Christmas tree” jig/joggle stick, 23:20; designer of *Naiad Explorer*, 61:10; on Misbehavioral Analysis and Best of Inclinations, 165:4
- Simpson Timber Company: marine-grade plywood market, 16:12, 16:20; MarinePly panels, 16:20
- simulators: motion simulator for high-speed boat training/Cruden (Amsterdam), 166:64
- Sinek Yachts: ice-navigation boats, 34:55
- Singmarine Industries Ltd.: purchase of Pacific Seacraft, 10:20, 10:33
- Sinicissen, Ron: on specialty plywood panels, 16:12
- Sinks: head arrangements, 5:50
- Sintes, Dave: on lofting/CAD, 7:18; self-taught designer and builder of boats using C-Flex, obit for, 166:20; fast patrol boat/Gulf shrimper/one-off sportfisherman, 166:20
- Sintes, Fiberglass Designs: lofting/CAD, 7:18
- Sjoblom, Peter: GENLAM laminate analysis software, 47:53
- Sitka spruce: sanding, 168:44; spars/masts, 168:12, 44; masts for Pedrick 65 yawl, 168:44; Touchwood BV, supplier, 168:44
- Skagit Plastics: molded integral grid systems, 48:4
- Skagit Valley College: maintenance technology program, 23:50
- Skalar Systems: CNC (numerical cutting ) equipment, 32:52
- skiffs: fiberglass: hull plugs (Tashmoo 24), 16:7
- skiffs, flats. See flats-boat market/flats, skiffs
- skiffs, plywood: Nexus Marine, 23:37
- skiffs, utility. See powerboats, utility skiffs
- skincoat: air pockets/delamination, 45:76, 47:57, 50:46; blister prevention, 15:60, 20:32, 23:4, 50:46; chop/chopped-strand mat/chines, strakes, steps, corners, 58:79, 60:5; chopped-strand bondcoat/vinyl ester resin, 49:59; with photo-curing resins, 18:8; print-through

causes/prevention, 7:50, 50:46;  
 secondary bonding/gelcoat, 19:44, 23:4,  
 33:46, 33:57, 45:76, 50:46; secondary  
 bonding/X-layer, 19:44;  
 techniques/workshop, 47:57; Xycon,  
 28:60. *See also* gelcoat,  
 application/shop  
 practices/troubleshooting; secondary  
 bonding  
 Skipjack boats: Rule 1162 compliance,  
 25:8  
 SkipperLiner Industries: commercial  
 vessels/T-boats, 36:22, 36:33  
 Slane, Tom: profile/Slane  
 Marine/accounting system, 57:74,  
 57:76, 57:80  
 Slane, Willis: founder/Hatteras, 43:36, 57:7  
 Slane Marine: profile/FRP retrofits and  
 repairs, 57:74, 57:76  
 small boatshops. *See also* boatshops,  
 small  
 small craft: ABYC safety standards/CD-  
 ROM, 49:79; design  
 guidelines/principles, 7:25, 39:67, 44:46,  
 47:24, 48:4, 49:79, 51:6, 52:43, 56:53,  
 56:55; design/licensure, 47:24, 51:6;  
 engineering/costing/composite, 47:66;  
 high-performance propellers, 48:86;  
 knotmeters for, 44:54; lightning  
 protection systems, 43:64;  
 power/performance prediction, 46:62,  
 58:26; propulsion  
 systems/efficiency/propeller tunnels,  
 44:38, 44:45, 46:5; stability  
 standards/testing, 42:26, 44:5, 47:63,  
 54:98; transatlantic voyage/3'11" boat,  
 53:12; 20<sup>th</sup> century gunboats/combatant  
 craft, 52:3, 52:43, 52:51. *See also*  
 canoes; jet boats/jet skis; kayaks;  
 personal watercraft (PWC); pleasure  
 boat market/design considerations;  
 powerboats, small runabouts/racers;  
 powerboats, utility skiffs; sailboats;  
 sailboat market/industry; shells,  
 rowing/racing; skiffs  
 small parts: vacuum-assisted molding of,  
 30:18, 32:28, 46:16  
 small passenger boats; T-boats, 36:22,  
 36:32, 37:4, 38:4, 39:4. *See also*  
 Subchapter T boats  
 small yachts: classification/scantlings,  
 39:80, 48:8, 48:9, 48:14  
 smart answers, 164:80  
 SmartTool Technologies: SmartLevel  
 electronic digital level, 14:57, 42:26,  
 42:32, 44:5  
 SMARTweave: sensor system for tracking  
 resin flow, 46:45, 57:88  
 Smead, David: on battery  
 recharging/wiring/cable, 19:50, 22:4; on  
 stepped voltage regulators, 20:50  
 Smith, Buck: Glas-Craft/early spray  
 equipment, 38:30  
 Smith, Gary: Glas-Craft/early spray  
 equipment, 38:30. *See also* GS  
 Manufacturing  
 Smith, Jim, Boats" Tricel paper  
 honeycombs, 32:52  
 Smith, Neil, author: "Good Press Is Never  
 Free," 18:40; "Rethinking Ad Strategy"  
 26:54  
 Smith, Timothy G.: on small-craft  
 design/engineering/licensure, 51:6  
 smoke detectors on recreational boats,  
 168:96; ABYC 2018 update on, 168:96;  
 and a better supplementation  
 for/photoelectric smoke and heat  
 detectors, 171:4; electrical panel in non-  
 fire-retardant enclosure, 169:6; and  
 manual discharge pulls, 170:4; meeting  
 NFPA (National Fire Protection  
 Association) standard/*Pleasure and*

*Commercial Motor Craft*, 170:4;  
 misrepresentation of smoke alarm  
 issues, 169:6, 170:4; UL Report  
 92NK26482 Fire Detection in  
 Recreational Vessels, 169:6; UL-217  
 detector, 169:6, 170:4  
 Smullin, Joe: on engine/genset mounts,  
 34:26  
 Smyth, Pete. Author: "Stepping into the  
 Future," 5:52; "Walt Walters," 3:27. *See*  
*also* trimaran,sailing; hybrid wing sail;  
 Everglades Challenge  
 Smyth, Randy: and Fast Forward  
 Composites, 170:48; trimaran  
 racer/using hybrid wing sail/Everglades  
 Challenge, 170:48  
 Snadecki, Bill: Adams 36/stealth  
 lobsterboat, 51:96  
 SNAME. *See* Society of Naval Architects  
 and Engineers  
 sniffers, styrene: gas samplers, 7:64  
 Snow, Dennis: obituary, 47:15  
 Snow, Dennis, author: "A Time to Join  
 Forces," 18:64  
 Snowmobiles: planing, 54:18  
 Snyder, Dick: on owners' manuals, 27:46  
 Society for the Advancement of Materials  
 and Process Engineering (SAMPE):  
 membership/symposium, 58:52  
 Society of Accredited Marine Surveyors  
 (SAMS): accident-investigation seminar,  
 26:51; professional qualifications/skills,  
 162:6, 163:132; survey report  
 guidelines, 55:71; web site, 41:58  
 Society of Automotive Engineers (SAE)  
 standards: engines/boat noise, 43:75;  
 engines/horsepower ratings, 59:56;  
 engines/safety, 36:48; exhaust hose,  
 49:16; exhaust systems/safety, 43:44,  
 49:16

Society of Boat and Yacht Designers:  
 membership/address, 7:5  
 Society of Naval Architects and Engineers  
 (SNAME): avoidance of conflict of  
 interest, 162:6, 163:132; construction  
 standards, 38:14; fire equivalencies for  
 aluminum, 62:41; Hann  
 award/CAD/CAM implementation study,  
 58:13; information exchange, 33:88;  
 licensure/Professional Engineer, 43:3,  
 47:24, 51:6, 56:53, 56:55;  
 program/membership, 24:58, 47:24;  
 propeller matching  
 program/publications, 46:52; small-craft  
 data sheets/resistance, 58:26; small-  
 craft design/engineering, 51:6, 56:53,  
 56:55; small craft design manual, 44:46;  
 48:4; small-craft power prediction,  
 46:62; small-craft software resources,  
 7:25; standardized composites testing  
 program, 32:3, 34:42, 34:48, 36:4  
 SoelCat 12 multihull, 161:48; *Solar Sailor*  
 ferry/Australia, 117:26; *Solar Splash*  
 competition, 97:10; systems  
 training/certification, 57:99; Wally Island  
 yacht with trees/Monaco, 117:26  
 solar panels: wiring for, 36:41, 39:56  
 solar power: solar energy-powered  
 propulsion/Craft V20/Vripack Yachting,  
 173:34; *Solar Sport One* racing circuit,  
 173:34; systems training/certification,  
 57:99  
 Solar Sal 44: sun-powered ferry, 169:6.  
*See also* Gerr, Dave  
 Solar Splash Competition: for lightweight  
 solar-powered boats, 97:10  
 SOLAS (International Convention for  
 Safety of Life at Sea): 62:78, 166:64:  
 USCG approved and certified rescue  
 boats/Millard Marine, Inc., 153:58

- solenoids: for battery paralleling, 20:50, 39:56; for valves, 3:63
- Solomon Technologies: “Electric Wheel” and Whisperprop diesel electric propulsion system, 102:4; propeller generating electricity/”regeneration,” 109:140
- solvent heater: for water-based resin cleaners, 2:70
- solvents: contaminant removal/paint adhesion, 37:36, 52:67; contaminant removal/laminate repairs, 52:67; entrapment in laminate/detection, 23:42; incineration, 28:48; managing waste, 28:48, 28:52; ratio to resin/VOC reduction, 20:40, 21:18; unreacted/moisture meter readings, 60:48. *See also* acetone; DBE (dibasic ester) solvent; styrene; toluene; xylene
- solvents, low-volatility: water-based, 2:70, 4:58, 6:10; DBE-based, 6:10, 10:8, 10:17, 20:56, 33:20, 33:75. *See also* DBE (dibasic ester) solvent
- solvents, recycling/recovery systems: Recyclene, 28:48; Recyclit SR 80 recycler, 16:52; recovery still, 27:70
- solvents, replacements for: DBE (dibasic ester), 6:10, 10:8, 10:17, 25:8; Dynasolve M-30, 20:56; Replacetone (emulsifier), 20:56, 25:8; ShipShape, 4:58; water-based, 2:70, 6:10. *See also* acetone, replacements; DBE (dibasic ester) solvent
- Solvent Solutions: BBA Solvent F302, 33:20
- solvent wipes/washes, for surface preparation: core bonding, 9:36; polyester gelcoat bonded to epoxy laminate, 43:5; vs. grinding, 39:19; scarfed laminate repairs/DCPD laminates, 52:67; scarfed structural repairs/epoxy/advanced-composite single-skin laminates, 43:54, 43:62; secondary bonding, 10:8, 20:32, 39:19, 52:67
- Sommer, Harold: on *Titanic*, 53:12
- Sommers, Eric: on SCRIMP, 31:42
- Sommerville, David: on boat shows/marketing, 36:60, 36:64
- Sommerville, Vinton “Slim,” author: “Kiko, Bob, and Xlim,” 117:54
- Sonic Technology Products, Inc.: AudioTech Probe, 19:59
- Sorensen, Eric W., author: “Access Granted/Access Denied,” 124:32; “Asking the Tough Questions,” 73:136; “At The Helm, Part 2,” 115:36; “Confessions of a Test Pilot,” 42:88; “Elements of a Habitable (and Safe) Interior,” 118:30; “The Feds’ Own Boat Show,” 121:78; “Field Notes from New Gretna,” 46:16; “Pod-driven Classic,” 129:54; “The Sound of Powerboating,” 78:104; “Topside Security,” 69:92; “The Unsinkable,” 140:80; “The View From the Helm, Part I,” 114:30
- Sosnove, Nancy: builder profile/Nexus Marine, 23:37, 27:41
- sounding stick. *See* fuel tanks
- soundproof booths: Sound Seal systems, 9:56
- soundproofing. *See* noise/vibration control
- soundproofing insulation: in aluminum boats, 21:26, 45:47; in aluminum-fiberglass hybrids, 17:19; foam, 5:42, 21:26, 64:11; honeycomb cores, 22:20, 36:78; materials/installations, 5:42, 97:10; Sonalead, 21:26; sources, 5:49; Tufcote barrier composites, 12:60; in yachts/standards, 40:24, 45:47. *See also* noise/vibration control

South Africa: Aerodyne Yachts, 83:50;  
boatbuilding industry, 83:50;  
professional engineer licensure in,  
104:4; Quantum Sails, 83:50; Robertson  
& Caine catamarans, 83:50;  
multihulls/Alex Simonis, 83:66

Southampton Institute of Higher Education  
(SHIHE): advanced composite materials  
course, 67:13, 69:125; moisture meter  
study, 23:42, 23:45, 23:29; profile,  
61:26; yacht and small craft design  
course, 101:106

Southampton Yacht Services: J-boat  
restoration/*Velsheda*, 52:12

Southco, Inc.: captive nut, 41:62;  
integration of suppliers and services,  
97:24

Southern California Marine Association  
(SCMA): address, 4:20;  
efforts/membership, 4:9

Southern Spars: carbon fiber mast and  
boom for *Janice of Wyoming*, 103:14;  
Future Fibres division/radial braiding  
machine, 164:12; profile/New Zealand  
sparbuilder, 55:58, 75:98; relocation of,  
61:10, 75:98

Southport Boat Works (Leland, NC):  
company start-up and marketing of  
recreational boats, 95:38; designing for  
production/checklists, 95:38

Southport Island Marine: fiberglass version  
of William Hand design Handy Billy 21,  
109:17

Southwest Windpower: Air Marine wind  
generator, 56:18

Sovereign moisture meters. See moisture  
meters

Sovereign Yachts: in New Zealand, 68:11;  
110' *Venturosa*, 42:74; plasma-arc  
cutting, 24:34

Soviet Union, former:  
Ekranoplans/combination military craft,  
57:15

soy-based diesel fuel (biodiesel):  
production/applications, 34:55

soy-based foam: for upholstery/Campion  
Marine, 143:52

Space Shelters: temporary boat shelters,  
35:15, 36:4

SPAR Associates: Perception software,  
23:50

Sparkman & Stephens: AeroRig sloop,  
67:13; book *Best of the Best*, 84:52;  
book, *Lines*, 82:18, 119:20; carbon fiber  
spar design, 47:44, 47:53; *Deb/Suntone*  
lines, 82:18; J-class racing sloop  
*Ranger*, 67:13; *La Baronessa*, 62:12;  
megayacht market, 12:50; Mystic  
Seaport rendezvous of S&S yachts,  
74:44; profile/design office, 59:44,  
59:48, 60:66, 82:18; profile/*America's*  
Cup contenders, 60:66; *Sayula II* FRP  
cruiser racer, 84:52; SCRIMPed  
motoryacht, 55:16; Seguin  
Model/Lyman-Morse Boatbuilding Co.,  
97:82. Swan 36, 84:52; Tartan 27/Ray  
McLeod, Jr., 173:6; "Type Plans"  
catalog, 119:3. See also Stephens, Olin;  
Stephens, Rod

spars. See masts and spars

Spaulding, Jonathan: on bedding contour-  
cut foams, 31:34, 31:42; on damage  
assessment/thermal imaging, 25:18; on  
mold release, 12:27; on repairing cored  
laminates, 9:36, 25:18, 25:25; on  
SCRIMP process, 31:42, 44:30;  
vacuum-bagging tips, 30:22; on worker  
training, 13:54

Specht, Russell: on information exchange  
(methods), 6:5

SpecialCraft: powercats/water taxis, 80:12

Specialty Marine Contractors: aluminum boat kits, 63:145, 100:12  
 Specialty Tapes: CD-4113 nontoxic transfer tape, 34:59  
 specific gravity: in testing catalyst ratios, 1:6  
 Specmar, Inc.: welded aluminum stockboat designs, 167:6  
 Spectra (polyethylene) fibers/fabric: reinforcement applications, 28:18; Spectron 12 rope, 53:64; types/source, 16:52  
 Spectre, Peter H., author: "Boatyard in a Box," 21:38; "Never on Sunday," 2:80  
 Spectronics Corporation: Spectroline fuel detection system, 8:54  
 Spectrum Boats: metal bonding (aluminum boat assembly), 4:42  
 speed: balancing comfort with, 6:2, 72:10; balance and weight, 126:38; builder's contracts and, 37:60; cruise control, 54:18; design analysis, 49:8, 67:31, 68:32, 70:5, 126:38, 139:108; displacement speeds, 8:4, 29:72, 30:4; improvements/hull redesign, 45:86, 72:10; limits/safety/noise pollution, 43:75; measuring, 46:52; 62:96, 113:32, 126:38; megayacht market, 12:50; performance steering Systems/Latham Performance Products, 130:44; resistance/performance prediction, 56:26, 58:6, 58:26, 113:32; sea trials/documentation, 12:10, 113:32; solid vs. cored bottom laminates, 51:26  
 speed, estimating: formulas/Valentine Jenkins/Harry Schoell, 49:54, 51:6, 54:96; Crouch's formula, 51:6, 53:4, 54:96, 126:38, 128:6; Eduardo Reyes formula, 126:38, 128:6; Keith's formula, 57:7; for motoryachts, 59:56, 59:57; Renato "Sonny" Levi's formula, 126:38; Reynolds Number, 126:38; subcritical and supercritical/Froude number, 60:5, 65:102; weights/loading, 59:56; Wyman's formula, 54:96, 55:5, 57:7.  
*See also* performance prediction  
 speed strakes: aluminum/Speed Rails, 33:75; on the B-28 fast boat/Mannerfelt Design Team, 163:26  
 Speedtech Instruments: Speedmate knotmeters, 44:54  
 Speer, Tom: on elliptical planforms for a sail rig, 80:4  
 Spencer Boat Company: Rybovich merger, 14:26  
 Speshyock, Mike: on spray equipment development, 39:4  
 Spheretex: Sphercore SBC core material, 39:98, 83:84  
 spills, fuel/chemical, containment/cleanup kits: Devcon brochure, 21:60; Hazorb products, 4:58; New Pig products, 21:60; Spill Cleanup Kits, 20:56  
 Spinazola, Gene: fire prevention strategies, 44:18  
 Spinazola, Gene, author: "Fire-Emergency Preparedness," 39:44  
 Spinazola, Gene, inventor: Marina FAST ATTACK foam rig for fires, 69:13  
*Spirit of South Carolina*, pilot schooner/Sea Island Boat Builders, 109:17  
 SPJ Yachts (Australia): Jetcat rescue catamaran, 165:10  
 SPLASH (Small Perturbation Linearized Analysis of Surface Hydrodynamics): computer tank test, 61:66  
 splash molds: for conditioning "green" tooling, 12:27, 12:30; tooling for production, 3:34  
 splashing. *See* Vessel Hull Design Protection Act (VHDPA)

Sponagle, Dana: on secondary bonding, 20:32

Sponberg, Eric W.: Cherubini 20 runabout, 112:28; on composite wing masts, 14:8; on floating-frame construction/ABS classification, 50:5, 52:4; on Florida Board of Professional Engineers and professional engineer licensure decision, 114:4; free-standing rig designs/Open 60 class, 55:44, 55:46; on free-surface correction/people as weights/stability testing, 44:5; Globetrotter 45/freestanding spars, 95:6; on jettisonable keels, 21:4; on professional engineer licensure, 110:4; on new committee establishment by SNAME for professional engineer (P.E.) licensure issues, 47:24, 72:112, 73:5; ocean-going carbon fiber rowboat/Schooner Creek Boat Works, 172:56; ocean marathon rowboat design, 64:11; retirement announcement to go sailing, 159:10; on Richard Boehmer/Base Speed Concept in comparison to S number, 133:8; response on one-bearing vs. two-bearing rudder systems, 118:4; spar design/technology, 3:42, 29:8, 95:6; on weight reduction/sailboats, 29:20; on whereabouts of original Buzzards Bay 30 sloops, 116:4

Sponberg, Eric W., author: "All That Floats Is Not A Boat," 145:120; "The Builder's Model," 54:82; "Case Studies in Redesign," 45:86; "Classed Yachts and Raceboats," 48:8; "Deketchification of America," 142:80; "Factors of Safety," 72:22; "Forensic Engineering and Expert Witnessing," 50:18; "Jettisonable Keels," 23:26; "The Last Word (We Hope) on Florida's Licensure Decision," 117:88;

"Lightweight Engineering," 79:48; "Modeled and Tweaked," 114:20; "No Skills Required?" 130:80; "Ocean Rowboat," 161:56; "One-Bearing Rudder Design," 116:18; "*Project Amazon* and the Unstayed Rig," 55:44; "Recycling Dead Boats," 60:82; "Technology and the Yacht Designer," 165:88; "Weight Estimating and the Stability Test," 42:26; "We Has Met the Enemy, Part II," 84:104

sportfishermen. See powerboats, sportfishermen; powerboats, offshore sportfishing yachts

Sprague, John: vacuum-drying blistered hulls, 9:50, 9:53

spray, problems with: spray rails vs. lifting strakes, 45:86

spray adhesive: Clear Stick, 20:56; NauticGrip IF, 110:12

spray booths. See paint shop/spray booth

spraying equipment/systems, catalyst mixing/metering: Binks Unison system, 23:54; catalyzation by weight, 30:57; development of, 38:30; external-mix/pressure-pot, 11:42, 13:70, 33:46; external-mix/slave-arm, 2:6, 11:42, 14:59, 15:13, 15:60, 20:40, 22:4, 26:34, 30:57, 33:46; internal-mix, 2:6, 11:42, 14:59, 15:13, 20:40, 21:18, 22:4, 24:4, 26:34, 30:57, 33:46, 55:26; internal-mix/airless, 28:48, 28:52, 33:46; spray gun adapter for recycled fibers in resin spray/Eco-Wolf, 134:6; two-pot system (BPO/DMA), 15:60. See also spraying equipment/systems/techniques

spraying equipment/systems, environmentally friendly alternatives: air-assisted/airless spray guns, 28:48, 28:52, 33:46, 55:26; flow coaters, 25:58,



55:26; hand layup, 10:8, 10:17, 55:26; pressure-fed rollers, 20:40, 21:18, 55:26  
 spraying equipment/systems/techniques:  
 Binks Model 7 spray gun, 38:30; Binks Model 18 spray gun, 45:76; Binks Super Slave resin gun, 1:68; blister prevention, 15:13, 15:60; Catalyst Alarm system, 15:70; catalyst dilution, 2:6; catalyst ratios/temperature/gel times, 2:6, 33:46; *Compliant Finishing Guide*, 15:70; cleaning/defensive painting, 52:54; compressed-air systems, 33:46; condensation/temperature fluctuations, 33:46; contamination/secondary bonding problems, 20:32; for copper coating/thermal spraying, 8:4; development of, 38:30, 39:4; DUX gun, 112:10; for epoxies/high-solids, 42:62, 43:5; for flotation foam, 11:52; Euromere barrier coat vs. Spraycore barrier coat products, 113:4; for gelcoat, 6:52, 11:42, 13:70, 33:46, 34:28, 41:50, 45:76; Gemini-VR combination chopper gun/two-component proportioner, 10:52; for granite gelcoat, 34:28; grounding/static discharge, 22:12; gun cleaner, 13:70; high-pressure hose, 4:58; increasing transfer efficiency (overspray reduction), 34:35, 34:40; for LP paints, 19:12; maintenance/shop practices, 6:64, 15:13; manuals/DeVilbiss, 26:54; vs. non-spray laminating techniques (styrene emissions reduction), 10:8, 10:17, 20:40, 21:18; for photo-curing resins, 18:8; for production boat models, 154:22; for PVA/mold release, 12:27, 41:50; solvent-free foam guns, 11:52; spray finish training workshop/ITW & Owens College, 75:14; for syntactic foams, 7:50, 28:60; 3M Paint

Preparation System (PPS) disposable containers/ clamps/atomizing spray nozzle, 141:30; Titan Epic airless piston spray pump, 23:54; for varnish, 19:36, 154:12; Venus-Gusmer Pro Gun, 14:59; Venus-Gusmer MBF-01, 28:60; for vinyl ester resin, 6:10; workshop/DeVilbiss, 28:54; for Xycon skincoat, 28:60. See also chopper guns; gelcoat, application/shop practices/troubleshooting; painting techniques, spraying  
 spraying equipment/systems/techniques, high-volume, low-pressure (HVLP): Accuspray, 34:35; Atom-miser ColorCan, 9:56; Binks, 26:34, 34:35; Binks Model 2100 spray gun, 122:12; *Compliant Finishing Guide*, 15:70; DeVilbiss, 34:35; DeVilbiss OMX gun, 37:71; external mix/BACT, 22:4; GEO RDA, 32:52; Graco Optimiser spray gun, 26:54; increasing transfer efficiency (overspray reduction), 34:35, 68:54; Lex-Aire, 34:35; manual/DeVilbiss, 26:54; orange peel/viscosity, 34:35, 37:36, 37:42; for painting aluminum boats, 37:36, 37:42; Poly-Craft Systems HVLP plural-component spray gun, 18:54; Rule 1106.1 amendment and, 60:11; SATA Jet 95 sprayer, 37:42; SATA paint system/air-fed mask, 23:54; sources, 34:40; spraying linear polyurethanes, 19:12; spraying techniques/applications/troubleshooting, 29:8, 33:46, 34:35; Titan LP3 system, 34:59  
 spray-painting. See painting techniques, spraying; spraying equipment/systems/techniques; spraying

equipment/systems/techniques, high-volume, low-pressure (HVLP)  
 spray rails: FRP construction, 60:5  
 spray strakes: and rudder ventilation, 45:96  
 sprint boats: jetsprinting, 57:15  
 Spronk, Peter: designer/catamarans, 119:78; 124:42; composite catamarans, 124:42  
*Spruce Goose*, wood airplane: Duramold hot-molding process, 151:6  
 SP Systems: Baltic Yachts sailboats, 85:45; *Composite Materials Handbook*/advanced composites, 58:26, 69:125; epoxy-based gelcoats, 79:114; epoxy/polyester laminating system/compatibility, 44:5, 61:116, 79:114; *Growler* prepreg Kevlar/S-glass/foam/Velocity Prediction Program, 154:36; name change to Gurit, 169:6; Nautor's Swan sailboats, 84:52; polyester gelcoats, 79:114; prepreg/PVC core processing problems, 70:44, 72:5  
 SP Technologies: 62:46  
 Spunfab nylon filament mesh: for carbon unidirectional laminates, 144:58  
 Spurr, Daniel (Dan): *Yacht Style*/review, 44:54; on internally ballasted boats vs. externally ballasted boats, 104:4  
 Spurr, Daniel (Dan), author: "A Man for All Trades," 88:46; "Abbey and Brownie," 104:100; "All Points Boats," 93:40; "BEI/AEY," 106:92; "Bertram Is Back," 171:18; "Bill Tritt and Early Fiberglass," 60:116; "Blocks of Any Era to Order," 145:24; "Bonnette Design," 109:180; "Build It and They Will Come," 99:52; "By The Rules," 154:38; "C&C-Then," 92:48; "Carbon Conversion," 146:40; "The Collector," 119:66; "Controlling Dust (*Continued*)," 87:10; "A Dearth of Style,"

77:104; "Delta," 94:32; "The Designs of Robert Perry," 97:28; "Diversifying the Portfolio," 127:94; "Driver Optional," 133:96; "Dust Control," 84:10; "Dykstra Revisited," 141:50; "Elling Yachts," 158:54; "Fast Company," 155:20; "First Glass," 103:186; "First Chesapeake Powerboat Symposium," 116:40; "Flying Machines, Part One," 90:50; "Flying Machines, Part Two," 91:154; "From the Shows and Beyond," 150:72; "General Practitioner," 110:68; "God, Country, and Fast Boats," 85:64; "Gougeon.G-O-U-G-E-O-N. Gougeon." 125:36; "Hargrave Gets His Due," 99:30; "The Interior Designer," 123:46; "Interiors to Go," 97:108; "J is for Johnstone," 98:28; "The Hydrodynamicist," 121:50; "Juan K," (Trixie Wadson co-author) 127:72; "Lazarra & Sons," 169:44; "Lemsteraaks to Superyachts," 143:40; "Let's Make a Merc," 111:42; "Loft, Cut, and Fasten," 137:44; "Kvichak," 96:52; "Low Profile, High Performance," 109:80; "Market Share," 114:68; "Nordlund," 87:46; "The Marshall Plan," 167:40; "Mike and Henry Strike Again," 91:96; "The Morgan Invasion," 135:14; "On Hallowed Ground," 147:38; "Out of Cuba," 114:94; "Outside the Box," 130:52; "The Pedrick Profile," 86:44; "The Plan," 107:52; "R.J. Dougherty and Sons Boatbuilding," 102:96; "Red Jacket Revisited," 115:100; "Restless in Miami," 160:16; "VEC," 101:62; "Show and Tell: Coating Remover with Depth Control," 141:30; "Small Shop, Large Parts," 120:62; "Storm Chasers," 162:76; "The Strong Stuff," 152:36; "Superyacht Pit Stop," 157:102; "Survivor," 126:56; "Survivor II," 129:40; "Survivor III," 139:74;

“Survivor IV,” 164:46; “Thai Boatbuilding, Family Style,” 128:62; “Three’s A Crowd,” 165:56; “Tooling and Techniques from Schooner Creek,” 172:56; “Tooling Evolution,” 145:78; “Under Control,” 127:30; “The Unteak Deck,” 125:20; “Vripack,” 108:44; “Walt’s Way,” 132:36; “Whiticar,” 104:58; “Willard Marine: Turn the Page,” 153:58; “Wholesale to the Trade,” 91:66; “Wood to Glass,” 134:62; “Wooldridge Boats,” 116:53; The Zurn File,” 100:42  
 squeegee: for controlling resin content, 59:30; radiused/for taping and tabbing, 29:43  
 squid: and boat encounters, 90:3  
 SSV (Sailing School Vessel): SSV *Corwith Cramer*, 121:9  
 Stabicraft: 659 Wheel House observation boats for service monitoring Alaskan fisheries, 139:18  
 stability: adding shallow skegs, 163:4; computer-aided design (CAD) and stability analysis, 150:88; calculating the GM (center of gravity and metacenter) formula, 166:3; damaged/intact, 54:98; longitudinal/transverse, 54:98, 64:46, 65:102; positive/neutral/negative, 54:98, 54:99; static, 54:98, 118:22. *See also* instability, dynamic/positive; stability, dynamic/positive  
 stability, dynamic/positive: Angle of Vanishing Stability, 140:4, 162:52; anti-roll tanks, 93:22; ballast keels and, 23:24, 23:26, 64:46, 70:38; barrier-avoidance/maneuverability, 27:3; catamaran model vs. deep-V monohull, 78:22, 127:56; complexity of stability calculations/viable solutions for, 153:52, 163:4; defined, 54:98, 70:38, 162:24; design analysis/prediction, 49:8, 55:32,

70:38; 81:58, 104:42, 153:52; Didi 950 with and without water ballast/stability, 153:52; dynamic stability calculator software program/Donald L. Blount and Associates, 126:80; electric inclinometer, 162:24; exhaust systems and, 37:26; fin system vs. rudder roll control, 93:22; free-surface effect/correction (tanks), 42:26, 44:5; hydrostatic stability, 140:4; GM (metacentric height), 42:26, 44:5, 93:22, 113:72; and improper balance, 126:38, 139:54; indicators, 31:20, 31:28, 64:46; in-water testing vs. theoretical calculations, 162:3; magnification ratio, 93:22, 30; metacenter explained, 162:24, 166:6; paravane stabilizers, 93:22, 113:72; of planing hulls, 31:20, 31:28, 34:5, 58:26, 64:46; porpoising, 31:20, 31:28, 72:22, 93:62; racing measurement rules/performance, 60:66; righting moment, 23:24, 23:26, 70:38, 153:52, 162:24; roll test, 44:5, 93:22, 62, 162:3; stability (inclining) testing/standards/certification, 31:20, 36:22, 36:32, 39:4, 42:26, 44:5, 48:8, 48:9, 48:14, 50:11, 93:62; 110:68; stability (inclining) field tests/freeboard, 47:63, 162:24, 166:3; T-boat rules/testing, 36:22, 36:32, 39:4; trim/roll angles, 31:20; V hull/no form stability and box hull/high form stability, 139:54; water tube setup for inclining tests, 162:24; zero-speed stabilizing system/Quantum, 93:22. *See also* instability, dynamic/positive  
 stability: damaged/intact, 54:98; intermittent controllability, 163:68; longitudinal/transverse, 54:98, 163:68; positive/neutral/negative, 54:98, 54:99; skegs for, 163:68; static, 54:98. *See*

*a/so* instability, dynamic/positive;  
 stability, dynamic/positive  
 stability, dynamic/positive:  
     acceleration/drag/morphing hulls,  
     173:54; ballast keels and, 23:24, 23:26;  
     barrier-avoidance/maneuverability, 27:3;  
     defined, 54:98; design  
     analysis/prediction, 49:8, 55:32, 173:54;  
     exhaust systems and, 37:26; free-  
     surface effect/correction (tanks), 42:26,  
     44:5; GM (metacentric height), 42:26,  
     44:5; indicators, 31:20, 31:28; of planing  
     hulls, 31:20, 31:28, 34:5, 58:26;  
     porpoising, 31:20, 31:28, 173:54;  
     potential for dynamic instability in  
     Adjustable Deadrise  
     (ADR)powerboat/morphing hull. 173:54;  
     racing measurement rules/performance,  
     60:66;righting moment, 23:24, 23:26; roll  
     test, 44:5; stability inclining  
     testing/standards/certification, 31:20,  
     36:22, 36:32, 39:4, 42:26, 44:5, 48:8,  
     48:9, 48:14, 50:11; stability (inclining)  
     field tests/freeboard, 47:63; T-boat  
     rules/testing, 36:22, 36:32, 39:4; trim/roll  
     angles, 31:20. See *a/so* instability,  
     dynamic/positive  
 stability testing (inclining experiment). See  
     stability, dynamic/positive  
 stabilizer fins: Quantum's ZeroSpeed  
     system, 110:4  
 stabilizer systems: Dynamic Stability  
     Systems foils for Skate 15  
     performance/Turnpoint Design, 173:46;  
     MagLift System/Quantum Marine  
     Engineering, 114:10; Plum stabilizer,  
     97:164; Seakeeper gyrostabilizer,  
     113:72, 120:4, 146:10; Wesmar, 15:70,  
     36:78, 61:82  
 Stafford, George, author: "When Insurance  
     Claims Get Out of Control," 50:80

staging: for gelcoat/paint spraying, 11:45,  
     42:20; ladders/Brownell, 24:62; scissor  
     lifts, 42:20; scissor-lift  
     platforms/pneumatic-hydraulic, 44:54  
 staining: brightwork/varnish repairs, 19:36  
 stainless steel. See steel, stainless;  
     fasteners, stainless steel  
 Stainless Steel Coatings: Steel It, 20:56  
 Staley, Jim: obituary, 9:5  
 StanCraft: 62:12  
 Standard Communications: Horizon Omni  
     VHF radio, 35:58  
 Standard G computer program: measuring  
     and recording accelerations, 145:106;  
     post-processing chart correction, 147:6  
 Standard Products Co.: Quick-Edge trim,  
     5:26  
 standing rigging. See rigging, stainless  
     steel; rigging, standing  
 Stanfield Mfg.: JS1010 joiner/shaper, 11:52  
 staples, plastic: applications/sources, 9:57  
 stapling: vs. vacuum-bagging, 1:58  
 StarBoard: polymer sheet material, 7:64  
 StarChip: conversion kit for LED lights,  
     87:80  
*Star of India* (square-rigger vessel): 69:13  
*Stars & Stripes*: S1 (soft-sail) and H1  
     (hard-sail) *America's* Cup cats, 72:84;  
     133:70, 96; obit for lead designer Britton  
     Chance, Jr., 141:6  
 Stark, Terry: on efficient designs (jon  
     boats), 16:4  
 Starlite Industries, Inc.: tool catalog, 20:56  
 starters, electric. See DC electrical  
     systems/equipment  
 static dissipator/neutralizer: NRD, Inc.,  
     13:18; for release surfaces, 13:18  
 static electricity: contact/separation  
     (part/tooling), 22:12  
 static pipeline wave experiment, 145:12

StatPower Technologies Corp.: inverter supplier, 25:34, 25:40

Staudacher, Jon: anchoring hardware, 15:21; roller brake, 8:52

Staudacher Hydroplanes: anchoring hardware, 15:21

Stavas, Ben: used-boat orphanage, 57:15

Stayput Fasteners: canvas fasteners, 11:52

stays. See rigging, standing

St. Clair, Pack: on product safety/liability, 15:50

stealth technology: carbon-fiber construction, 53:40; radar-absorbing material (RAM), 53:40; "smart" composites, 46:45, 46:50, 48:4; 46:45, 48:4, 53:40; thermal masking, 53:40

steam-cleaning: and blistering, 2:38, 4:5, 7:8

steam-cleaning equipment: compact high-pressure, 20:56

steam launches: replica market, 18:20; Rose 20 model, 68:11

steamship *Titanic*: reverse-engineering wreck of /model testing, 58:13; steam engines, 53:12

Steber, Bob: teak supplier/Quality Woods, 54:18

steel boats: Delaware pilot boat launches, 150:34; Gil Klingel/boatbuilding, 85:4; Waterline Yachts, 83:72; repairs and maintenance/A.F. Theriault & Son Boatyard, 101:92

steel, mild: ductility, 53:4; galvanic corrosion, 32:36, 32:39

steel, stainless: aircraft-type 316/stopnuts, 38:20; AquaMet 22, 54:62, 54:70, 146:48, 148:4; carbide/precipitation-hardened, 54:70, 55:5; cavitation erosion, 54:70; chlorides, 148:4; cleaning/polishing, 49:79, 54:70; duplex,

54:70, 146:48; galvanic corrosion/engine beds, 46:16; fatigue/failure/stress-cracking, 51:56, 54:70, 57:7; 148:4; floors/*Sliver*/Robert H. Perry/Northwest School of Wooden Boatbuilding, 137:44; galvanic corrosion/fasteners/hull-to-deck joint, 60:104, 146:48; galvanic corrosion/keel fasteners, 15:23, 38:20, 39:4; galvanic corrosion/resistance/prevention, 32:36, 32:39, 32:41, 33:28, 54:70, 60:104, 146:48; galvanic corrosion/tanks, 52:18, 54:5; galvanizing process, 33:28; Gemlux electrochemical polishing process, 49:79; grades/alloys/performance, 32:41, 51:57, 52:4, 52:18, 54:70. 146:48; grain structure, 54:70; hydrogen embrittlement, 54:70, 148:4; laminating table/specific heats, 45:68, 48:4; molybdenum alloys, 32:41, 52:18, 54:70; Nitronic 50, 32:41, 51:57, 52:4; problems, 146:48, 148:4; weld decay/intergranular corrosion, 52:18, 54:70, 146:48

steel construction: *Boatbuilding With Steel*/Gilbert Klingel, 83:3; CAD/CAM technology, 7:18, 38:38; CAL/NCC technology, 38:14, 38:38; vs. fiberglass/composites (strength), 4:22, 4:64, 57:7; floating frames/ABS classification, 52:4; fuel/water tanks, 52:18, 54:5; galvanic/stray-current corrosion, 33:28; lofting/liability, 38:14; Navy PC boats, 52:43; 105' schooner, 2:12; paints/coatings, 52:54, 52:55; specifications/standards/testing, 34:42; Subchapter T boats, 36:22; testing/Carderock, 42:39; tourist sub, 55:16; welding, 52:18, 54:70, 132:18. See also computer software,

lofting/parts generation; metal construction, CAL/NCC (computer-aided lofting/numerically controlled cutting) applications; numerically controlled (NC) cutting; The Metal Boat Society, 18:4

steering systems: ABS/LR classification, 39:80; Akermann Steering, 100:92; autopilot/trim tab, 53:50; control-station design/layout, 48:66, 48:79; design/safety, 42:88, 115:36; dynamic stability problems, 31:20, 100:92; EC (EU) certification, 41:38; jet boats, 36:50; offshore performance racing sailboats/Child series, 53:50; pendulum rudder, 53:50; push-pull cables/wire chases, 28:14; rack-and-pinion, 3:60; Ride Guide dual-cable steering/Allison Boats, 94:18; rotary/No-Feedback torque arrestor, 48:86; rudder size/geometry/angle/location, 45:96, 98:76, 100:92, 115:36; skid fin, 98:76; systems manual, 43:83; systems technician training/certification, 57:99; tiller arm toe-in/toe-out angles, 45:96; twin wheels//*Isobel* sailing yacht/Stephens, Waring & White, 136:46; tuning/twin-screw rudder installation, 45:96. *See also* autopilot; rudder/rudder assembly; trim tabs

Steffen, Jim: criticism on NAVTECH USSA training members of SAMS and NAMS, 163:4

Steinert, Paul: on noise-reducing laminates, 32:4

stem: plumb vs. raked/design considerations, 25:55, 27:4

Stenberg, Mike: shrink-wrap recycling, 33:69

Stephens, Olin: *Babe* and *Nymph* design, 119:20; book *Lines*, 82:18; profile/naval architect/historian, 59:44; 60:66, 67:13,

119:3. *See also* Sparkman & Stephens, 59:44

Stephens, Robert: on Neo 41 and sense of running a semi-planing powerboat, 152:4

Stephens, Robert, author: "The Right Stuff," 136:44

Stephens, Rod: designer/amphibious vehicle/DUKW, 56:10, 57:13, 119:3; affiliation with Sailing School Vessel (SSV), 121:9; electronic publication *Rod on Sailing Lessons From the Sea*, 119:3. *See also* Sparkman & Stephens

Stephens, Waring, & White: cold-molded sloop/*Spirit of Tradition* yacht/*Anna*, 168:14; *Isobel* sailing yacht/cold-molded wood/epoxy, 136:44; Zogo diesel-electric launch, 124:12, 127:30; pod drive for vintage Huckins motoryacht, 129:54

stepped hulls: construction, 6:5, 85:82; curved steps, 54:18; design criteria, 5:52, 63:176, 65:5, 127:56; development/history, 7:5, 63:176, 127:56; five-step/Quad Step design/Outerlimits 44 SL, 133:60; Formula FASTech/Methacrylate adhesive/Thunderbird Products Inc., 75:58; incompatibility with water jets, 138:6; Nighthawk stepped hull prototype/FB Design, 133:84; powerboat designs, 5:52, 7:5, 34:5, 46:16, 49:42, 65:52, 66:52, 133:60; step-ventilation openings, 85:82; stepped chine, 46:16; trihedral/stepped-cavity hullform, 49:42; Stepped-vee Ventilated Tunnel (SVVT) hull/ Michael Peters/Barker Boatworks, 169:116; ventilated stepped hull, 88:4; XSR48 superboat/Fabio Buzzi, 110:12

stepped planing boat: Dynaplane design, 97:164; John Plum, inventor, 88:82, 97:164

stereo microscopy: 87:62

Sterling: LP paints/application, 19:12, 21:26

stern: overhanging vs. reverse/design considerations, 25:55, 27:4

stern flaps: propeller tunnels and trim-tab placement for, 75:140; testing of, 70:81; vs. trim tabs, 70:81

stern gear: tools for removing, 48:86

stern tube: repair of, 130:38

stern tube bearings: Vesconite Hilube/VescoPlastics, 166:14

sternwheeler: *Tahoe Queen*/Tim Graul, 110:68

Stetson Pinkham, outboard and I/O dealership (Waldoboro, ME): Lincoln Davis/vintage motors, 92:68

Steve French Enterprises: unexposed transom door hinges for sportfishing boats, 107:14

Steve Killing Yacht Design: C-Class cats, 133:70; three-element wing sail, 133:70

Stevens, Brian, author: "Trial By Fire," 127:104

Stevens, John: CATUG chemical carrier, 43:36

Stevens, Russ, author: "Fastening without Holes," 32:52; "Fuel-flow Meters Deserve a Second Look," 26:54

Stevens Institute of Technology: Davidson Laboratory/model testing, 56:26, 56:38, 60:66

Steward, Robert M.: on propeller-shaft removal, 6:5

Stewart, Jim: on megayacht market, 12:50

Stewart Warner Corporation: Heavy-Duty Gauges, 21:60

Steyr Motors GmbH: diesel-electric two-in-one hybrid DC motor/flywheel generator, 115:128; diesel generator for charging lithium iron phosphate (LFP) batteries/J-Class Hybrid Power System; STIDD Series 800 seats: for foil-assisted catamaran *Swift*, 96:52; for military and government RIBs, 70:66; monoblock diesels, 122:64; Shelter Island Runabout, 70:66; ZF/Beneteau parallel hybrid, 127:30

Stimson, David: bow-roof shed, 35:15; Design Challenge, 122:24; fuel-efficient planing boat designs, 116:40; Ocean Pointer, 116:40; plank-on-frame power dory/Powerboat Design Challenge, 122:24

Stingray Boats: recession business strategies, 127:30; web-based management system, 127:30; Z-plane hulls, 127:30

STIX, Stability Index: and ISO standards, 81:128

Stockbridge Communications: boatyard newsletters, 31:16

Stolk, Leo: Stolkraft hullform, 49:42; 68:11

Stolkraft: planing hullform/efficiency, 49:42, 58:6; 68:11

Stone Boat Yard: 70:21

Stone, Colin: on advantages of Centa thrust bearings, 122:6; on Navigating a Sea of Standards and fuel shutoff capability outside engineroom, 156:4

Stonwurks, Inc.: stone panels, 34:28, 34:32, 101:12

storage. See boat storage; chemical storage; dry storage

Storm Hawk Boats: resin-infused, outboard powered 21' boat, 103:208

stoves, galley: diesel stove, 151:128; Force 10/oxygen-depletion sensors, 45:32;

Paul E. Luke, 14:26, 4:32; Tudor/Maxie, 1:68. See *also* heaters, cabin

Strader, Dave: on Weskor structural core, 54:5

Straight Line Marine: alignment of boat running gear/profile, 159:36; Class II crack testing, 159:56

strain-gauge testing: equipment and configurations for, 79:102

strainer, raw-water: 61:115, 127:116; custom sea chest/Nordhavn boat, 137:34, 139:5; den Ouden (Vetus) clear lid, 163:56; internal and external strainers, 127:116; Marelon "Anti-Venturi" through-hull, 130:66, 132:4; Marelon T-150 strainer for tight locations, 151:12; stainless steel/CREWS, 39:98

Strait Moorings: helical anchor, 53:64

strakes, lifting. See lifting strakes

Strand, Rick, author: "Adhesive Bonding Meets Production Boatbuilding," 75:58; "Strain-Gauge Testing," 79:102; "Wet Balsa Core," 96:16; "Wet Core," 82:104

Strand, Rick: on back-wetting, 15:13; on bottom paint removal, 7:8; on cored panel penetrations, 99:44; on DBE, 10:8; on strength testing of composites, 4:22; on wet balsa core, 98:4, 99:4

Strang, Charles: inventor/composite boats, 167:6

Strasel, Erik: on sealing electrical connections with room temperature vulcanizing silicone rubber compounds/acetic acid/corrosion, 105:4

Stratasys Inc.: 3D CAD Modeler, 7:64

Streck, Cortland: 60' power cat, 50:11

strength testing of composites/laminates. See composites testing

stresses/loads: fiberglass strength/breakage, 13:33; glossary of

terms, 13:34. See *also* composites testing *entries*; fatigue resistance, of laminates; laminates, marine

stretching techniques: CAD program, 7:18; megayacht design, 47:34; tooling, 2:42, 46:16, 46:26, 67:13

Striker Yachts: advertising/marketing, 6:47

Stringer, Stephen: clay modeling, 21:12

stringers. See frames/framing systems

strip planking: DuFLEX strip planks, 63:162; DuraKore end-grained balsa strips, 15:34; solid wood strips, 15:38; Speed Strip system, 46:65, 69:156. See *also* wood construction, strip-planked

striping paint: Formula 40 Marine Color (acrylic), 18:54

striping tapes: Mark IV cutting-and-assembly system, 13:70; removal (Scotch-Brite discs), 16:52

strippers. See paint removal

Stripping Technologies, Inc.: AirWall ventilator/dust remover, 13:70LAB 1 System plastic blast media reclaimer, 12:60

Strom, Lars: on correction of metric conversions/rudder design/high-performance boat, 80:4

Strome, John: on gelcoat repairs, 65:5

Strong systems. See Tides Marine

Struben, Fred: on survey reports/seaworthiness, 36:74

structural adhesives. See adhesives, structural

Structural Composites, Inc.: closed-molding procedures, history of, 69:132; composite-panel test fixture, 36:4; composites testing, 34:42, 36:4, 143:10; mitigating shock loads/pressurized hull and cockpit, 143:10; PRISMA Composite stringers/preform hat stiffeners, 78:7; Resin Injection



Recirculation Method (RIRM), 32:28, 48:48; RHIB prisma preforms/reduction in hull and deck weight, 143:10; stitched vs. woven fabrics/evaluation, 32:4. See *also* Wolfe, Art

structural design and materials selection, 119:50

*Structural Properties of Laminated Douglas Fir/Epoxy Composite Material*: reference publication by NASA and Meade Gougeon, 173:76. See *also* Gougeon, Meade, Gougeon Brothers, wind turbine blades, wood laminates

structural standards of high-speed craft: data logging of accelerations and bottom pressures, 157:80; design loads consideration/test methods, 157:80; equivalent static pressure, 157:80; wave and acceleration measurements, 157:80

structural standards and seaworthiness of recreational boats: 63:38; 75:3; 79:109; molding grillage tabbed to hull/Hanse, 91:136; Sea Craft boats, 91:116

structure. See frames/framing systems/structure

Stuart, E. & D.: 28' daysailer, 4:30

Stuart, Joe: Alumaweld Boats/profile, 26:20, 37:16, 37:36; on outsourcing, 37:16; on paint job/profit margin, 37:36, 37:42, 37:47

Stuart Catamarans: 60' power cat, 50:11

stuffing box. See propeller shaft stuffing box

Sturtevant, Tom: on fire/property insurance, 7:28

S2 Yachts (Holland, MI): parent company of Tiara Yachts, 71:52

styrene (solvent): attack of foam cores, 52:30; classification/carcinogenic, 29:54, 40:20, 53:73; solvent wipes/secondary bonding, 30:32, 52:67. See *also* gelcoat;

polyester resins; solvent wipes/washes; styrene emissions, monitoring/reduction/compliance; styrene monomer

styrene emissions, monitoring/reduction/compliance: Clean Air Act/Amendments/1990, 10:8, 40:17, 53:73, 54:98, 66:128, 68:5, 69:132; closed-molding, 39:90, 54:112; CFA study/testing/program, 39:90, 40:17, 40:18, 41:5, 55:26; ECT 120 epoxy compatible gelcoat and elimination of tie-coating, 139:30; exposure limits/health effects, 1:30, 2:27, 40:17, 40:20, 41:58, 42:5, 53:73, 57:7; FRP waste reduction/good management practice, 55:26, 55:27, 55:30, 123:26; hand layup vs. spraying, 10:8, 10:17, 40:17, 54:112, 55:26, 66:128; importance of embracing process changes, 54:112, 123:26; monitoring/recordkeeping, 7:64, 40:17, 41:5, 53:73; NMMA assessment, 32:48, 41:5, 53:73; Rule 1126 compliance, 25:8, 26:34. See *also* DCPD (low-styrene) resins; fabric impregnators; resin-infusion molding/SCRIMP; resin-transfer molding; thermoplastics; vacuum-bagging, applications/techniques; VOC emissions, reduction/compliance

Styrene Information and Research Center (SIRC): styrene exposure/health effects, 40:20, 41:58

styrene monomer: hourglassing of PVC foam cores, 9:36; outgassing/carbon-monoxide alarms, 45:32; in polyester and DCPD resins, 8:28

styrene monomer, substitutes for: PMS/vinyl toluene/DCPD, 10:8. See *also* DCPD resins

styrene (monomer-loss) suppressants:  
 resin additives, 8:28; and secondary  
 bonding, 8:28, 20:32, 25:8;  
 types/formulations/performance, 8:28,  
 25:8

styrene-acrylonitrile (SAN) copolymer: vs.  
 cross-linked PVC foam core, 70:44;  
 Luran S, 34:59

styrofoam: CNC cutting for hull  
 shape/Rhebergen, 96:36; flybridge  
 cowling mold, 96:36; for high-temp  
 tooling/caveats, 59:76; plug for plastic-  
 faced-plaster (PFP) tool, 60:96, 60:103

Subchapter K boats: *Ranger* and *Patriot*  
 aluminum catamaran ferries/Bruce  
 Marek, 106:22

Subchapter S boats (150 or more  
 passengers): USCG standards for,  
 63:38

Subchapter T boats (up to 149  
 passengers): conversions, 36:32, 37:4,  
 139:54; diesel-fuel systems/Code of  
 Federal Regulations for, 84:82; and fire  
 protection, 62:78; niche  
 market/construction, 36:22, 37:4;  
 rules/revisions, 36:22, 37:4, 38:4, 93:98;  
 stability rules/certification testing, 36:22,  
 36:32, 39:4, 63:38; 106:22

subcontractors. *See*  
 outsourcing/subcontractors

subframe/compartments:  
 surveying/fiberoptic borescope, 35:42.  
*See also* bulkheads/compartments

submarines, passenger/tourist: welded  
 steel/Oregon Iron Works, 55:16

submarines, small: one-man composite  
 “aquabatic”/deep-diving probes, 55:16;  
 two-man/The Toy, 53:12

sugar pine: for fairing batten/plug  
 construction, 28:10

suits, Tyvek: chilled-air/EEV Comfort Suit,  
 4:58, 33:46, 64:5; review/sources, 3:19;  
 ventilating, 33:46

Sullivan, Mary, author: “An Advanced-  
 Composites Training Seminar,” 47:57;  
 “The DynaFlyer 40,” 47:17; “A First:  
 Composites in a Commercial Fast  
 Ferry,” 62:87; “A Painter’s Paint Booth,”  
 42:20; “Perfect Pitch,” 42:74; “Push-  
 button Sailing,” 51:100; “Recent  
 Research on Passenger Comfort,” 3:30;  
 “A Self-Cleaning Sea Strainer,” 61:115;  
 “Taking Shape,” 78:94; “Tough Stuff  
 from Tides,” 39:98; “Tracking Engine  
 Vibration,” 74:85

Summers, Charles B., author: “Alumaweld  
 Boats,” 26:20; “Automated  
 Boatbuilding,” 59:71; “Boatbuilding  
 Schools: Bates Technical College,”  
 20:21; “Building the 161’ FRP Yacht  
*Evviva*,” 32:18; “CAD/CAM: What Is It  
 Doing for Boatbuilders?,” 7:18;  
 “CAD/CAM: Choosing Hardware and  
 Software,” 8:35; “CAD/CAM Meets RIB,”  
 65:97; “Location, Location, Location,”  
 69:114; “Mainstreaming Welded  
 Aluminum,” 21:26; “Managing A  
 Remodel,” 85:96; “Manufacturing  
 Wooden Boats: Nexus Marine  
 Corporation,” 23:37; “Methods and  
 Materials on the West Coast,” 45:54; “A  
 New Pilot Boat for Puget Sound,” 67:90;  
 “Painting Production Aluminum,” 37:36;  
 “Seattle Start-Up,” 69:114; “Switching to  
 Yachts,” 40:24; “Virtual Aluminum  
 Construction,” 63:145; “Westport  
 Shipyard,” 62:26

Summit Yachts: Summit 35 project, 123:10

Sumpter, Paula: on plastic kayak recycling,  
 15:4

Sunbird Yachts (Zhuhai, China), 103:72;  
 kitted composite boats/SmartPacs,  
 103:104; Li Yuexian interview, 103:108

Sunbrella: marine fabric/carpet runners,  
 32:15

Sundlin, David J.: on videotape production,  
 16:22; on video production.on-location,  
 22:42, 22:45, 22:49

Sunfish-Laser, Inc.: Vanguard acquisition,  
 49:74

Sunrez Corp.: photo-initiated  
 resins/applications/technology/patents,  
 18:8, 18:17, 19:8, 50:5; UV-PPG  
 fabrication, 48:35, 50:5. *See also*  
 Livesay, Mark (Sunrez Corp.); photo-  
 curing resins

sunroof: carbon pre-preg resin and gelcoat  
 units for/Trend Marine, 101:12; Cruisers  
 Yachts 560 Express/aluminum hardtop  
 with power sunroof, 114:68;  
 Webasto/fixed or electrically operated  
 sunroof line, 150:10

Sunseeker International: production  
 boatbuilder/carbon fiber, 58:36; use of  
 Parabeam E-glass skins for boat  
 parts/fixtures, 72:10

Sunshine Makers: Simple Green cleaner,  
 15:44

Sunward Yachts: one-off tooling, 10:42  
 supercapacitors, 118:40

Superior Fiberglass and Resins: acetone  
 replacement/Super Blue Resin Cleaner,  
 3:20; toolwashing units, 33:26

superstructure. *See* deckhouse;  
 pilothouse; tuna towers; wheelhouse

suppliers: online scams, 155:80

Suppliers of Advanced Composite  
 Materials (SACMA): health and safety  
 pamphlet, 36:78

surface-effect ship (SES): minehunter,  
 65:84; M80 Stiletto hull design, 97:10

surface-piercing drives. *See*  
 propulsion/drive systems

surface-piercing struts, 126:64

surfactants. *See* resin surfactants

surfboards: molded replicas, 28:54

Surette, John J.: on deep-cycle marine  
 batteries, 18:44, 19:4

surveying techniques/tools/equipment:  
 1990s retrospective, 60:27; adhesive-  
 backed paper tape rule, 42:74; fiber  
 optic boroscope, 158:48; holesaw  
 cutouts, 49:24, 49:27; holesaw  
 cutouts/water-saturated flotation foam,  
 37:48; regressed blisters, 51:108;  
 photography techniques and equipment,  
 79:86; professional standards, 53:4; test  
 coupons/repair patches, 36:34, 49:24,  
 49:27. *See also* blistering,  
 gelcoat/osmotic; composites testing;  
 core bonding

surveying techniques/tools/equipment,  
 non-destructive: blister detection, 23:42;  
 bolt inspection, 40:4; BondMaster for  
 measuring bond strength, 163:93;  
 computed tomography (CT) scanning,  
 163:93; damaged keel bulb, 133:104;  
 delamination/cored hulls, 25:18;  
 fiberoptic borescopes, 35:42; FLIR  
 T440bx thermal imager, 164:40;  
 hammer-sounding (tap-testing), 25:18,  
 35:42, 43:54, 47:57, 133:104, 163:93;  
 illuminating periscope, 24:62; laminate  
 damage, 35:42, 133:104, 163:93,  
 164:40; marine laminates vs. aerospace  
 composites, 133:104; metal  
 components/failure analysis, 51:56;  
 mobile lighting  
 sources/headlamps/snake lights/finger  
 lights, 158:48; moisture meters, 19:8,  
 16:50, 23:42, 23:45, 23:47, 60:48;  
 piezoelectric (vibrational) shearography,

163:93; severely damaged hulls, 25:18; Smart Hammer, 47:57; sources, 35:50; subframe/compartments, 35:42; thermal imaging/infrared thermography, 25:18, 35:42, 43:54, 133:104, 150:60, 163:93, 164:40; ultrasonic, 17:58, 35:42, 40:4, 133:104, 150:60; workshop, 47:57. See *also* moisture meters

surveyors/surveying, profession/judgment: 1990s retrospective, 60:27; ABS/LR classification survey inspections, 39:80; accident investigation, 26:51, 59:89; common sense in, 120:80, 122:6; appraisals/damage claims, 44:72, 50:80, 59:89, 85:30; billing, 30:26, 71:5; Condition and Valuation (C&V) surveys/haulouts, 30:72, 51:108, 55:71, 59:89; consulting, 59:89, 71:5, 161:80; contracts, 59:89; distance learning program (U.K.), 81:10; electrical systems training/certification, 54:32, 66:38, 70:25; ethics/judgment/liability/credibility, 5:64, 24:72, 30:26, 30:60, 31:30, 37:13, 44:72, 59:89, 88:46, 108:136, 110:4, 153:80, 163:132; expert witness work, 47:24, 50:18, 50:20, 50:25, 56:53, 59:89; formal requirements for, 161:80, 163:132, 164:4; importance of calculation of machinery-space volume to fire-extinguishing system, 153:80; Informa Distance Learning (U.K.), 81:10; in-water surveys/caveats, 31:30; keel inspection/fasteners, 38:20, 39:4, 40:4; 88:46; liability coverage, 59:89; multiple roles of/conflicts of interest, 59:89, 68:96; negotiation, 35:72, 59:89; osmotic blisters, 51:108; pre-purchase surveys, 55:71; qualifications/education, 37:80, 59:89, 161:80, 163:132, 164:4; as subcontractors in boatyard, 54:5;

*Surveying Small Craft*/review, 34:52; theft and fraud networking, 71:27; Uniform Standards of Professional Appraisal Practice (USPAP), 85:30; venture partnership and, 59:89. See *also* Navtech US Surveyors Association (USSA), survey reports

survey reports: disclaimers/exculpatory clauses/limits of authority, 30:26, 30:35, 31:30, 32:4, 37:13, 38:4, 55:71, 59:89; and fire-extinguishing systems, 153:80; multiple roles of surveyor, 59:89; pre-purchase (Condition & Valuation), 55:71, 59:89; seaworthiness, 34:55, 36:74; testing for, 30:26; writing guidelines, 30:26, 30:28, 30:35, 31:4, 37:13, 55:71, 55:76, 59:89, 88:46

importance of executive summary in reports, 157:128; personal observations, 157:128; surveys, in-water: vs. hauling for survey, 30:72; liability/ordinary care, 31:30

surveys, new-boat: for quality control/manufacturing, 35:4; pre-purchase (C&V), 55:71

survival at sea: multihulls, 23:24

Suter, R.M.: SideKick air-supplied respirator, 19:59

Sutherland, Bud: on customer service in boatyards, 5:7

Sutherland, Scott R., author: "N[E]E = Not Easily Explained,": 78:38

Sutphen Marine: mold-release system, 13:11; use of vinyl ester resins, 6:10

Suunto USA, Inc.: Design Line compasses, 8:54

swaged terminal fittings: corrosion, 15:21, 15:23, 54:70

Swain, Geoffrey: on carbon-aluminum/galvanic interaction, 59:5

SWATH (small waterplane area twin hull):

65:102; 126:64; 129:40; MCS SWATH  
1, 166:48

Sweden: advanced

composites/navy/Karlskrona Shipyard,  
53:40, 55:5, 57:7; Dockstavarvet AB  
/Interceptor Craft, 167:28; epoxy  
exposure, 53:40, 55:5, 57:7; FRP  
construction/styrene exposure, 1:30,  
53:40; FRP recycling programs, 60:82;  
Trampofoil, 54:18. *See also* Lonno,  
Anders; Mannerfelt, Ocke; Oldenburg,  
Bo; Ryds Batindustri AB

Sweden Yachts (Orust, Sweden): profile of,  
82:58

Swedish Coast Guard: amphibious assault  
craft CB-90/Petter Hakanson, 167:28;  
patrol/rescue boat: 61:10; Controller  
Area Network (CAN)-based distributor  
power system, 99:82; "JockeySeat,"  
70:66

Swedish Sea Rescue Society: rescue  
vessel deckhouse, 105:4; SSRS-1200  
rescue vessel, 104:42; ASTRA-type  
vessel, 104:42

Svendsen, Svend: California  
boatbuilder/obit, 144:10

Swift boats: description/history of, 89:4

SwiftShips: flow coaters, 25:58

Swindahl, Carl: profile/Modutech

Marine/commercial boats, 40:40

swinging keel: 62:51, 64:64

Swik, Bill: on "Technology and the Yacht  
Designer" and computer technological  
advancements in jet engine design,  
169:6

switches: battery, 8:12; float/bilge pumps,  
32:52, 44:29, 57:48, 57:60, 57:73;  
labeling/documentation, 132:80;  
Rotoswitch, 27:70; waterproof, 5:58

Switzerland: Boesch

Motorboats/mahogany runabouts,  
143:10; competition for *America's Cup*,  
70:21

Sword Marine Technology: outboard  
waterjet package, 96:6

SYBO Composites: and epoxy-compatible  
gelcoat, 139:30

Sydney-Hobart Race: design  
standards/scantlings/structural failures,  
48:8

*Syllogic* (Open 40 racing vessel): rigged  
canting mast, 70:38; rotating keel, 70:38

Symphony Boat Co.: Elektra Six-2 electric  
launch/laminated panels of bamboo,  
159:10; runabout launch/foam-cored  
plywood-and-aluminum hull, 146:10

Sylvan Forest Products: pressure-treated  
plywood panels, 27:42

Sylvia Bolton Design Inc.: interior  
design/mooryacht *Alexis*/Platypus  
Marine, 85:96

synchronizers: Electro-Sync, 7:64

Synstone: simulated marble/granite  
countertops, 34:28, 34:32

syntactic adhesives/putties. *See* putties,  
bonding/bedding; putties, syntactic

syntactic foam. *See* epoxy syntactic tooling  
foam/slurries/putties; polyester syntactic  
foam; putties, syntactic

systems: 1990s retrospective, 60:27;  
complexity of, 59:21, 59:44, 60:27,  
137:34; computer-controlled, 45:47; EC  
(EU) certification, 41:38;  
design/manufacturing/installation  
efficiency audit, 59:21; electrical  
certification, 48:4, 54:32, 57:99, 57:100;  
evolution/integration of technologies,  
57:100;  
maintenance/troubleshooting/repair  
(owners' manuals), 27:46, 27:54;

maintenance/troubleshooting/repair (systems manual), 43:83; marine systems technician training/certification, 48:4, 57:98, 57:99, 57:100, 120:34. *See also* AC/shore-power electrical systems; air conditioners; components/ancillary equipment/accessories; DC electrical systems/equipment; electrical systems; engines, marine; navigation instruments/systems; plumbing systems; propulsion/drive systems; pumps; refrigeration, marine; steering systems. *See also* components/ancillary equipment/accessories

System Three Resins: foaming epoxy, 140:4; high-modulus epoxy, 45:54; on post-curing epoxy, 14:45; POL-E-BOND, 2:72; POX-E-COP, 7:42, 7:48; SA-2100 sealant/two-part aliphatic polyurethane, 140:7; water-reducible paint system (LP topcoat WR-LPU/epoxy primer WR-155), 22:55. *See also* Hendricks, W. Kern

systems: adhesive bonded mounts for systems layouts, 145:48

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

table, cabin: fold-up: plans/how-to-build, 18:42; swing gimballed table, 150:72

Tacktick: wireless micronet instrument system, 91:20

tacky tape (vacuum-bag sealant): for scarfed-seam deck repair, 37:48; vacuum-bagging techniques, 30:18, 34:59, 43:24; vacuum-bagging techniques/flat-panel fabrication, 45:68

Tacoma Boatbuilding: megayacht market, 12:50, 13:4

Tacoma Community Boat Builders: building and navigating woodenboat for at-risk teens, 166:18

taffrail generator, 120:52

Taiwan: boatbuilding in, 5:7

Talv, Harry: on marine engines, 12:4

T & L Tools: T & L screw extractor, 24:58

Tampa Defence UK, 161:20. *See also* Tampa Yach Manufacturing

Tampa Defense USA, 161:20. *See also* Tampa Yacht Manufacturing

Tampa Yacht Manufacturing: buy-out of Tempest line boats, 153:8, 161:20; collaborative venture with Alicat Workboats, Ltd., 161:20; Fast Coastal Interceptor (44-FCI), 153:8, 161:20; and Middle East business plan, 161:20; and Robert Kaidy, naval architect, 161:20; TYM 50-FAC (Fast Attack Craft), 161:20; venture with Alicat Workboats Ltd. (UK), 161:20;

Tander, Rob: Design Challenge/Vrimbo 39 outboard cruiser/Sjoerd Bouma, 127:20

Tank-vent fittings; Securefill, 87:6

tanks, fuel. *See* fuel tanks

tanks, holding. *See* holding tanks

tanks, waste-collection: systems/safety, 6:8

tanks, water. *See* water tanks

tank sensors: Gobius tank level indicator, 116:10

tank sentries: Headhunter, 31:68

tank-testing. *See* model basins/tank-testing facilities and programs, Australia; model basins/tank-testing facilities, North America; model testing

Tanton, Yves-Marie: designer/builder of free-standing rigs, 55:46; mainsail vang/boom, 102:14

Tanton, Inc.: Tanton 45 and 70/free-standing rigs, 55:46

tape, carbon. *See* carbon tape

tape, masking: 3-M Fine-Line, 37:36. See  
a/so painting supplies

tape measures: DeWalt extended blade,  
155:10

tape, Mylar. See Mylar tape

tape, polymeric foam: Gaska Tape, 48:86

tape, protective: 3M Heavy Duty Protective  
Tape, 29:58

tape, sandblasting: used in vacuum-  
bagging/drying, 9:50

tape, tacky. See tacky tape

tape, Teflon: for marine hose installation,  
51:6

tape rule: adhesive-backed paper, 42:74

taping and tabbing. See fiberglass  
fabrics/reinforcements, taping and  
tabbing

Taplin, Bud: on Passage Marker, 154:4

Tarbell, Russ: on worker training, 14:4

Target Enterprises: Target 2020  
waterborne acrylic finish, 23:54; Target  
TK 200 teak treatment, 10:52

tarp, polyethylene: for boat shed, 35:15

Tarpon Yacht Center: LP paints/safety  
gear, 20:8

Tasmania: INCAT, 53:12

taxes, corporate income/capital gains:  
amortization of tooling, 9:13;  
changing/impact of, 22:36, 63:29

taxes, luxury/sales/use: builder's contracts  
and, 37:60; and marine industry/market  
downturn, 12:2, 16:4, 46:16; marine  
trade associations and, 4:9, 18:64; and  
megayacht market, 12:50; repeal  
of/market recovery, 25:3, 37:66; and  
sailboat market, 20:64

Taylorbrite LLC: cold cathode fluorescents,  
87:80

Taylor, David, Adm.: profile, 53:12

Taylor, David, Model Basin: tank-testing  
facility, 42:39, 49:42, 53:12, 56:26,  
56:38, 58:13, 113:32; 126:64; 128:18

Taylor Made Systems: enclosed flybridge  
windshield/Ovation 52 powerboat, 118:8

Taylor, Michael (Mike): on marine  
insurance/maintaining to class, 48:8; on  
foamed-in fuel tanks, 37:48; on  
surveying severely damaged hulls,  
25:18

Taylor, Michael (Mike), author: "Classing  
Yachts," 39:80; "Lightning-Protection  
Systems," 43:64

T-bar: framing systems/aluminum boats,  
24:34, 26:4, 29:4

T-boats. See Subchapter T boats

TCM Composites: temperature-controlled  
infusion tables, 125:54

TE. See transfer efficiency

teak: export statistics, 75:72;  
gluing/finishing, and adhesive  
problems, 75:72; sources/salvage,  
54:18, 165:22; toxicity/side effects of,  
75:72; other woods  
durability/substitutes, 75:72, cleaning  
methods, 75:72

teak cleaner: Target TK 200  
restorer/protectant, 10:52

Teakdecking Systems (TDS): modular  
decking/installation, 51:114, 138:48,  
165:3, 165:22; refinement and  
improvement to decks, 165:22

teak decks: matching grain and color,  
165:22; methods at Teakdecking  
Systems, 165:22; reconstruction, 1:46,  
64:112, 165:22; laid, 45:47, 165:22;  
prefabricated, 5:26, 51:114, 165:22;  
maintenance, 131:66; recaulking,  
131:66

teak/holly cabin soles: shop-made/balsa  
core, 13:43

*Team Adventure* (catamaran): carbon crossbeam emergency repair, 72:38

Team Oracle: USA-71 hull/recycling, 163:44

*Team Phillips* (racing catamaran, formerly *Goss Challenger*): 62:46; abandonment of, 69:13, 72:84

Team Scarab: high-performance boats by Westerly Marine, 61:52

Tech Products Corp.: all-attitude engine mounts, 13:70

Techflex, Inc.: braided UV-resistant polyethylene terephthalate (PET) tube for wire bundling, 77:10; Flexo wire/cable jacketing, 11:52; Thermashield, 77:10

Technical Innovations, Inc.: Air Cyclone fan, 25:59; EEV Comfort Suit, 4:58, 33:46; Quick Fill polyester compound, 18:54

Techno Craft S.L.: yacht containment structures, 144:48

Technology Associates, Inc.: ceramic scissors, 16:52

Technology Development: roto-molded polyethylene utility skiffs, 11:28

Tedder, Bruce: promotion of South African companies in world market, 83:50

*Ted Hood's Through Hand and Eye*, autobiography, 103:14, 145:12

Tef-Gel: Teflon-filled paste/corrosion prevention, 60:104

Teleflex Marine: No-Feedback rotary steering system, 48:86

telephone system: protection/hurricanes, 27:18, 27:21

Telesmanick, Leo: Beetle Cat jigs, 23:32

television: as promotional tool, 25:52

Telleria, Mike: response of Navigating a Sea of Standards and National Fire Protection Association

302/comprehensive scantlings, 155:4; response on surveyors and USSAC (US Surveyors Association/NAMS/SAMS, 162:6

Telleria, Mike, author: "A Builder's Guide to the Owner's Manual," 159:22; "Going Coastal," 166:48; "Navigating A Sea of Standards," 154:56; "The Smart Answer," 164:80; "Smoke Detectors: 'What's It Going to Take?'" 168:96; "You're Your Work, Not Your Business Card," 161:80; "When Zincs Are Not," 157:94

temperature, of boatshop: and catalyst ratios/gel times, 1:6, 15:13, 33:46, 44:30, 50:46; core bonding/bedding, 9:36, 33:46; with epoxies, 42:52; gelcoat application, 1:42, 33:46; gel times/SCRIMP, 44:30; hot-weather boatbuilding, 33:46, 50:46; laminate quality, 3:29, 33:46, 50:46; mold-release agents, 13:11; syntactic foams/putties, 3:46. *See also* heat/hot-weather boatbuilding; heaters/heating systems, boatshop; humidity; temperature, of laminate

temperature, of laminate: epoxy resin/print-through/post-curing, 14:45, 17:11, 34:21, 42:52, 42:59; and hardness testing (Barcol hardness tester), 5:12; heat distortion temperatures (HDTs), 2:6, 5:12, 14:45, 64:11; monitoring systems/techniques, 14:45, 14:48; polyester resin, 14:45; ramping up/post-curing, 14:45, 17:11, 34:21, 42:52, 42:59; specific heat/exotherm cycles/warping, 45:68; vinyl ester resin, 6:10, 14:45, 42:52. *See also* heat distortion temperatures (HDTs); ovens/autoclaves; post-curing; print-through, control/prevention; resins,



- curing/exotherm cycle; temperature, of  
boatshop
- Tempest Marine: buyout of line by Tampa  
Yacht Manufacturing, 153:8, 161L20;  
customs and border protection boats,  
153:8
- Tempest Yachts: interior design, 6:39
- Templin, Douglas E.: Rule 1106.1  
amendment, 60:11
- Templin, Douglas E., author: "Defensive  
Painting," 52:54
- Ten Golden Rules for Successful New  
Build Projects* ebook, 140:7, 141:4
- tender: custom carbon tender/New  
England Boatworks, 81:93
- Tennant, Malcolm, author: "Powercats and  
the LCG," 64:46; "Powercats," 78:46
- Tennant, Malcolm: on Awesome 770  
power catamaran, 54:5; CS hull/canoe  
sterned underbody, 114:10 on fast  
displacement hulls, 29:4; on hauling  
angle of high-speed displacement  
catamarans going through a high-speed  
turn, 93:4; icebear (powercat), 78:46;  
obit, 114:10; on New Zealand designers,  
73:5; on power catamarans, 47:5; on  
"The Price of Speed," 65:5
- Tennessee Mat Company, Inc.: anti-fatigue  
mats, 23:54
- tents: for dust containment/bottom prep,  
31:10; heatable/for painting and repairs,  
19:25, 21:12; heatable/for post-curing,  
14:45, 21:12, 34:21; for resin/putty  
storage, 33:57. *See also* boat  
sheds/shelters
- ter Heide, Roel: on synchronizing inverters,  
114:4
- terminals. *See* batteries; rigging, stainless  
steel, wire; swaged terminal fittings;  
wire/cable, marine, terminal connections
- Tern Boatworks (Nova Scotia): and  
aluminum and bronze foundry, 171:60;  
International One Design build/*Enigma*  
daysailer, 171:60; McGowan Marine  
Design affiliation, 171:60; repair and  
maintenance work/storage facility,  
171:60; submarine-themed playground,  
171:60
- testing, model/tank. *See* model testing  
testing of composites/laminates. *See*  
composites testing, lab/standardized;  
composites testing, non-destructive  
(NDT); composites testing, shop
- Tether, David E.: on diesel-electric/inrush  
surges, and battery banks, 93:4; and  
marine hybrid development, 127:30
- Texas: licensure/engineer, 56:53
- Textile Technologies Industries Inc. (TTII):  
X-weave fabric, 37:71
- textiles: Ferrari Group/composite textile  
and fabric coating specialists, 117:8
- Textor, Ken, author: "Shrink-Wrapping,"  
18:28; "The Doctor Is In," 92:68; "The  
Take Mystique," 75:72; "Vintage Speed,"  
81:72
- Textron Inc.: Homelite centrifugal pump,  
30:60; Motor Lifeboat (MLB) prototype,  
48:66
- Textron Lycoming: TF40B turbine engine,  
12:60
- Tg (glass transition temperature). *See*  
resins, curing/exotherm cycle
- Thames Rule, 61:76
- theft: boatyard property insurance, 7:28;  
Mighty DataDot alphanumeric  
identification code, 71:6
- theodolites: precision instruments for  
measuring angles in the horizontal and  
vertical planes, 159:60. *See also*  
CAD/CAM

*Theodore Tugboat*: based on cartoon character, 65:11

*Theory of Plates and Shells*, Timoshenko, S.P. & Woinowsky-Krieger, S./tabulated coefficients for simple laminate calculations, 166:31. *See also* Loscombe, Robin

Thermodyn Industries: Aden QT-100 hearing protection, 8:54

thermal imaging: goggles, for, 109:100; G-10 laminates, 164:40; FLIR T44obx thermal imager, 164:40; NavCom tower/Edson International, 113:10; RSB Imaging/metal, wood, fiberglass, 133:12; types/damage assessment/cored hulls, 25:18

thermal welding: 65:97

Thermashield: TechFlex tube and wrap, 77:10

thermocouples, electronic: building a temperature-sensor system, 89:78; for monitoring bondline exotherms/vacuum-bagging, 43:24; for monitoring laminate temperature/epoxies, 42:62, 89:78; for monitoring tooling exotherms/flat-panel construction, 45:68, 89:78; needle probes, 89:for photo-curing resins, 18:17, 89:78; for post-curing, 14:45, 63:151

thermoformed hulls: cracking/thermal expansion, 34:59; Luran S (styrene-acrylonitrile copolymer), 34:59; polycarbonate acrylic alloy/Carbonlite 2000, 60:11; polyethylene, 10:34, 11:20, 29:33, 29:37. *See also* ABS plastic; co-extrusion; roto-molding; thermoplastics (TPs)

thermoformed plastic components: custom made, 35:58, 163:44; stand-up paddleboards, 163:44

thermography/thermal imaging. *See* infrared thermography

thermoplastic foams. *See* foam cores, PVC

thermoplastic polymer panels: Nuvel, 34:28, 34:34

thermoplastic resins: Centrex, 14:57; pre-pregs, 24:18

thermoplastics (TPs): coextrusion, 10:34, 34:59; comingled glass-reinforced, 54:112; development/technology/performance, 10:34, 90:84; double-reading compass/Plastimo, 149:68; long-fiber thermoplastic reinforcements, 90:84; non-molded, 10:40; in flame-spread test, 62:78; recycling programs, 15:4, 29:33, 43:17, 54:112; ultra-high molecular weight/married to composite laminate, 44:35; VOC emissions, 11:20, 54:112

thermopolyurethane through hull fittings, 114:120

thermoset foams. *See* foam cores, PVC

thermosetting resins: data book on, 25:59; development of, 38:30, 54:112; melted-boat syndrome, 29:8; origination of, 134:62; pre-pregs, 24:18. *See also* epoxy resin; fiberglass (FRP) construction; polyester resin; vinyl ester resin

Thermwood Corp.: Model 50 cutting machine, 24:62

THHC Lighting: xenon lights, 87:97

Thiel, Philip: designer/human-powered canal boat, 55:16; on the geometry of shapes and freehand drawing/calculations, 126:6

Thiele, James: American Blimp Corporation/Lightships/airships, 58:13

Thing, R. Steven, author: "How Much Should I Charge?," 1:38; "How to Get

Along with Your Banker," 13:22;  
 "Weathering Tough Times," 9:13  
 Thin-Lite Corporation: low-voltage  
 fluorescent lighting, 87:97  
 thinners: Penetrol, 19:36; for varnish, 19:36  
 thixotropes. See Cab-O-Sil; fumed silica;  
 microspheres/microballoons; resin  
 thixotropes  
 Thomas & Betts: ball-lock cable ties,  
 170:10; Kopr-Shield, 8:12; stainless  
 steel cable ties with self-locking heads,  
 170:10  
 Thompson, Adrian: designer/offshore  
 multihulls/*Goss Challenger*, 58:13,  
 61:10, 62:3; high-speed catamarans,  
 63:86; profile, 62:46; *MarySlim* VSV  
 motoryacht, 109:17, 119:6; Very Slender  
 Vessel (VSV) wave-piercing monohull,  
 74:54  
 Thompson Brothers Boat Manufacturing  
 Co. (wisconsin). See *also* Cruisers  
 Yachts.  
 Thompson, Ewen: on lightning protection  
 and technicalities of ground plate  
 design, 88:4  
 Thompson, Joseph, & Co., Ltd.: Speed  
 Strip strip-planking system, 46:65  
 Thornell-Crete, Kellie, author: "Lapsed  
 Yards," 125:72  
 Thornell, Gerry: on wastewater  
 runoff/regulations, 31:10, 31:18  
 Thornycroft, Sir J.I.: *Ariel*, steam  
 launch/sea trial, 113:32; fast motor  
 torpedo boats, 128:18; *Miranda*, steam  
 yacht, 113:32; stepped hull boat/Coastal  
 Motor Boat, 85:76  
 thread-locking compounds: Loctite/for keel  
 fasteners, 38:20, 39:4, 40:4  
 3-D modeling. See computer software, 3-D  
 modeling/graphics; mock-ups, interior,  
 as sales/design tools

3M (3M) Corporation: adhesive films,  
 57:88, 169:28; atomizing spray nozzle,  
 141:30; barrier coating, 48:86; black  
 sandblasting tape, 9:50; blister and  
 repair filler, 48:86; drag-reduction films,  
 60:5; Easi-Care 5000 respirator, 3:19,  
 9:56; Fastbond, 29:8; 5200  
 sealant/adhesive, 1:46, 15:21, 20:32,  
 28:27, 29:4; Fine-Line plastic tape,  
 37:36; Finesse-It buffing compound,  
 19:36; Finesse-It mold-release system,  
 12:27; Hand-Masker film, 31:10; Heavy  
 Duty Protective Tape (No. 346), 29:58;  
 hooded respirator, 1:68; Jet-Weld, 29:8;  
 Liquid Polish, 19:36; MSDS Access  
 system, 23:54; 101 Marine Sealant for  
 composite integral tanks, 74:20; online  
 medical exams and respirator raining,  
 94:8; on-site workshops for respirator fit,  
 76:10; Paint-Preparation System  
 (PPS)/reuseable clamps and  
 disposeable containers, 141:30; Perfect-  
 It Paint Polishing System, 10:52;  
 Perfect-It glazing compound, 19:36;  
 portable Sun Gun for gelcoat color  
 matching, 108:16; Post-Its, 79:10;  
 respirator training videos, 15:70;  
 sandblaster sponge for joiner work,  
 76:80; sanding disc attachment  
 systems, 23:54; Scotch-Brite pads  
 (varnishwork), 19:36; Scotch-Brite discs  
 (graphics/tapes removal), 16:52;  
 Whitecap II face shield, 7:64; 3M Wrap  
 Film Series 1080, 169:28  
 3M (3M) 5200 sealant/structural adhesive:  
 applications/bedding cautions, 28:27,  
 29:4, 130:38; for bedding/deck  
 repair/waterlogged foam, 37:48; for  
 bonding hardware/fittings, 15:21, 28:27,  
 29:4; for secondary bonding, 20:32; for  
 teak deck reconstruction, 1:46

throttle arms/knobs: Ongaro Marine, 44:54

through-hulls: aluminum honeycomb core material/conversion of *USA 76 America's Cup* boat, 140:22; Bertram 35 through-hull fittings for reduction of water turbulence, 171:18; flooding/back-siphoning/bilge pump installations, 57:48, 57:56, 57:73, 69:70; galvanic/stray-current corrosion, 32:36, 130:66; impact testing on metallic and non-metallic through-hull fittings, 114:120; IonGuard sacrificial anode, 115:128; maintenance manual, 43:83; selection/installation/maintenance, 8:42, 8:44, 57:99

thrusters: hubless thruster/van der Velden Marine Systems, 120:38; retractable, 6:52; preparation for long-term storage, 122:52

Thunderbird Boat Co.: early fiberglass work, 103:186, 119:66; The *Flipper* fleet, 103:186

Thunderbird Products, Inc.: acetone reduction/replacement, 33:20, 33:26; shrink-wrapping (transport), 18:28; use of methacrylate adhesive, 75:58; use of photo-curing resins, 18:4; use of Pliogrip adhesive, 30:60

Thurston, Scott: on sailboat market, 23:4

Thurtle, George: on *Rocket Science* cruiser, 45:68

Tiara Yachts: epoxy-based production powerboat, 68:26; profile, 71:52

Tibbets, Ross, author: "All the Tools in the Box," 159:60; "Go Fly a Kite," 162:12; "The Wizard and *Merlin* Reunite," 161:8; "Wylie's Way," 165:70

Tiderunner Boats: use of Polylite Profile tooling resin system, 16:52

Tides Marine: DMBS rudder port bearing, 39:98; Strong rudder-port bearing, 46:26; Strong Sail System, 39:98; Strong Seal, 29:14, 29:21; upper rudder bearing, 39:98

Tidewater-Havre de Grace: discount marine accessories, 21:12

tie coat: for in-mold coatings/epoxy laminates, 49:59, 49:60, 51:6. *See also* bondcoat; gelcoat application/shop practices/troubleshooting; skincoat

Tige: ski boat with adjustable trim system for boatwake, 88:14

Tighe, W.R. (Bill): obituary, 47:15

Tillotson-Pearson Inc. (TPI): Alerion line, 147:38; builder profile/diversification, 33:36, 33:40, 110:3, 129:8, 147:38, 172:12; cored bottoms, 51:22; cruising catamarans, 30:48; designing for production, 2:60; J-Boats, 33:36, 51:22, 98:28, 147:38; re-launch of Pearson Yachts/*True North*, 74:9SCRIMP, 31:42, 33:36, 64:64, 69:132; spar technology, 3:42; structural adhesives, 28:27; vinyl ester resins, 6:10; X-weave patching, 36:34. *See also* Pearson Yachts

TimberGuard, UV-resistant polymer encapsulation for dock pilings, 109:17

*Timberwind*, cutter: pilot boat/Portland, Maine, 150:34. *See also* Roseway cutter

Time Saver Tool Corporation: Clinch-Fast metal clips, 10:52

Timmer, Jr., Blaine: Century Boats executive/obit for, 158:8

"Tirant" rig (push and pull): 64:64

*Titanic*: *Alvin* submersible scanning vessel, 141:6; reverse-engineering wreck of/model testing, 58:13; steam engines, 53:12

Titan Tool Inc.: Epic airless piston spray pump, 23:54; LP3 HVLP spray-finishing system, 34:59

titanium: all-titanium sailboat *Titan Lady*/Nissei Industrial Co., 132:62; corrosion and erosion resistance, 132:62; extraction process/history, 132:62; IBEX seminar on titanium, 132:62

Titanium Industries, Inc., 132:62

Tobiason, David: on chopper guns, 3:54

Todd, Western A., author: "Biting the Regulatory Bullet (on shop safety standards)," 2:67

Tofinou: daysailer/Philippe Joubert, 131:12

toilets, marine: antisiphon valves, 162:38; Dometic/SailVac system, 132:6; head arrangements, 5:50, 72:73; Lavac Zenith, 8:54, 72:73; macerating discharge pumps vs. diaphragm pumps, 162:38; macerating toilets, 72:73; Raritan double-acting piston pump toilet, 72:73; Raritan Sea/Fresh Marine Elegance toilet, 120:4; SeaLand "magnum opus" model, 72:73; Vacu-Flush, 4:58. *See also* head, arrangements/layout; holding tanks

Tolman, Renn: on structural adhesives, 28:27

toluene: MACT standards, 34:40

Tom's Marine Hardware: Interlux BilgeKote #862, 15:70

tonnage/admeasurement laws: aluminum construction/framing, 26:4; shipping rules/subchapters, 36:22; simpler international system, 53:4; speed prediction, 59:56

tool bag, canvas: Gould Shawmut, 40:66; Toolpak, 11:52

tool catalogs: cutters/drills, 20:56; laminating tools, 18:54, 20:8, 25:59

tooling (molds): adaptable mold, 67:128; for advanced-composite laminates/cheap, 59:76, 60:96; for

advanced-composite laminates/minesweepers, 53:40; for all-carbon prepreg construction/Hodgdon Yachts/*Commanchee*, maxi ocean racer, 153:20; aluminum extrusions, 59:76, 114:94; aluminum sheet-metal, 39:30; amortization of, 9:13; benefits/built-in post cure/Parabeam, 143:10; builder's contracts, 37:60; carbon pre-preg/room-temp/high-temp, 59:76; cast aluminum (RTM), 27:34; ceramic, 46:16; changeover to female molds/Green Marine, 123:32; for class C offshore racing catamaran/*Cogito*, 39:30; cleaners/wax strippers for, 22:12; cold-molded/post-curing, 59:76; comparison of FRP tooling processes and costs, 71:106; database/sources, 30:54; development/fiberglass, 38:30; direct-to-mold no-male plug/mouldCAM, 145:78; for DuraKore strip construction, 15:34; epoxy syntactic foam cores/slurries, 6:52, 7:50; existing boat modified as plug, 16:7; expandable molds/Rapid Expandable Modular Molding System (REMMS), 101:12; fairing system/Extender, 27:70; female molds/early FRP, 60:116; female molds/for keel blades, 60:96; female molds/Limited Production Tool (LPT) method for, 71:106; for fiberglass megayachts, 2:42, 3:5, 32:18, 96:36; for high temperature processing, 136:56; for inboard pod-drive systems, 115:32; for J-Boat models/DLBA Robotics, 98:28; gantry system, 32:18; gelcoat application, 11:42; "green"/conditioning/post-curing, 12:27, 12:30, 50:46, 60:96, 60:103; grounding/static discharge, 22:12; for headliners/mock-ups, 9:28; for hull and

deck/shoebox hull-to-deck joint, 60:104; for interior joinerwork, 40:42; for keel blades, 60:96; laminate schedule for, 3:34, 143:10; for large parts/advanced-composite laminates, 59:76, 60:96; low-mass laminated (RTM), 27:34; maintenance/repair, 15:49, 22:12, 25:59, 45:76; for megayachts, 2:42, 3:5, 32:18, 32:18, 47:34, 67:128; moisture/steaming of, 60:96, 60:103; for molded interior grid/liner, 46:28, 46:35; for one-off/bow redesign, 45:86; for one-off/composite, 10:42, 32:18, 44:35, 55:58, 96:36; for one-off/Masonite, 10:42; Optimold resin/aluminum, 46:16; plastic-faced-plaster (PFP), 60:96, 60:103; polyjet technology/3D printing/Whale Pumps, 161:8; producer/Consolidated, 47:34; producer/North End Marine, 44:35, 71:3; producing tooling for others at Marine Concepts/JRL Ventures, 151:68; for production boats, 2:60, 3:27, 3:34, 47:34, 47:40, 67:128, 101:62, 114:94; and release systems, 12:27, 12:30, 145:78; for resin-infusion molding/SCRIMP, 44:30, 44:35; for Resin Injected Recirculation Molding (RIRM), 48:48; for resin-transfer molding (RTM), 26:44, 27:34, 27:39, 32:28; for roto-molded/thermoformed hulls, 10:34, 11:20, 29:33; for small parts/vacuum-bagging/resin-transfer molding, 30:18, 32:28, 46:16; splash molds, 3:34; storage, 15:13, 17:34, 25:59, 45:76; stretching/extending hull, 2:42, 46:16, 46:26; strip-planked, 59:76; surface coat/AdTech ES-211, 60:96; temperature control/flat-panel construction, 45:68; temperature-controlled molding (TCM)/Andre

Cocquyt, 125:54; temperature control/RTM, 27:34; thermal expansion/wood support structure, 151:68; turning/Posi-Turner, 10:52; upgrading, 11:34, 12:10, 13:54, 71:3; for vacuum-bagging, 1:58, 30:18, 31:68, 53:40; vinyl ester, 6:10; VOCs reduction, 21:18; wood vs. steel, 53:40, 135:56; work area, 17:34, 71:3. *See also* mold-release systems/agents; plug (male mold); tooling, for custom/one-off boats; tooling, troubleshooting  
 tooling, for custom/one-off boats: affordable/custom line, 2:4; designing for production, 2:60; for DuraKore strip-planked construction, 15:34, 16:4; fairing techniques, 10:42; producer, Consolidated Yacht, 47:34; producer/North End Marine, 44:35  
 tooling, for custom/one-off boats, sandwich construction: absence of female tooling/New Zealand, 55:58; birdcage (open) molds, 10:42; fairing techniques, 10:42; full-surface molds, 10:42; for megayachts, 2:42, 3:5, 32:18, 47:34  
 tooling, troubleshooting: panel camber, 21:50; polystyrene hazing, 22:12; porosity, 21:50; pre-release (assymetry/instability) problems, 31:20, 50:46; print-through, 21:50, 50:46; print-through transfer to, 7:50; resin shrinkage, 21:50, 32:18, 50:46; static discharge, 22:12; surface reactivity/sticking of parts, 22:12; video on, 25:59  
 tooling foam: high-density/megayacht, 32:21. *See also* epoxy syntactic tooling foam  
 tooling gelcoat: Armorcote, 13:80; and mold release/surface reactivity, 12:27, 13:11, 22:12; porosity, 21:50; post-

- curing, 12:27, 12:30; surface cracking, 22:12; thickness, 21:50, 22:12
- tooling resin system: Polylite Profile 33540-00, 16:52
- tooling, water soluble, 103:44
- tools: forensic composite testing: 87:62; insuring (employees'), 7:28, 8:64; invitation to collect and preserve/WoodenBoat Library, 167:3; metal sealer for, 24:62; Proto Blackhawk PT-1050-2 automatic wire stripper, 141:30; storage (boatyard in a box concept), 21:38, 87:46. *See also specific tools*; tool catalogs
- tools, air. *See* compressed-air (pneumatic) tools/systems
- tools, power, combination: panel saw, 21:60
- tools, power, hand-held/portable/cordless: bionic wrench/Loggerhead Tools, 112:10; cordless 18V Track Saw/Festool, 160:8; cordless Rotary 18V Hammer Drill/Festool, 160:8; drill/driver, 48:86, 49:24, 49:25, 60:104; drills/saws for sample cutouts, 49:24, 49:25; dust collection/extraction systems, 28:38, 87:10, 144:10; ergonomics, 37:71; ergonomic screwdrivers/Wera Tools, 112:10; geared orbital sanders/Sioux Tools, 125:8; holesaws, 49:24; holesaws, storage of, 87:46; HP-7 Shoulder Plane/Bridge City Tool Works, 112:10; hurricane preparations, 27:18; for repairing carbon, 144:10; rubber disc tipped with tungsten carbide studs/Tercoo, 141:30; Toolympics, 50:11
- tools, power, stationary: buying used, 48:56; dust collection/extraction systems, 28:38; machining/milling, 48:56
- Torin. *See* Airex (linear PVC) foam; Core-Bond bonding putty
- Torit: dust/particle separator, 28:38; Environmental Control Booth (ECB), 28:38, 28:46, 28:47
- Torpedo: serial hybrid system providing whole-boat energy management, 164:58
- Torres, Claude: sportfisherman designer, 87:16
- Torreson, Gordon: on keel attachment/fasteners, 40:4
- Torrid Marine: Vibraseal water and corrosion resistant thread sealant, 140:7
- Torr Technologies Inc.: tools for vacuum bagging, 31:68
- Total Quality Management (TQM) systems: 25:52; lofting, 38:14, 38:38. *See also* product quality/quality control; production boatbuilding, manufacturing/production
- Touchwood BV: supplier of Sitka spruce, 168:44
- Townes, Brooks, author: "Adjustable Tooling," 67:128; "Bill Munson's Story," 58:66; "Kazulin Boats Ltd.," 65:52; "Making of a Passagemaker," 57:123; "Mitigating Impacts," 70:66; "More on the Boat, the Builder, and the Naval Architect," 67:98; "SeaArk," 69:52; "Southern Spars," 75:98; "Tiara Yachts," 71:52; "The Vic Franck Boat Co.," 64:96; "Westerly Marine," 61:52
- Townsend Bay Marine: 63:10; infrared scan of water intrusion, 85:22; job management system, 68:44
- Toyota Marine: Epic 21/22 waterski boats, 56:10; recyclable aluminum boats, 54:43
- TPI. *See* Tillotson-Pearson Inc. (TPI)

TR Industries: mold-release system/application, 12:27, 12:28

Trace Engineering: inverter supplier, 25:34, 25:40

Tracker Marine: acetone reduction/replacement, 33:26; BaltekMat applications, 7:50; CAD/CAM applications, 7:18; dealers/customer satisfaction/TQM, 25:52; dust collection/extraction system, 28:38; Hamberger, Sylvan "Ham", obit for, 158:8; tornado/rebuilding, 39:90; use of specialty plywood, 16:12, 27:42

trade associations, marine. *See* marine trade associations

trade deficit: powerboat surpluses vs. foreign supplier clustering, 74:96

trademarks: conflict/Calypso Inflatables, 14:4; trade-dress protection, 42:68, 110:118. *See also* patents

trade shows: IBEX, 55:3, 60:27, 60:136; international/Fort Lauderdale, 55:16; international/Marine Equipment Trade Show (METS), 55:3. *See also* boat shows

trailerable boats, market for: power cruisers/small runabouts, 39:67, 54:43, 58:79, 60:5; trailer-sailers, 30:48

trailerable sailboat: Rio Hondo 40S prototype/Scott McClintock, 112:22

trailerling: point loading/chines, 58:79, 60:5; pivot point on brace trailer/Rigging Solutions, 130:10

trailers, hydraulic: Brownell Boat Works, 22:32, 57:133, 60:27, 66:64, 71:88; custom-built/tilt/Morse Overland Marine, 135:58; evolution, 57:133. *See also* boat transport

Traina, John: and Newcastle Marine profile, 130:28

training, of employees: ABBRA composite-construction workshops, 38:51; beyond, 14:4; in composites, 38:51, 41:58, 42:5, 58:104, 144:10; composites-technician certification program, 44:49; in core bonding/installation, 59:104; cross-training, 12:10, 13:54, 25:42, 26:20, 29:22, 46:16, 47:34, 145:86; electrical systems certification, 54:32; in firefighting/preparedness, 35:25, 39:44; in-house education/workshops/apprenticeships, 35:25, 36:74, 41:28, 41:58, 46:16, 145:86; in leadership, 13:54; programs/systems/trends, 5:32, 12:10, 13:54; in safety, 8:64; 13:54; vendor/supplier-provided, 13:54; in waste reduction/management, 20:40, 28:52, 55:26, 55:27

training, vocational: advanced composites, 47:57, 50:11; Australian apprenticeship program, 166:64; catalog of marine trade classes, 62:12; in composites, 41:58, 42:5, 58:104; computer (numeric) lofting, 38:14, 38:47; design/engineering, 7:25, 20:26, 22:51, 43:36, 43:41, 47:24, 58:104; electrical systems certification, 48:4, 54:32; engine mechanics, 57:15; International Yacht Restoration school, 52:12; manual (traditional) lofting, 38:14; Marine Training and Education Center (NC), 105:12; marine systems technician training/certification, 48:4, 57:98, 57:99, 57:100; New Zealand apprenticeship system, 20:18, 20:21, 54:43, 54:52; Quadrant Marine Institute, 79:77, 162:12; spray-finish training workshop/DeVilbiss and Binks, 75:14; stretching/extending hull, 145:12; surveying, 37:80; U.S. boatbuilding



- schools/programs, 20:3, 20:18, 21:12, 22:4, 22:51, 23:50, 32:48, 46:10, 50:11, 61:26, 79:77, 81:10, 144:10, 162:12; wooden boats, 47:34, 50:11, 144:10. See *also* boatbuilding apprenticeship programs; education
- Tramex Inc.: moisture meter, 3:60
- transducer, depthsounder: internally mounted/drag reduction, 45:29; 94:18; dual-element transducers, 150:60; limitations, 150:60; variations on UT (ultrasonic testing) transducers, 150:60
- transfer efficiency. See painting techniques, spraying
- Transmatic. See Dustcontrol/Transmatic
- transom: expansion/computer vs. manual lofting, 24:26, 67:13; kill box/Calyber 35 sportfishermen, 115:18; reverse/design considerations, 25:55, 27:4. See *also* stretching techniques
- transom, plywood-cored: vs. fiberglass, 40:54, 41:5; installation, 6:5, 69:70; problems/repairs, 29:8, 32:44, 32:45, 69:70
- transom door: latch for, 3:60, 161L34; one-piece and two-piece doors, 69:92; outward-opening door, 171:34
- Transpac: *Merlin*. Santa Cruz 70/builder and designer Bill Lee, 161:8; TP52 class, 154:36
- traveler-car: with cam-matic cleats, 3:60
- Travelift: evolution of, 57:133; maintenance/safe operation, 50:38, 53:4; vs. marine railways, 57:133; mammoth 600C model, 110:12; pier for/environmental regulations, 27:8; strap use recommendation, 142:18. See *also* boat lifts/hoists; boat storage; hauling and launching
- trawler yachts: Arthur DeFever design, 144:10, 151:96; Grand Banks/*Spray*/American Marine, 151:96; Kettenburg Boat Works, 102:3; Northern Marine, 57:123; North Sea trawler type/*Dardanella*, 58:13; restored shrimp trawler, 2:12
- Trellex Morse: Deep Sea Seal (Trellcraft Seal), 29:14, 29:21
- Trend-Lines: Dyna-Pressure four-way clamp, 12:60
- Trend Marine (UK): carbon fiber sunroofs, 101:12
- Trenhaile, Brian E.: on free-surface correction/stability testing, 44:5
- Trenton Marine. See Able Marine
- Tres Martin's Performance Boat Driving School, 133:60
- Trevisan, Amador Henrique: on metric conversion standards, 96:4; on ethanol usage in Brazil, 109:6
- Trevira polyester fabric: with honeycomb cores, 22:8, 22:20; for noise-reducing laminates, 32:4; print blocker, 7:50, 7:62
- tri-bowed boat: plenum mold for, 96:6
- Tricel Corporation: kraft-paper honeycomb core, 22:20, 24:4, 32:52; Tripanel/Marine, 32:52
- Trico Welding and Mariune Repair: 60' shrimp trawler, 2:12
- Tricon: Ward Setzer-designed *Nisi* powerboat/China, 128:38
- Tricycle: use of to transport tools/Sadgrove's Quay, 91:20
- Trident Rubber: exhaust hose/SAE-compliant, 43:44
- trihedral hullform: hydroplane, 59:10; Stolkraft, 49:42
- Tri Lark Boats Inc.: profile, 53:12
- Trilling Medical Technologies: Water-Jel burn care supplies, 8:54
- trim, edge: Quick-Edge trim, 5:26

trim, hull: ballast correction for, 64:46; non-metallic stabilizers, 35:58, construction considerations, 87:46

Trim-Lok cover treatments, 115:18

trimarans, power: circumnavigations, 50:11, 63:86, 72:84; commuter/seaplane hybrid/Xtreme Explorer, 57:15; electric/wave-piercing, 50:11; fuel-efficient *Yanmar Endeavor* (Morelli & Melvin design), 72:84; market for, 6:25; outsourcing/framing kits, 37:16, 37:18; trimaran ferry hull/North West Bay Ships, 95:6

trimarans, sail: *Adagio*/WEST SYSTEM→ epoxy, 125:36; articulating hulls and beams, 91:154; *Cheers*, Atlantic proa/Dick Newick, 122:40; fast solo, 65:11; hydrofoil-equipped trimaran/Multihull Technologies, 75:14; hybrid wing sail, 170:48; Ian Farrier/F27 trimaran with folding amas, 172:12; *Lark* with dagger-foils/Dick Newick, 122:40; market/designs for, 6:25; Morelli & Melvin designs, 72:84; multiplast trimaran *Geronimo*, 90:3; *Ocean Surfer*, solo racer/Durakore/Dick Newick, 122:40; Open 60 Groupama/Van Peteghem Lauriot-Prevost (VPLP) design, 91:154; ORMA Class, 91:154; remote-controlled/ circumnavigation, 54:18, 55:16; rigid-wing, 53:12, 55:16, 170:48; *Rogue Wave*/Dick Newick, 122:40, 124:42, 125:36; Telstar folding trimaran, 83:14; *Trine*/Dick Newick, 122:40; *Vals 1, II, and III*/Dick Newick, 122:40; WindRider, 52:12; WindRider rotomolded polyethylene trimaran, 135:46; W17 trimaran, 169:103

trim tabs: cure for dynamic instability, 34:5, 58:26, 126:38; for minimum resistance, 58:26; in surface-piercing prop, 121:78;

Rocket Flaps, 34:59; Lenco electro-mechanical, 7:64; better reachable layout for, 171:34; vs. stern flaps, 70:81; when and how to add, 75:140

Trinity Yachts: aluminum-fiberglass construction, 17:19; carbon credits program, 117:26; and Dometic in-duct air purifier, 141:6; noise/vibration control, 5:42; recession business strategies, 121:62

Tripp, William H. "Bill": Aero 24, 105:56; *Aquijo* ketch/carbon fiber rigging for/ radial braiding machine, 164:12; Baltic 50 carbon/Kevlar/epoxy laminates production sailboat/Baltic Yachts (Finland), 85:46; Bermuda 40/Hinckley Co., 105:56, 151:24; Block Island 40, 105:56; centerboard yawl *Georgiabelle*, 105:56; Cinderella // hull bottom repairs, 126:18; *Cinderella IV*/Green Marine, 123:32, 136:56; custom aluminum ocean racers/*Ondine*, 105:56; flushed deck sloop *Touche*, 105:56; *Katrinka* cruiser/race refit/Brooklin Boat Yard, 138:48; offshore raceboats/design/review, 105:56; 109:6; 110:4. 151:24; Tripp 30 fiberglass yawl, 105:56

Tri-State Custom Fiberglass: C-Hawk Boats/foamed urethane board stock, 37:48

Tristram Boats: fizzboats, 54:43

Tritt, William (Bill): and fiberglass mast, 134:62; fiberglass automobile bodies, 133:8; profile/early fiberglass/Glasspar, 41:58, 60:116, 60:118, 60:120; 132:6

Triumph Yachts: interior design, 6:34

Troberg, Dick, author: "The Other Stray Current," 105:96, 107:4

troop carrier: Russian WIG (wing-in-ground-effect) craft/Daniel Savitsky, 126:64

Trophee Jules Verne round-the-world race: contenders *PlayStation* and *Goss Challenger*, 58:13, 60:11

troubleshooting: process control system, 112:88

TruDesign: glass-reinforced nylon raw-water plumbing components, 143:10; valve position monitors, 143:10

True Marine: Speedseal pump cover, 53:89

Truja, Vasil: on Green Star Class/hybrid power yachts, 119:4

Trumpy boats: restoration of/Moores Marine, 109:60; jackstand for/Moores Marine, 142:18

Tsai-Wu evaluation, 156:40. *See also* finite element analysis

Tsouvalis, Nicholas G.: hat-section stiffeners, 77:5

T-Torque Drive System, Inc.: surface-piercing drive system, 18:54

tube-bending machine, 120:38

Tubular Compartmentalized Integrated Hull Construction, 105:12

tuberculosis: exposure/OSHA rule, 36:74

Tucker, Wayne: on galvanic blistering, 57:32

Tucker, Wayne, and Richard Brown, authors: “Galvanic Blisters in Carbon fiber Laminates,” 57:30

tug-and-barge, integrated: CATUG catamaran chemical carrier, 43:36

Tug-Boat Products: laminating rollers, 6:52

tugboats: designs/yard boats, 42:34; “gentleman’s tugboat,” *Benjamin Bates*/Tim Graul, 110:68; Godzilla tugboat/Sam Devlin, 85:10; propeller matching, 46:61; repair of wooden tugboat Swell/Commodore Boats, 167:14; 65’ wooden tugboat *Theodore Tugboat*, based on cartoon character, 65:11; Z-drive tugs, Washburn & Doughty, 104:12, 127:104; Z-drive tugs/Gladding-Hearn, 151:52

tuna towers: aftermarket niche/Rybovich, 14:26, 14:32; backing plates for primary leg, 139:84; *Boca Jima* aerodynamic tuna tower, 101:38; installation/safety, 42:88; tower shop/J & J Marine, 104:78; lightning protection, 43:64; outsourcing/quality control, 35:4; PipeWelders Marine builders, 67:13; tower-mounted lights, 101:38

Tunco Manufacturing, Inc.: abrasive tools, 25:59

turbocharging. *See* Andrews, Alan.

turbulence: model testing vs. full-scale testing, 58:6; and propulsive efficiency, 46:5; stimulators, 58:6

Turkey: METYX Composites tooling center, 135:6; Yonca-Onuk JV/Fabricator’s Excellence Award, 84:18; Vicem Yachts, 102:34; on shipyard conditions in, 104:4

Turner Yachts: low-temp pre-preg construction, 64:82; switching to pre-pregs, 63:151

turning systems. *See* hull lifting/rolling/turning systems; roto-molding

Turn Point Design: CNC-cut composites tooling/parts, 137:2; and Northwest School of Wooden Boatbuilding, 137:44; Skate 15/kit construction of a mini Transat Design Sailboat/plans, 173:46

Twaron: para-aramid, 158:54; use of at Elling Yachts, 158:54

twelve boats a year business plan, 123:10;

12-Meter class: last wooden 12-meter/*America’s Cup*, 135:14; 1997

Regatta, 50:11; velocity prediction  
program/math model/Van Oossanen,  
Peter, 121:50

2HO: *Quokka IV*/cored structural laminate,  
52:30

Tyvek suits. *See* suits, Tyvek

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

U-bolt: Wichard's waterproof, 24:62

UFO (Unidentified Foiling Object), 166:3

Ullberg, Robert, designer: cold-molded  
sportfisherman hull, 81:10

Ullman Dynamics, 166:64. *See also*  
Ullman, Johan, Dr., and High Speed  
Boat Operations (HSBO); seats for  
Norsafe's Marathon 900 RIB, 166:64.  
*See also* Ullman, Johan, Dr.

Ullman, Johan, Dr., author: "Designing  
Consoles for Speed," 141:62; "High-  
Speed Handlebars," 159:56; "Offshore  
Race Open to Workboats," 147:10;  
"Slamming Standards," 149:48

Ullman, Johan, Dr.: High Speed Boat  
Operations (HSBO) Forum, 150:10,  
166:64; inventor, shock-absorbing seat  
and control system (the "Ullman  
Cockpit"), 70:66; "JockeySeat," 70:66;  
suspension seats for Storm  
interceptor/Armstrong Marine, 152:36

ULMW-PE. *See* polyethylene, ultra-high  
molecular weight (ULMW-PE); ultra high  
molecular weight polyethylene

Ultimate 20/Ultimate 24: Jim Antrim, 76:60

ultra high molecular weight polyethylene:  
corrosion resistant wood-composite  
material, 167:14

UltraJet, water jet: 67:70

Ultra Safety systems: Ultimate  
Pumpswitch, 32:52

ultrasonic test equipment: for  
diagnostics/surveying, 35:42, 40:4,  
150:60; Krautkramer Bransom flaw  
detector, 40:4; Quantum QFT-2  
scanner, 17:58; Rayleigh-Lamb waves  
(surface waves), 150:60; techniques  
and applications of, 150:60

UltraSuede: used in interiors, 3:60, 6:34,  
6:39; source, 3:60

ultraviolet light. *See* photo-curing resins;  
UV (ultraviolet) degradation; UV  
(ultraviolet)-resistant coatings

Umlauf, Wayne E.: on design challenge  
losers' designs, 124:6

Umoe Mandal, Norwegian shipyard: 65:84

underwater cameras: in sportfishermen,  
64:11

underwater lighting, 115:74, 117:5;  
DeepSea Power & Light/high impact  
lights, 117:5

underwater movie camera, 133:12. *See*  
*also* Whitman, Dudley.

Underwriters Laboratories (UL): accident-  
investigation seminar, 26:51; circuit-  
breaker testing, 85:114; lack of listing in  
marine gear, 61:128; crash testing  
remote-controlled boats, 67:13; industry  
standards, 64:128, 94:84

*Unexpected*, Carolina-style sportfisherman:  
lightweight furniture and joinerwork for,  
76:80, 92:76

Unger, Wolfgang: on acrylics (osmotic  
resistance), 15:60; on blister  
prevention/resistance, 15:13, 15:60;  
poured-core transom repair, 32:45;  
Seawolf Industries/FRP recycling, 60:82

Unidentified Foiling Object: affordable  
production-built foiling beach  
catamaran, 166:22. *See also* Clark,  
Dave and Steve; UFO

- Unified Safety Corp.: chemical-storage buildings, 4:58
- Uniflite Boatbuilders: PRB (river patrol boat) Mark I, 54:18, 57:7; PRB Mark II, 57:7
- Union Bay Shipbuilding: NC cutting/lofting, 7:18
- United Process, Inc.: Sound Seal soundproofing systems, 9:56
- United Resins Corporation: epoxy syntactic tooling foam, 6:52
- Universal Motors: M3-20 diesel engine, 2:70
- Universal Rule, 61:76
- University of Michigan: Marine Hydrodynamics Laboratory/model testing, 56:26, 56:38; naval architect and marine engineering program, 101:106
- University of Rhode Island: boatbuilding vocational training program, 46:10
- UNIX-based software: in five-axis routers, 61:102; Guido Perla and Associates ship-design firm, 74:68
- unmanned surface vehicles (USVs): surveillance drone boat, 88:14; Owl/Robert Murphy, 88:14; X-1 Concept vessel/Harbor Wing Technologies, 133:96
- unreliability of industry self-certifications, 158:3
- upholstery/cushions: bedding fastenings/water ingress, 37:48; Belina Interiors shop, 97:108; design/production/Cobalt Boats, 28:32; at Cruisers Yacht shop, 114:68; fabric cleaner, 38:55; fabrics/patterning/measuring, 32:15, 34:28; interior design update, 6:39; outsourcing vs. in-house, 37:16, 133:84; performance boat seats/Outerlimits Offshore Powerboats, 133:84; upgrading interiors, 32:15; weight savings/Cigarette Racing Team, 12:18. *See also* fabrics, marine/upholstery
- urea-formaldehyde adhesive: Weldwood, 51:36
- urethane adhesives: description/applications, 41:44; Sikaflex, 29:8; 3M, 29:8
- urethane caulk/adhesive: 3M 5200, 1:46, 15:21, 20:32
- urethane coatings/paints: HVLP spraying techniques, 34:35. *See also* urethane gelcoat
- urethane coatings/paints, solventless: testing of/ocean rescue vessel, 4:30
- urethane flotation foam: medium-density foamed board stock, 37:48; waterlogged/diagnosis/repairs, 37:48, 37:58. *See also* flotation foam
- urethane gelcoat: Ultrachrome 4005/epoxy laminates, 49:59, 49:60
- urethane-polyester resins. *See* polyester-urethane hybrid resins
- U.S. Air Force: paint removal methods, 7:8
- U.S. Army Corps of Engineers: dredging, 51:11
- U.S. Army Research Laboratory: “smart” composites workshop, 48:4
- U.S. Coast Guard: annual publication *Recreational Boating Statistics*/boat fires, 137:22; approved resins list, 67:13, 133:114; boat safety standards, 4:10, 8:24, 39:12, 62:78, 63:38, 64:128, 101:4; builder-owner disputes (arbitration), 12:47; BUSL utility boats, 51:11; chartering regulations, 27:70; COO vessel identification, 31:62; design certification/plan approval/licensure, 47:24, 153:58; experimental “rubber band” mooring, 113:4; flotation foam

installation/repairs/water saturation, 37:48, 57:41; flotation requirements/compliance/testing, 37:48, 57:41, 57:42; fuel hose regulations, 49:16; high-speed drug buster, 71:123; HINs (Hull Identification Numbers), 31:62, 35:52, 60:5; Homeland Security Response Boat, 85:64, 87:4; ice rescue boat/Midwest Rescue Airboats, 121:78; Lake George, NY excursion boat (*Ethan Allen*) loss/jurisdiction, 101:4, 110:68, 137:12; launchings, 51:11; Leadership 44 trainers/infusion specifications, 133:114; Maritime Safety and Security Teams (MSST), 85:64; Motor Lifeboat (MLB)/fenestration, 41:62; Motor Lifeboat (MLB)/wheelhouse design, 48:66, 117:44; Motor Lifeboat (MLB)47 prototype, 117:44; Motor Surfboat/repairs, 37:48; Motor Surfboat (MSB) Mark V/SCRIMP, 37:3; overcurrent protection regulations, 36:41; passenger weight issue, 110:68, 137:12; patrol boats/Marco method, 26:44; patrol and rescue boats/reverse-cambered cockpit deck/Seaway Boats, 99:20; railing height, 69:92; RIB/foam collar, 40:66; scupper/drain hose definition, 69:92; simplified stability test, 44:5, 54:98; SOLAS rescue boats/Willard Marine, 153:58; stability standards/regulations/small craft, 54:98; Subchapter T boats/rules/certification/inspections, 36:22, 36:32, 39:4, 69:92; surf-rescue boat/dynamic stability, 31:20, 33:4; tonnage (admeasurement) rules/aluminum construction, 26:4. *See also* ABYC safety standards  
 U.S. Department of Defense (DOD): acquisition/design, 52:43; assault

support patrol boat, 146:24; composites testing/research (Naval Undersea Warfare Center), 34:42, 48:4, 48:35, 53:40, 57:30; composites testing/research/carbon fiber, 57:30; downsizing/carbon fiber costs, 26:4; downsizing/skills cross-over to boatbuilding, 25:64; downsizing/technology transfer to maritime industry, 42:39; stealth technology, 46:45, 48:4, 53:40. *See also* Carderock Division, Naval Surface Warfare Center; military vessels; Navy boats/contracts, U.S.; U.S. Navy  
 U.S. Marine Corps: small unit riverine craft (SURC)/SAFE Boats International, 85:64  
 U.S. Marine: laser-scanning fiberglass part cures shrinkage for exact tooling allowance, 99:20  
 USA 76, *America's* Cup boat: conversion from raceboat to work boat, 140:22  
 used-boat market: class maintenance, 39:80; competition with, 11:34, 12:4, 39:70; market strategy, 10:2; megayachts, 12:50; orphanage/networking service, 57:15; recycling programs/U.S. and Europe, 60:82; retrofit program, 18:4; sailboats/Catalina, 35:34; sportfishermen/Bertram, 10:2, 39:70  
 US Marine: acetone reduction/replacement, 33:20; DCPD laminate repairs, 52:67; fiber-to-resin ratios, 59:30; and ISO scantlings, 63:38; safety inspections, 15:50; standardized lab testing, 50:46; waste reduction, 37:66  
 USM Corporation: Socket-Drive Polytops polymer-headed screws, 44:54

U.S. Government: on-line resources Web site, 69:13

U.S. Naval Academy: Hydromechanics Laboratory/model testing, 56:26, 56:38; 150th anniversary, 38:51

U.S. Navy: acoustic signature characterization, 46:50; advanced composites testing/R&D/Carderock, 42:39, 47:57, 48:35, 48:48, 50:5; CECMT Marine Composites Technology Center, 48:48; Combatant Craft Department (CCD), 52:43, 52:51, 52:53, 91:172; composites testing/secondary bonding specifications, 20:32, 20:37, 39:19; development of closed-molding/resin-infusion molding techniques, 31:42, 32:28, 42:39, 47:57, 48:35, 51:52, 53:40; fly-by-wire controls, 73:120; Series 50 planing hulls, 128:18; M80 Stiletto, 97:12, 127:42, 129:6; 44 MK II sail-training vessels, 121:88; Ship Hull Characteristics Program (SHCP), 17:58; Skydex Technologies sea shocks, 91:172; “smart” composites R&D, 46:45, 46:50, 48:4; stealth technology, 46:45, 48:4, 53:40, 73:120. *See also* Carderock Division, Naval Surface Warfare Center; Navy boats/contracts, U.S.

U.S. Paint: Awl-Fair, 23:54; Awlgrip/product support, 60:27; Awlgrip 2/alternative LPU paint, 45:5

U.S. tonnage (admeasurement) system: aluminum yacht construction, 26:4; speed prediction, 59:56. *See also* tonnage/admeasurement laws

USWatercraft: acquisition of C&C Yachts brand, 147:38; J/24 keelboat, 147:38; profile/diversification/product development, 147:38

Utility Composites, Inc.: Raptor plastic/composite nails, 31:68, 32:52

utility skiffs: *See also* offshore service vessels, crew transfer vessels

UV (ultraviolet)-curable coatings and adhesives. *See* photo-curing resins

UV (ultraviolet) degradation: and black silica frit/Simson Fast Tack, 83:72; of ABS plastic, 10:34; of plastic sea valves, 8:42

UV (ultraviolet)-resistant coatings: gelcoat, 2:72; UV/96 sealant, 15:44

UV-PPG (UV-cured pre-pregs). *See* photo-curing resins

UV-VARTM (UV-cured, vacuum-assisted resin-transfer molding). *See* photo-curing resins

---

A B C D E F G H I J K L M N  
O P Q R S T U **V** W X Y Z

---

Vacanti, David: hydrodynamic foils program, 97:28; on variable-order b-splines, 18:4

Vacanti, David, author: “Keel and Rudder Design,” 95:76

Vacanti Yacht Design Software: keel-design program, 24:26, 24:32; Prolines Basic, 30:60, 33:69; Prolines design/fairing software, 8:35, 17:58, 33:69

vacu-forming: molds/mechanical bonds, 49:59; thermoplastics development/construction (Old Town Canoe), 10:34, 11:20

vacuum-assisted resin-transfer molding (VARTM). *See* resin-infusion molding/processing

vacuum bags/film: alternative to (custom tooling), 31:68; Mercury Vacuum Presses, 15:70; Quality Vakuum

Products, 26:54; reusable, 30:18, 30:22, 30:25, 117:8; sealing/fitting/pleats, 43:24, 46:5, 96:36; types/applications/sources, 1:58, 1:63, 1:64, 13:48, 30:18, 30:22, 30:25, 43:33, 46:5, 53:20; Sprayomer water-based elastomer vs. disposable nylon bags and silicone bags, 117:8; VacuPress System, 13:48; for vacuum-drying blistered hull, 9:50, 9:53. *See also* vacuum-bagging equipment/systems/setup

vacuum-bagging, applications/techniques: air-release ports/Mylar tape, 45:68; alternative to (plastic nails), 9:57, 31:68; bag sealing/fitting/pleats, 43:24, 96:36, 108:100, 110:4; balsa core, 30:18, 30:22, 52:30; bondline ventilation/flat-panel fabrication, 45:68; carbon fiber spars, 47:44; for composite flat-panel fabrication/co-curing, 45:68, 68:26, 108:100; for composite one-offs/New Zealand, 55:58; for composite racing shells/kayaks, 41:28, 41:30; for composites testing/samples, 39:30, 50:46; cored custom cabinetry, 13:43; cored/sandwich construction, 9:36, 30:18, 43:24, 108:100; cored bottoms, 51:22, 51:29, 53:40; cored small parts, 30:18; drying blistered hulls, 9:50, 9:53; dry-/wet-bagging cores, 30:18, 47:57, 53:20; fiberglass megayachts, 2:42; fiber-to-resin ratios/controlling resin content, 59:30, 95:16, 132:50, 133:114; gauges for, 83:34, 95:16; handbook/Gougeon Brothers, 43:24; with high-performance resins, 39:30, 42:52, 53:20, 53:40; for large-scale cold-molding, 51:36; one-stage infusion, 51:22, 51:29; set-up for advanced composite shop, 83:35; vs. open-

molding, 53:20, 59:30; outgassing/PVC cores/pre-pregs, 47:57, 69:132; with photo-curing resins, 18:8; plastic-faced-plaster (PFP) tooling, 60:96, 60:103; pre-stitched laminate stack, 57:88; for production building, 1:58, 1:64, 29:22, 30:18, 42:52, 42:59; proficiency, 46:5, 94:48, 99:66, 110:4; pump plumbing/wiring/manifolding, 43:24; 83:34; PVA-treated tooling, 41:50, 45:68; redundancy in system, 63:151; for repairs, 60:27, 69:70, 82:22; 97:174, 108:100; room-temp/high-temp tooling, 59:76; scarfed repairs/advanced-composite single-skin laminates, 43:54, 108:100; simple shop setup/C-class catamaran, 39:30; simple shop setup/low-cost tips, 43:24; skills/training/workshops, 43:24, 47:57, 77:10; solid waste concerns/reduction, 31:42, 31:68; tooling for, 10:42, 30:18, 31:68, 53:20, 59:76; vacuum degassing resins/Steven Brandis, 132:50; VOC emissions/waste reduction, 1:64, 26:34, 28:48, 28:52, 54:112, 133:114; wet-bagging, 30:18, 53:20. *See also* bagged-laminate infusion process (BLIP); cold-molding; laminates, marine, advanced-composite; resin-infusion molding

vacuum-bagging equipment/systems/setup: bleeder/breather/isolation valves, 1:58, 9:50, 30:18, 43:24, 45:68, 110:4; feed line vacuum penetrations in the bag, 106:92; frogs (vacuum probes/valves), 30:18, 43:24, 45:5; gauges/manifold, 43:24, 95:16; mastic, 1:58; Mylar flash-breaker tape/air-release ports, 45:68; oven/heaters/process-control unit, 39:30, 64:82; sandblasting tape, 9:50;



simple shop setups, 39:30, 43:24, 110:4; sources, 1:63, 13:48, 43:33; tacky tape, 30:18, 34:59, 43:24, 45:68; thermocouples, 43:24, 64:82, 89:78; tubing/piping/hose, 43:24, 69:132; vacuum/laminating tables, 39:30, 45:54, 45:68. *See also* vacuum bags/film; vacuum pumps

vacuum (pressure) clamping: equipment system, 26:54; RTM applications, 26:44, 69:132. *See also* vacuum-bagging, applications/techniques

vacuum cleaners/systems: air-powered/applications, 33:64; and blister prevention, 15:13; Diavac, 4:58; Dustcontrol, 84:10; Eurovac I portable system/Eurovac II and III, 84:10; Eurovac downdraft table, 84:10; Fein vacuum, 84:10; Hawg compressed-air vac, 16:52; Nilfisk VT-60A wet/dry, 25:59; Sand 'N Vac, 9:56; Vacuum Sanding Systems, 20:56. *See also* dust collectors; dust extractors/collectors

vacuum-drying, of blistered hulls: air leakage, 10:4; HotVac drying, 69:13; applications/equipment/techniques, 9:50, 9:53, 16:42

vacuum-flow molding: Marco method, 26:44, 32:28

vacuum probes/valves (frogs): machined-aluminum/sources/cost, 43:24, 45:5; shop-made, 30:18

vacuum pumps, types/applications: booklet/Gast Manufacturing Corp., 43:24; electric, 43:24; Kinney 5-hp, 9:50; liquid ring pumps, 87:4; Mercury Vacuum Presses, 15:70; mobile vacuum pump, 69:132; oil-sealed rotary-vane, 87:4; Piab, 30:18; rotary vane/air-powered, 39:30, 43:24; for SCRIMP process, 31:42; sources, 43:33; Squire-Cogswell SC-6, 1:58, 1:63; for thermoforming/vacu-forming, 10:34, 11:20; VacuPress System, 13:48; for vacuum-bagging/plumbing/wiring/manifolding/maintenance, 1:58, 1:63, 1:64, 42:52, 43:24; for vacuum-drying blistered hull, 9:50, 9:53. *See also* vacuum-bagging, applications/techniques; vacuum-bagging equipment/systems/supplies vacuum tables. *See* vacuum-bagging equipment/systems/setup

Vaitses, Allan, author: "The Corrugated Composite Part," 91:178; "The Ferrocement Sportfisherman," 71:99; "Field Method for Finding Prop Pitch," 83:12; "A Master Builder Looks at Licensure (and Other Anti-Libertarian Ideas)," 100:120; "Who Needs a Contract?," 37:60

Vaitses, Allan (boatbuilder): on professional engineer licensure, 100:120; profile, 71:88

Vaitses, Allan: on 48' Hunt deep-V *Active* and cold-molded 48 *Prelude*, 73:5

Vaitses, Steve: on Parting Shot (*Professional BoatBuilder* No. 100, page 120) photo of upright hull and wheels used to rotate it, 101:4

valves: ABS/LR classification, 39:80; metal fatigue/failure, 51:57, 52:4, 146:62; solenoid-operated, 3:60; three-way, 7:64

valves, sea. *See* sea valves

Vamarie, Abeking & Rasmussen ketch: mizzenmast mystery prop, 68:11

Vanadia, Peter: on adhesive/sealants, 29:4

Vance, John: on Tricel paper honeycombs, 32:52

Van Abbema, Mark: Design Challenge/Mark V 36 Commuter, 129:18

- Van de Stadt Timber, and Bruynzeel Plywood, 119:6
- van der Burg, Titia, author: "Conyplex's Conversion,": 108:18; "A Different Approach," 70:38; "Sailing Master," 89:50
- van der Pijl, Bram: Bootdump boat disposal and boat recycling, 160:40
- van der Velden Marine Systems: hubless thrusters, 120:38
- van der Velden, Rene: designer/73' superyacht, 58:13
- Van Dusen, Ted: on carbon fiber laminates/fittings/galvanic blistering, 57:30; profile/composite racing shells/kayaks, 41:28, 41:30, 106:112. See also Composite Engineering, Inc.
- Vanguard Racing Sailboats: profile/Plexus structural adhesive, 52:81; roto-molded multihulls/playboats, 54:18; Sunfish-Laser acquisition, 49:74
- van Heerden, Christiaan, author: "Three from Southwest," 57:110
- van Hemmen, Rik F., P.E.: on the Scarano Fleet, 165:4
- Van Lancker, Peter: American-Chinese joint venture/Dynasty World Yachts, 103:122; profile of, 81:26; Black Watch 30 sportfisherman, 81:26; turnaround at Chris-Craft, 80:48
- van Meer, Olivier, designer: 63:10
- Vanner, Inc.: inverter supplier, 25:40
- Van Oossanen, Peter: fast displacement hullform (FDHF) concept, 134:6, 154:12, 172:12; hull vane, 154:12; tank testing, 121:50, 134:6, 154:12; *Australia II*, 121:50
- Van Peer, Chris, boatbuilder: waterfront gentrification threatens his boatyard for closure, 61:10
- Van Ost, Jack: center-cockpit cruising sailboats, and Lazarra Yachts, 169:44
- Van Peteghem Lauriot-Prevost (VPLP): design of hull and appendages for *Commanche*/Hodgdon Yachts, 153:20; *Figaro Beneteau* 3 sloop with port and starboard foils, 172:12; l'Hydroptere trifoiler, 116:46; luxury catamaran/Aikane 56, profile of, 91:154; ORMA *Belgacom*, 91:154; Alex de Beaufort/Nacira Design, 112:10
- Vanquish Yachts: VQ sportcruiser and outboards, 173:6; de Groot, Guido, designer, 173:6
- Van Sickle, Jan: on profitability, 21:4
- Van Tassel, Gary: 34' sportfisherman, 2:12, 15:34; on DuraKore strips, 15:34; interior joinerwork/CAD/CAM applications/software, 40:42
- Vari-Pitch: hydraulic, computer-controlled propeller, 78:12
- varnish, phenolic: applications/tips, 19:36
- varnish, urethane/polyurethane: applications/techniques/performance, 19:36; AwlSpar, 19:36; Cetol Marine, 20:56; Epifanes, 19:36, 24:58; Pettit Ultra-V-Gold, 11:52; Stoppani two-part, 26:54
- varnish, waterborne acrylic: shop testing, 24:58; Target 2020, 23:54, 24:58
- varnishing: application techniques/tips, 19:36, 51:11, 154:22; prep work/sanding/revarnishing/repair, 19:36, 154:22; Sherwin Williams two-part conversion varnish, 76:80
- spraying techniques, 19:36; tools/supplies, 19:36
- VARTM (vacuum-assisted resin-transfer molding). See resin-infusion molding/processing

Vaughan, Robert (Bob): environmental waste management manual, 27:8; on HVLP spray systems, 34:35. *See also* Seal Cove Boatyard

Vavolotis, Andy: Cape Dory founder, 65:11; on Cape Dory/survival strategy, 13:80; fast solo trimarans, 65:11

VDO/Yazaki Corp.: Vanguard instruments/gauges, 21:60

VectorLam Cirrus 2.0: R20 process at Viking, 173:6; selects best laminate for a given application/Road to Optimization (R20) process, 173:6

Vectorply: VectorFusion fabrics, 114:10, 173:6

Vector Systems Inc.: paint booth design/engineering, 42:24

VectorWorks International: 62:12, 71:3; tooling analysis, 71:106, 79:10

Vectran: backstays vs. PBO-fiber backstays, 64:64; sailcloth, 41:58

VEEM Limited: CNC machined Interceptor Technology/polymer re-pitching strips for propellers, 119:6

velocity prediction program (VPP): prepreg Kevlar/S-glass/foam/Growler/SP Systems, 154:36; at Van Oossanen and Associates (The Netherlands), 121:50

Velting, Ray: EC (EU) certification process, 41:38, 41:41

Vendée Globe Race: and Open 50, 65:24; IMOCA 60s, 162:52

veneers, hardwood: control samples, 97:108; custom milled/Rybovich, 25:42; engineered veneer/Macassar ebony/Oakwood Veneer Co, 163:14; Hardwood Plywood & Veneer Association buyer's guide, 23:54; matching color and grain/Belina Interiors, 97:108; Oberflex prefinished laminates, 35:58

vent, air: blowers, 109:128; fundamentals and calculations for passenger compartments, storage spaces, and heaters, 109:128, 115:6; generator vents, 110:104; intake air vs. outlet air, 109:128; solar-powered air vents, 109:128, 110:104, 114:10; Vent-O-Mate, 48:86

ventilation system, boat: active air transfer for Trumpy boat aft cabins, 109:60; and ABYC standards/engine air requirements, 117:18; back-drafting concerns/carbon monoxide, 45:32; control station, 48:66; engineroom layout, 37:26; 110:104, 137:12

ventilation systems, shop: air-filtration system/Royal Huisman, 45:47; air-makeup system/paint booth/Little Harbor, 42:20, 42:24; Air Wall, 13:70; Cobalt Boats, 28:32; delta t/ambient air temp and engine room temperature, 165:10; Dettling-style, dry-plenum ventilation system, 115:3; dust collectors/extractors as, 28:38; heat recovery/ventilation system, 2:67; Moisture Rejection Closure equipment/Zazz Engineering, 165:10; in Scandinavia, 2:67; Sabre Yachts, 3:19; vent windows in windshield, 115:36. *See also* air-filtration/air-makeup systems; dust-collection/extraction systems; wet-filtration (water wash) air exhaust system

vent pipe fittings: for fuel tank, 87:4

Ventnor Boat Works: William Garden-designed fin-tailed craft, 76:10

Venus-Gusmer: Catalyst Alarm System, 15:70; early spray guns/catalyst metering systems, 38:30; fabric impregnators/applications, 2:42, 5:34, 10:52, 14:59; flow coaters, 25:58;

- Hydrajector RTM injection pump, 26:54;  
on internal-mix spray equipment, 24:4;  
MBF-01 syntactic-foam producer, 28:60;  
portable fabric impregnator, 21:60; Pro  
Gun resin/gelcoat spray applicator,  
14:59; resin-quality control kit, 29:51;  
Tape Machine impregnator, 14:59;  
water-based solvent heater, 2:70
- Verdier, Guillaume, designer: rudders with  
tubercles, 162:52; *Safran* racing sailboat  
with Dali foil/Transat Jacques Vabre,  
162:52
- VERID Industries: XPS-750 solvent-  
recovery still, 27:70
- Veritas Tools Inc.: Tucker Vise, 13:70
- Vermont: licensure/engineer, 56:53
- Vernay Centek Products, Inc.: fiberglass  
exhaust hose, 46:5; mufflers, 46:16;  
Super II Vernatone fiberglass muffler,  
6:52
- Very Slender Vessel (VSV), wave-piercing  
monohull/Adrian Thompson, 74:54;  
*MarySlim* VSV motoryacht, 109:17
- Vessel Hull Design Protection Act  
(VHDPA), 83:104, 138:64; and new  
2008 Amendments, 138:64
- VesselVanguard: web-based service for  
manuals, warranties, and service  
schedules, 139:18
- Vetrotex: Twintex comingled resin/fiber,  
54:112
- Vetus: Aqualarm exhaust temperature  
alarm, 46:5; "Around the Engine"  
program, 163:56; corrosion-resistant wet  
exhaust system, 163:56; diesel gurus,  
163:56; gear drive and gearless bow  
thrusters, 163:56; lift-type muffler, 49:16,  
51:6; plastic muffler/exhaust loops, 46:5;  
profile/manufacturing without a factory,  
163:56
- VHF radio: antennas/lightning protection  
systems, 43:64; Standard  
Communications Horizon Omni, 35:58
- Viareggio, Italy: yacht construction and  
service center, 108:62
- Vibrans, Paul: on professionalism and  
culture, 96:4
- Vibraseal: water and corrosion resistant  
threat sealant, 140:7
- vibration control, engine/propeller. See  
engines, marine, noise/vibration control;  
noise/vibration control; soundproofing  
insulation
- Vibration Institute, 74:85
- Vic Franck Boat Company: profile, 64:96
- Vic Frank's: varnish work, 19:36
- Vicem Yachts: profile of, 102:34
- Victron Energy: electrical generator testing,  
113:56, 114:4
- video cameras, low-light: CCD (Charge  
Coupled Display), 35:42; subminiature,  
35:42
- video production: development/scripting,  
16:22, 16:26; on-location  
strategies/costs, 22:42, 22:45, 22:49
- video sequencing, 139:40
- videos: in diagnostics/surveys, 35:42; in  
fire preparedness, 39:44; in interior  
design/upgrades, 40:62; in  
sales/promotion, 16:22, 25:52, 40:62,  
55:32
- videos, training: as efficiency/productivity  
tool, 29:22; on gelcoating, 23:54; on  
laminating/composites, 4:58, 24:58
- Vietnam: Luc Vernet/Eastern Design/3D  
modeling, 113:10; promotion of yacht  
industry in, 66:11
- Viking Fender Company: extruded  
monomer closed-cell foam  
collar/Spanish pilot boat, 78:86

Viking Life Saving Equipment: immersion suits and Arctic life rafts, 169:6; Safety Evacuation System (SES), 169:6

Viking Yacht Company:  
 advertising/marketing, 6:42; acquisition of Gulfstar Yachts, 169:44; builder profile/product lines, 46:16, 46:26; designing for production, 2:60, 96:3; evaluating laminate and construction process/Road to Optimization (R20) process/VectorLam Cirrus 2.0, 173:6; “the hot hut” fireproof disposal site, 131:54; interior design/mock-ups, 6:34, 37:26; 68’ Convertible, 46:16, 46:26

*Viktoria/“World Peace”*, stepped hull hydrofoil, gift to Richard Nixon, 63:10

Villalon, Augusto “Kiko,” author: “Kiko, Bob, and Slim,” 117:54; “Maintenance in a Cigar Box,” 154:80; “Notes on ‘Changes of Address,’” 158:8

Villalon, Augusto “Kiko”: cigar box genie/boat maintenance check, 154:80; the ghost line, 114:94; on incline-testing and on testing Neptune deep-V sterndrive boat, 163:4; “Jack Riggleman Remembered,” 128:8; Porsche speedboat, 114:94, 116:4; strategy for increasing fuel costs and fuel-efficient boats, 122:12; tooling shop/Marine Concepts, 114:94

Villalon, Gordie Campbell: memories of *Julie*/Bill Luders design wood sloop, 164:12

vintage raceboats, 79:3, 72

Vineyard Vixen 34: and restoration renaissance, 136:4. *See also* Howell, John.

vinyl boat cushions: cause of pink staining, 170:10

vinyl ester and polyester hybrid resin: Hydrex/megayacht, 32:18, 32:21

vinyl ester primer/putty: Duratec/tie coat/print-through prevention, 34:21, 42:59; shrinkage/painting, 52:54

vinyl ester resins: allergic reactions, 42:62; antifouling coating/Max-Pro-Coat, 19:59; applications/techniques/chemistry/costs, 6:10, 42:52, 60:27, 132:50, 169:44; ATLAC 580, 28:18; barrier/skincoat (blister prevention/repair), 6:10, 7:50, 12:4, 17:11, 20:32, 23:4, 51:108, 52:43, 66:78, 83:22; with carbon-fiber reinforcements, 28:18, 53:40; catalyst foaming, 15:13, 132:50; catalyst ratios/temperature/cure cycle, 1:6, 6:10, 15:13, 39:27, 42:52, 42:62, 53:20; corrosion resistance, 20:32, 25:8, 164:16; cumene hydroperoxide (CHP) catalyst vs. methyl ethyl ketone peroxide (MEKP)/boiling point, 132:50; Derakane 8084, 58:36; Dion FR9300 fire retardant, 67:13; Dion VER9100, 12:4; elongation properties/fatigue resistance, 42:52, 55:5; epoxy-based/SCRIMP, 44:30; vs. epoxy resins, 42:52, 53:20, 53:40, 55:5, 57:7; fabrication manual/Dow, 44:36; hybrid/Seemann Composites Modified Vinyl Ester (SCMVE), 58:36; impregnator applications, 42:52; and Interplastic Corporation’s hydrolic and osmotic resistance test for, 83:22l with Kevlar reinforcements, 28:18; used in navy boats, 47:57, 48:35, 53:40, 55:5, 57:7, 58:36; walnut shells/Baltek’s AL-600, 169:44; with polyester gelcoat/compatibility, 42:52; vs. polyester resins, 42:52, 53:20, 57:7, 66:78; pre-pregs, 24:18; promoters/accelerators/inhibitors, 6:16, 33:46, 35:4, 42:62, 44:30; photo-initiated, 18:8; print-through/heat-distortion temperatures, 42:52;

repairs/secondary-bonding, 25:25, 36:34, 52:67, 66:78; SCRIMP applications/resin chemistry, 31:42, 44:30; secondary-bonding characteristics, 20:32, 25:25, 39:27; secondary-bonding primer for/ATPRIME, 20:32, 42:5, 52:67; for single-skin laminates, 43:54, 43:62, 53:20, 66:78; sources, 6:18; solvents/cleaners for, 6:10, 42:62; strength testing, 4:22, 66:78; temperature/shop conditions, 33:46, 53:20, 84:52; thixotropes/resin drainout, 33:46, 42:62; thixotropic/repairwork, 20:32; as tie coat/DCPD laminate repairs, 52:67; VARTM applications, 58:36; VOC regulations/compliance, 25:8, 68:54. *See also* fiberglass (FRP) construction; laminates, marine; print-through, control/prevention; SCRIMP vinyl ester tooling gelcoat: tie coat/epoxy laminates, 49:59  
 vinyls, marine: cleaner for, 38:55; Magic Touch, 6:39; Majilite, 6:39; Nautolex, 6:52  
 vinyl toluene: styrene substitute, 10:8  
 vinyl wrap: colored film coatings, 169:28; environmental impact of, 169:28; 3M Wrap Film Series 1080, 169:28; vs. paint, 169:28; wrapping a Cutwater Cruiser, 169:29; wrapping a 102' Ocean Alexander, 169:28. *See also* interior joinerwork/cabinetry, 3M (3M) Corporation, paint, coatings/paint/Marshall gregory, NA  
 Virginia: licensure as PE/naval architect, 47:24;  
 Virpack Yachting: *Dardanella* trawler yacht, 58:13  
 virtual boatyard: 62:12; Nigel Irens, 63:86; Specialty Marine Contractors, 63:145

virtual engineered composites (VEC), 78:94, 101:62  
 Visby-class corvettes, 53:40; 124:26  
 Viscom International, Inc.: TBS polyurethane deck covering, 8:54; Wichard's waterproof U-bolt, 24:62  
 vise: Tucker Vise, 13:70  
 Vise-Grips: 12LC Large Jaw, 35:58; for screw removal, 23:20  
 Visual Inspection Technologies: fiberoptic borescopes, 35:42  
 Vitters Shipyard: profile/Dutch builder of superyachts, 58:13  
*Vladimer Nazor*: conversion to yacht *Seagull I*, 100:4  
 Vlahovich, Mike: on vocational training programs, 20:21  
 Vlahovich Boat Corporation: vocational training, 20:21  
 VOC emissions, reduction/compliance: acetone replacements, 33:20, 33:26, 33:69, 91:96, 115:56; acrylics, 11:20, 75:58; air-assisted airless spray guns, 28:48, 28:52; 68:54; benchmarking/environmental audit, 20:3, 20:40, 27:61; catalytic heaters, 8:54; Clean Air Act/Amendments/1990, 10:8, 26:8, 60:39, 66:128, 68:5; closed-molding, 26:34, 26:44, 31:42, 39:90, 41:28, 41:30, 44:30, 48:35, 66:128, 68:5; Derakane resin, 91:96, 133:114; fabric impregnators, 5:34, 91:96, 157:50; flow coaters, 25:58, 26:34, 55:26; HVLP spray systems, 34:35, 34:40, 37:36, 37:71, 60:11; impact on boatbuilding industry, 10:8, 10:17, 17:4, 60:11, 66:128, 68:5, 144:48; improved work environment, 26:34, 26:44, 31:42, 41:28, 41:30, 42:20, 42:24, 44:30, 114:4, 115:56; incineration, 10:8; internal-mix spray equipment, 20:50,

21:18, 22:4, 24:4, 55:26; knitted heavyweight reinforcements, 18:54, 29:38; knitted reinforcements, 1:30, 29:38; low-styrene (DCPD) resins, 1:30, 2:4, 8:28, 55:26, 91:96, 157:50; mold-release systems/agents, 13:11; photo-curing resins, 18:8, 18:17, 26:34, 48:35; pre-pregs, 24:18, 48:35, 63:151; profitability/savings, 21:18, 25:3; refrigerants, 16:35, 17:4, 22:56, 26:8; resin-infusion (transfer) molding, 26:44, 28:48, 28:52, 31:42, 32:28, 48:35; Rule 1106.1 amendment, 60:11; Rule 1162, 1:30, 2:4, 8:28, 10:8, 18:8, 26:34, 60:3, 91:96; styrene, 10:8, 40:17, 66:128, 68:5; styrene substitutes (PMS, vinyl toluene), 10:8; syntactic foams, 7:50; thermoplastics, 10:34; vacuum-bagging, 26:34, 28:48, 28:52, 66:5

vocational programs. *See* training, vocational

Voegeli, Ron: Bayview Edison Industries/American Expedition Yachts, 106:92

Volkswagen: software rigging on engine management systems for diesel cars, 158:88

Vollmer, Michael: on Rio Hondo 40S/Scott McClintock, 113:4; on powerboat stability and ISO standards, 114:4

voltage regulator, multi-step/"smart": backup for inverter, 25:30; cables/connections/DC system, 20:50; diode/voltage drop, 20:50; for house battery bank, 39:56; selection/performance, 19:50, 19:55; sources, 19:50, 19:59, 39:56. *See also* battery chargers, marine; DC electrical systems/equipment, charging systems

Volvo Penta of the Americas: and DPX sterndrive, 163:26; Battery Management

System, 167:54; Boat Engine Integration Center, 115:32; Aquamatic, 122:12, 161:8, 167:54; common-rail engines, 86:74, 122:64; computer diagnostics for marine wiring/Controller Area Network (CAN), 97:148; D2-75 diesel engine/propeller efficiency analysis, 150:50; Duoprop/counter-rotating props, 122:12, 167:54; Duoprop turbo diesel engine, 34:55, 167:54; electronic control systems for smaller engines, 57:15; early engines/first true diesel engines, 167:54; fast and easy oil analysis program for customers, 149:10; 4-blade folding propeller, 124:54; Inboard Performance System (IPS), 106:42, 108:44, 115:18, 115:32, 117:66, 129:54, 160:32, 167:54; Inboard Performance (IPS) versions IPS 800 and IPS 900 for D8-550 and D8-600 engines, 167:54; KAD30 and 40 "fence engines," 167:54; MD1 and MD2 sailboat engines, 122:12; news Inboard Performance Systems over-propping engines, 151:6; on-water test facility, 167:54; powered and sponsored B-28 fast boat/Mannerfelt Design Team, 163:26; Saildrive, 167:54; Speed Rails speed strakes, 33:75; stand-alone joystick control system, 167:54; stern-drive with forward-facing propellers, 167:54; TD96, turbocharged diesel engine, 122:12; training center for mechanics, 57:15; Vara (Sweden) plant, 167:54; "yo-yo" testobat for Volvo powertrain testing, 167:54

V12 Ferrari motor: use in hydroplane raceboat, 159:10

von Zeppelin, Ferdinand. *See also* ZF Marine.

Vosper Thornycroft: 115' power trimaran, 50:11, 55:16

Voyager Marine Power: gas inboard engines, 17:44  
 VPLP (Van Peteghem Lauriot-Prevost). See Van Peteghem Lauriot-Prevost.  
 Vrimbo 39 outboard cruiser: Design Challenge/Sjoerd Bouma/Rob Tander, 127:20. See also: Bouma, Sjoerd; Tander, Rob.  
 Vripack Yachting (The Netherlands): bottoms and structural engineering for Fairline boats, 163:14; Craft V20, 173:34; electric propulsion luxury barge, 135:6; one-design solar powered propulsion, 173:34; profile of, 108:44; low displacement/LDL powerboat hullforms/*Ned 70*, 147:18; Slide Hull, first patented hullform, 164:12; SmartKits CNC cut metal kits for Gamma 20 steel motoyacht hull, 148:46; Wajer Osprey powerboat, 101:12  
 "VSV" (Very Slender Vessel): wave piercer, 62:46; *Mary Slim* motoryacht/Adrian Thompson design, 119:6  
 Vulcan Catalytic Systems: catalytic heaters (blister repairs), 8:54, 16:42, 17:11  
 Vulcan 3D: portable laser measurement system, 66:110

---

A B C D E F G H I J K L M N  
 O P Q R S T U V **W** X Y Z

---

Wabbit boat: Tom Wylie, 75:38  
 Wachmann, Amy L.: on Callan Marine's high-performance powerboat, 68:5  
 Waddell, Willie: on *Rocket Science*/flat-panel construction, 45:62  
 Wadson, Trixie, author: "C-Class Repairs Define Little *America's Cup*," 128:8; "Juan K," (Dan Spurr, co-author), 127:72 wages. See payroll/wages

Wahoo Boats: sportfisherman, 2:12  
 Wakefield, Darryl: on FRP megayacht/Admiral Marine, 32:18, 32:21  
 Walbro: Series 6000 marine fuel pump, 26:54  
 Walden Paddlers: outsourcing/kayaks, 37:16  
 walkaround sportfishing yachts, offshore: 87:16  
 Walford, Peter: on sailing market/multihulls, 23:4  
 Walker, John: libel litigation, 39:90  
 Walker, Rob: on New Zealand boatbuilders, 55:58  
 Wallace, Bill: on Oil Change Delayed/filter element systems and centrifugal spinner systems, 146:4  
 Wallas Marin: cabin heaters/carbon monoxide protection, 45:32  
 Wallstrom, Bob: on engine mounts/Luders, 36:4  
 Wallstrom, Bob: Yacht Design Institute correspondence courses, 101:106  
 Wally Yachts: profile/*Magic Carpet*, 51:100; winged Wally 118 powerboat, 78:12  
 Walsh, Barbara Jean: on Ernie Braatz/obituary, 44:18. See also PILOT directory  
 Walsh, Barbara Jean, author: "All's Fair" (sanding/fairing tool), 24:62; "Blister Insurance," 19:59; "The Case Against Boat Noise," 43:75; "China Revisited," 128:38; "The China Trade," 103:72; "The Cutting Room," 35:58; "Developing A Skilled Work Force. Seriously." 116:112; "Du Pont's 50P," 15:70; "Exploring High-Volume, Low-Pressure Technology," 29:8; "The Great Flotation Foam Mystery," 24:62; "Inside Look: Cobalt Boats," 28:32; "Jazzing Up



Interiors," 32:15; "Midwestern Boatbuilder Gives Xycon Skincoat Two Thumbs Up," 28:60; "MirroCraft's Ultra Pro," 17:31; "Out of the Cocoon," 21:72; "The Outsourcing Option," 37:16; "Polylite Profile Tooling System," 16:52; "Preforms for Production," 41:62; "Regulations & Bottom Prep," 31:10; "Replacing Acetone," 33:20; "Setting a Standard," 36:46; "Shop Ergonomics," 37:71; "Skills for Boatyard and Marina Managers," 35:25; "Staying Current with the Standards," 44:18; "'Stick-Building' a Deck Plug," 28:10; "U.S.A.—or So the Labels Say," 103:128; "Up in a Downtime," 129:26; "A Walk -Through at Cheoy Lee," 103:112; "Welcome to My Web," 40:80; "We-no-nah Canoe Inc.," 49:36

Walsh, Gerritt: on boat shows/marketing, 36:60, 36:64

Walsh, Shawn: SMARTweave, 46:45

Walsteds Baadevaerft: yacht restoration/*Kong Bele*, 52:12

Walters, Craig: Clearwater Electric Boats, 43:17

Walters, Walt: designer profile, 3:27, 132:36; on designer-builder relationship, 3:27; 132:36; obit, 160:8

*Wander Bird*, fantail schooner: 65:11

Ward, Dave: on ultrasonic inspection/surveying, 35:42

warning/safety labels: for jet boats, 36:50; liability recommendations/strategy, 15:50, 21:12, 27:46, 44:13, 45:14; owners' manuals and, 27:46; sources, 21:12

warranties, product. See product warranties; repairs, warranty

Warren, Quentin, author: "A Builder's Designer," 61:66

Warren, Rob: on ozone-clean marine refrigeration/service, 26:17

Warsash Maritime Center: advanced composite materials course, 67:13, 69:125

Warsash School of Nautical Studies: 61:30

Warsash Operations Center of Safety and Survival: 61:26

Washburn & Doughty (Maine): *Bulldog*, Z-drive tug, 104:12; fire destruction, 127:104

Washburn, Richard, author: "A Voice from the Boatshop Floor," 39:54

Washburn's Boat Yard: customer education, 35:52; management, 35:25

wash-down system: Baudoin Ocean Wash Systems with extendable poles, 131:54; Manual Wastewater Treatment System for wash-down, 134:6; painting preparation/aluminum boats, 37:36

Washington County Technical College: vocational training program, 20:26, 22:51, 41:3

Washington state/Puget Sound: boat-noise legislation/PWCs, 43:75, 44:49; bottom paint/hazardous waste disposal, 31:10; IBEX-West, 42:5; jetsprinting, 57:15; licensure as PE/naval architect, 47:24, 49:4; luxury yacht market, 26:51, 34:55; 40:24, 40:28; Superyacht Northwest boat show, 26:51, 34:55. See also Munson Manufacturing/Munson, William E. (Bill)

waste, solid. See boatyard waste disposal/reduction/compliance; recycling programs

waste-collection systems: runoff/paint removal, 6:8, 7:8, 7:13, 31:10, 120:4; 134:6; Manual Wastewater Treatment System/David Flagler, 134:6; paint separator, 8:54; Vanish 300 Hybrid

Wastewater Treatment System, 120:4;  
 water-recycling system, 31:10, 31:68,  
 120:4  
 water ballast, sailboats: and box rule  
 sailboats, 153:52; articulating seawater  
 scoop/Sofo Scoop/Sofomarin, 153:52;  
 movable water ballast, 153:52;  
 consequences and complexity of  
 stability calculations, 153:52; water  
 ballast, and angle of heel in multihulls,  
 62:46; vs. swinging keel, 65:24  
 water-based topside coatings: Oleronlac's  
 one- and two-part waterbased  
 products/Marine exterior surfaces,  
 105:12  
 waterborne and waterfront structures:  
 62:12  
 waterfront design. See boatyard waste  
 disposal/reduction/compliance  
 water-jacketed infusion table, 125:54  
 waterjet drives: cracking around waterjets  
 and transom/welding, 137:56; intake  
 fouling/Fin Cutter System, 122:12; for  
 J/Boat Down East-style cruiser, 96:6;  
 new vs. conventional propeller drive  
 systems, 122:12; North West Bay  
 Ships/*Dolphin Ulsan*, 95:6; 128' fast  
 motor yacht/modified-V/Michael Peters  
 Yacht Design, 126:38; Sword Marine  
 Technology, 96:6  
 waterjet powered craft: Ellis 36 Express  
 Cruiser, 67:70; Hinckley Picnic Boat,  
 67:70; *Puget Sound*, 67:90, 98; 87:104  
 waterline: pattern for/AutoCAD, 45:86  
 Waterline Yachts (British Columbia): profile  
 of, 83:72  
 watermaker: maintenance, 66:26; Seafari  
 mini watermaker/Horizon Reverse  
 Osmosis, 107:14; sizes and capacities,  
 66:26; sources, 66:26; space-saving,  
 3:60

water paste: bilge oil indicator, 31:59  
 water pollution: bilgewater  
 discharge/regulations, 31:59;  
 environmental awareness/education  
 programs, 20:8, 24:58, 31:16, 35:52,  
 38:51; illegal dumping, 27:61; impact of  
 boating/*Polluting for Pleasure*, 19:8;  
 non-point-source, 18:64, 27:8, 29:4,  
 31:10, 38:51; oil spills/fires, 39:44; pH  
 and osmotic blistering, 17:17; point-  
 source, 31:10; prevention/company  
 involvement, 29:54; prevention/control  
 manuals, 20:8, 27:17, 28:48, 28:52,  
 33:75; prevention/electric boats, 43:17.  
 See also boatyard waste  
 disposal/reduction/compliance; spills,  
 fuel/chemical, cleanup/containment kits  
 water-powered systems:  
 hydrogenerator/Watt&Sea, 130:10  
 Waters, Mike, N.A.: on W17 and ams-  
 shaped hulls and low leeway  
 advantages, 170:4  
 Waters, Mike, N.A., author: "W17: Can  
 Simple Hull Shapes Be Supported by  
 Science?" 169:104  
 water skiing boats: Ski Master powered  
 dinghy/Donald Healey/Healey Sports  
 Boat, 173:6. See also Healey, Donald  
 water-soluble molecules (WSMs):  
 dissolving glycols/blister repairs, 15:13,  
 15:60, 16:42  
 water tanks: aluminum/steel, 52:18, 54:5,  
 155:4; aluminum tanks and chlorine  
 corrosion, 155:4; Belzone coating for  
 tank bottoms, 165:56;  
 custom/polypropylene, 20:56; customer  
 service/warranties, 153:36; fiberglass  
 tanks, 153:36; independent vs. built-in,  
 52:18, 54:5; installation/access, 52:18,  
 153:36; insulation, 153:36;  
 materials/construction/corrosion

- prevention, 52:18, 52:67, 54:5, 130:66, 132:4, 153:36; nontoxic antifreeze for winterization, 155:4; overheat protection circuit, 153:36; stability testing/free-surface effect, 42:26; tank sentries, 31:68; water heater alternatives, 153:36; water heaters/types/temps/hoses, 153:36; winterizing choices, 154:4
- Watson, J.R.: on Gougeon's Stresform (tortured plywood) spar construction, 14:8; on WEST SYSTEM → resin system and Adhesive Technologies Ltd., New Zealand, 72:5
- Watt&Sea: transom-mounted hydrogenerator, 130:10
- Wave Adaptive Modular Vessel prototype *Proteus*, 107:14
- wave data: in relation to motion sickness, 61:82; strip chart readings for height calculations, 67:31
- wavemaking: eddy-making, 58:26; effect of form/W17 Trimaran, 169:104, 170:4; prediction/reduction of/displacement hulls, 26:31, 28:6, 29:4, 58:6, 58:26, 60:66, 170:4
- wave-piercers: fast catamarans, 29:4, 50:11, 53:12, 54:43, 54:44, 61:10, 62:46, 74:54, 78:46; 124:42, 135:26; fast ferries, 63:106; Gold Coast Yachts/wave-piercer hullform, 124:42, 169:6; Revenge Advanced Composites 49' prototype for U.S. Special Operations Command/semi wave piercer, 149:56; shock mitigation/David E. Jones, 149:56; Sonny Levi designs, 135:26; *SpeedDream* sailboat prototype/Vlad Murnikov, 141:24 Very Slender Vessel (VSV)/Adrian Thompson, 74:54, 109:18; Vlad Murnikov wave-piercer innovations, 169:6
- Wave Piercers New Zealand Ltd., 54:43, 54:44
- wave slam effects: accelerator recorder device/Dyena, 142:8, 144:80; analyzing accelerations, 141:36, 142:8, 144:80; ARE S motion control system/Navatek Ltd., 143:6; vibration and shock effects, 144:80
- wax: antifoulant/Zebra products, 8:54; carnauba, 12:27; copolymer (for gelcoat), 15:44; mold-release/types/application, 12:27, 12:28, 60:118, 60:120; paraffin (surfactant/styrene suppressant), 8:28, 20:32, 60:118, 60:120
- Wayland Marine: videos used in marketing, 16:33
- W-class sailboats: *Wild Horses* and *White Wings* collision, 72:10
- W.D. Schock Company: profile of, 140:7
- WD-40: uses, 24:62
- weather. See temperature, of boatshop
- Weaver, Tom, designer: Eastport 32 utility-style luxury powerboat, 123:10. See also Price, Mick.
- Webb Institute of Naval Architecture: profile of, 76:36, 101:106; Jim Antrim, designer, 76:60; vocational training program, 101:106, 123:72
- WebCore: fiberglass-reinforced closed-cell foam core, 52:30
- Wedge, Paul: canvaswork/training, 29:54
- Wedge Innovations: SmartLevel electronic digital level, 14:45, 42:26, 42:32, 44:5
- Weidner, Marilyn: post-curing concerns, 15:4
- weight (hull): vs. speed/structure/scantlings, 49:54
- weight (hull): controlling/reducing: carbon-fiber laminates, 39:30, 58:36, 146:24; baseline single-skin construction,

120:18; carbon-fiber pre-pregs, 39:30, 134:42; in composite canoes/kayaks, 49:36; in composite flat-panel construction, 45:54, 45:62; in cored laminates/internal structure, 51:22, 61:66, 64:96, 99:52, 146:24; in cored sportfisherman, 54:62. 93:62; COVE system (COre-Veneer-Epoxy), 55:79; design analysis, 49:8, 64:52; Duo Delta Conic hull/Schoell Marine, 85:76; equipment/systems/ propulsion efficiency, 44:38, 133:60; infused single-skin construction, 120:18; interior design/cabinetry, 6:39, 13:43, 29:8, 34:28, 34:32, 44:38, 64:52; laminate schedules, 2:42; in megayachts, 2:42, 32:18, 32:21, 64:52; molded integral grid/liner, 46:35, 46:37, 99:52; monitoring during construction, 64:52, 87:46, 96:6; non-dimensional hull-bottom loading coefficient, 93:62; prototype commuter/Reuel Parker design, 130:20; resin-infusion molding, 32:28, 53:20; resistance/drag and, 58:26, 85:76; secondary bonding, 32:18, 32:21; strategies/seminar, 29:8, 120:18; woven vs. knitted reinforcements, 29:38, 44:38; vacuum-bagging, 53:20, 71:6, 120:18; vinyl esters/epoxy, 6:10, 29:38, 53:20, 96:6, 120:18; waterlogging/core bedding, 31:34, 31:39; waterlogging/flotation foam, 37:48, 37:58; weight savings/monocoque grid system/Outerlimits Powerboats, 133:60; wood-foam sandwich construction, 55:79; wood selection, 2:60. *See also* carbon fiber; core bonding, materials/techniques; core materials; fiberglass construction, cored/sandwich; vacuum-bagging,

applications/techniques; wood construction, composite cored/sandwich weight (hull), estimating/measuring: center of buoyancy (CB), 42:26; 93:62; book, *Marine Vehicle Weight Engineering/* Society of Allied Weight Engineers, 115:18; center of gravity (CG), 42:26, 44:5, 93:62, 126:38; hotmolded vs. conventionally framed hull/Fairey Marine, 147:64; people as weights, 42:26, 44:5; propulsion efficiency, 44:38; 60M luxury yacht/Mark Mills design, 128:10; stability testing, 42:26, 44:5, 93:62; weight and centers calculation, 59:56, 59:57, 85:76, 93:62; weight studies/Michael Peters Yacht Design, 126:38

weight (rig), controlling reducing: ballast shifting/canting keel, 47:17; spars, 29:8, 47:34, 47:44, 47:52, 47:53. *See also* carbon fiber

Weisburger brothers: RIB builder/Zodiac-Hurricane, 48:50

Weiss, Steven, author: "Neo 41," 151:44

Weiss, Steven: profile of Steven Weiss Yacht Design, 130:10; The Clam, folding rigid inflatable boat (FRIB)/Steve Callahan, 71:6; 130:10

Weissman-Berman, Deborah: computer analysis of laminate strength, 2:42; plastic memory/laminate analysis, 53:4

Welch, Steve: on The Stick-on Solution and adhesive bonding vs. self-tapping screws/Click Bond Inc., 147:6

Welch, Tom: Preferred Data Corporation/custom accounting software, 57:74, 57:92

weld decay: galvanic/intergranular corrosion, 32:41

welding, aluminum: failures in aluminum welds, 139:5, 147:24, 151:82; Meta-Lax

technique, 2:12; Lincoln Electric Co./VRTEX 360 virtual-reality welding training system, 133:12; metal/inert gas (MIG), 53:31; Fronius welders/Wooldridge Boats, Inc., 116:52; Millermatic 350P system, 118:8; PipeWelders Marine, tuna tower welding, 67:13; plasma-arc cutting (PAC), 24:34; post-weld treatment, 137:56, 139:5; residual stresses, 151:82; scribe board, 151:82; tungsten/inert gas (TIG), 53:31, 85:4.

See *also* aluminum construction, welded welding cables, 138:3, 139:5

welding fumes: Worbst vacuums, 87:10

welding, hot-air: of polypropylene water tanks, 20:56, of polyethylene holding tanks, 162:38; of PVC and polyurethane-coated fabrics, 67:5

welding, plastic. See plastic welding

welding, steel: CO2 welding/Cheoy Lee, 103:112; explosive bonding process to aluminum, 63:106, 132:18; heat distortion, 103:44; Precision Light Systems' Laser/Gas Metal Arc Welding process, 103:44; weld decay, 52:18

welding fumes: exposure limits/1989, 1:30

welding supplies: aluminum spool guns vs. Millermatic 350P pulse arc welding power supplies, 118:8; CoolBand and CoolBelt for welding helmet, 126:8; Fresh-Air system, 39:98; Invision 352 MPa Plus MIG Runner Dual Wire Feeder system, 126:8; Speedglas auto-darkening lens, 39:98; Zytel nylon helmet, 39:98

welding, titanium, 132:62

Weldwood plastic resin: applications, 51:36

Weldy, Keith: on carbon-monoxide alarms, 45:32

Welin, Ed: on Jim Staley (obituary), 9:5

Wellcraft Marine: acetone reduction/conversion to DAA, 33:20; advertising/marketing, 6:42; former site now home to branch of Marine Concepts, 151:68; gun-applied methacrylate adhesive, 75:58; CAD/CAM applications, 7:18, 8:35; offshore speedboat handling classes, 63:10; shrink-wrapping (storage/transport), 18:28; stepped 25' Nova 3, 5:52; syntactic foam applications, 7:50

Wells Marine Technology, Inc.: Batt Link automatic paralleling device, 39:56; Batt Maxx automatic paralleling device, 39:56

Welshan, Danny: on acetone replacements, 33:20, 33:26

We-no-nah Canoe Inc.: builder profile/composite canoes and kayaks, 49:36, 49:40; marketing/manufacturing, 4:34; Tuf-Weave, 49:36

Wernicke, Steve: on flotation foam, 25:52

Werner, Theo (yacht designer): retro motoryachts, 65:11

Weskor: structural core material, 52:30, 54:5

Wesmar (Western Marine Electronics): stabilizer systems, 15:70, 36:78

West Coast "box" rule: and Goetz Cutom Sailboats, 73:54

West, Dan, author: "Modifying an Existing Boat for Use as a Plug," 16:7

Westerbeke: diesel engine for midsized auxiliary sailboats and small displacement powerboats, 122:12; generators, 122:64; Westerbeke 4-107/Perkins block, 122:64

Westerbeke, John R.: obituary, 67:13

Westerly Marine: *AmericaOne*, 63:10; DynaFlyer 40, 47:17; cruising boat

*Stealth Chicken* (Bob Perry design), 97:28; low-temp pre-preg construction, 64:82; Morelli & Melvin-designed 65' catamaran, 127:94; profile, 61:52; Rule 1162 compliance, 25:8

Western Boatworks: *Titanic* scale models, 58:13

Westland Industries: Tanspac II boat covers, 26:54

Westlawn Institute of Marine Technology: correspondence design courses, 7:25, 47:24, 64:11, 152:6; buyers found/David Smyth, 154:12; definition of yacht designer/licensure, 9:64, 47:24; design competition/Cruising World magazine, 104:12; Hargrave Memorial Scholarship Fund, 43:36, 43:41; state-of-the-art online learning system, 154:12; vocational training program, 7:25, 20:26

Westlawn School of Yacht Design: achievement ratios, 152:6; "Yacht Design Lite" correspondence course, 64:11; seeking buyer, 152:6

West Marine Products: Battery Combiner automatic paralleling device, 31:68, 39:56

West Marine Products and Service: hull-rotating units, 60:11; profile of, 91:66

Westport Shipyard: fabric impregnator applications, 5:34; fiberglass megayachts, 2:42; G-Flex high elongation epoxy, 125:36; G-flex epoxy/one-piece stem and keel/vintage Huckins motoryacht, 129:54; outsourcing, 37:16; 85' patrol boat, 60:11; profile, 62:26; acquisition of Pacific Mariner, 121:62; recession transition, 121:62; sea trials, 51:11; transition/commercial fishing boats to yachts, 40:24

WEST SYSTEM® products: development/cold-molded sailing yachts, 51:36, 69:156, 73:54, 125:36; epoxy putties (105/205), 39:27; high-modulus epoxy, 45:54; metering/mixing systems, 42:62, 61:116; post-curing resin, 14:45; PRO-SET epoxy resins, 34:18, 34:21, 42:52, 45:105, 125:36. See also Gougeon Brothers

Westwind Composites: Weskor honeycomb core, 52:30, 54:5

wet exhaust system. See engine exhaust system, wet

wet-filtration (water wash) air exhaust system: for grinding/laminating/LP finishing, 28:48

wet-out box for tabbing, 119:58

wet-pregs (A-staged epoxy pre-pregs). See fabric impregnators (wet-pregs); pre-pregs

wet strength retention (WSR) values: on resin product data sheets, 6:5

Whale Pumps: engineering services/prototyping/3D printing/polyjet technology, 161:8; Gusher 30 manual bilge pump, 5:26

Whale Water Systems: Intelligent control bilge and gray water pumps with sensors, 137:12; marine plumbing components, 61:10

whale-watching boats: reduction of underwater noise in, 63:10

Wahl fishboat: *Silver Mist*/conversion to pleasure cruiser/Commodore Boats, 167:14

Wharram, James: on creative experienced sailboat designers/Alex Simonis, 85:4; on professional engineering licensure and the European Recreational Craft Directive of 1998, 90:4; 2011 U.K.

- design competition/inshore fishing  
boat/sail or oar, 135:6
- wheel: carbon fiber, 6:52; ergonomic steering wheel, 115:36
- wheelchair-accessible yacht: John Anderson/Tim Nolan design, 57:15; C. Raymond Hunt Associates motoryacht, 73:82; Freedom Yachts *Independence 21*, 73:82; Able Yachts adaptive sailboats, 73:82
- wheelhouse: design/layout, 48:66, 48:79. *See also* cockpit; deckhouse; pilothouse; windows
- Wheel House Technologies: cloud-based vessel-maintenance management software, 137:34
- Wheels: add-on for boats/Sealegs, 156:12
- whetstones: Diamond sharpener, 1:68
- WhisperGen, marine genset, 115:136
- Whisperprop: auxiliary propulsion system for sailboats, 97:10, 99:10; Aziprop submersible unit, 92:12
- Whitacre, Hank: on racing yacht scantlings/floating-frame construction, 50:5
- Whitbread Round-the-World Race: design standards/scantlings/structural failures, 34:42, 34:48, 48:8, 48:9, 51:6, 61:66, 64:64; rigs/rigging/weight control, 55:112; *Toshiba* and New England Boatworks, 81:90; Whitbread Rule, 51:6
- Whitehead, Charles: on transformers and earth ("ground") leakage detection systems, 110:4, 111:4
- White, Chris: Buzzard's Bay 32c wd production powercat, 94:8; Atlantic 42, 46, 48 and 55 cruising cat, 94:8
- White, Eric: on tooling for production, 3:34
- White, Joel: Brooklin Boat Yard, 84:36; on ballast keel attachment, 39:4, 40:4; obituary, 52:4; on wiring alternators/parallel battery banks, 21:4
- White, Joel, author: "A Fold-up Table," 18:42
- White, Robert: on custom engineering of hydraulic boat trailers/Brownell trailers, 136:4
- White, Steve: Brooklin Boat Yard, 84:36; on computer lofting, 24:26
- White, Steve, author: "Teak Deck Reconstruction," 1:46
- Whitestone Corp.: Air-Vest, 29:58
- White Tornado*, vintage Bertram Nautech boat/restoration, 162:76. *See also Red Tornado*
- White Wings*, W-class boat: collision with sister boat *Wild Horses*, 72:10
- Whitman, Dudley: founder of Challenger Marine/obit, 133:12; underwater movie camera, 133:12
- Whittaker Corporation: Bertram Yacht, 39:70
- Whiticar, Curt: obit for founder of Whiticar Custom Boats, 168:14
- Whiticar Custom Boats (Stuart, Florida): Robert Ullberg-designed sportfisherman boat, 81:10; profile of, 104:58; building a custom sportfisherman, *Boomer*, 104:58
- Wichard Inc.: stainless-steel marine hardware, 54:70; Wichinox cleaner, 54:70
- Wilbur Boats: Wilbur 34 redesign/lifting strakes, 34:86
- Wilce, Steve: thermoplastic boats, 10:34, 10:40
- Wilco Marine Restoration Shop, 108:6
- Wilder, Mike: on dealerships/marketing (Boston Whaler), 2:34
- Wilderness Systems: WindRider trimaran, 52:12, 135:46; and venture capitalists, 135:46

- Wild Horses*, W-class boat: collision with sister boat *White Wings*, 72:10
- Wild Oats* (raceboat): canting ballast twin foils (CBTF), 95:76
- Wilkerson, Warren: on boatyard fires/procedures/equipment, 1:50; on fire/property insurance, 7:28
- Wilkinson, Jodi: on Wilco Marine Restoration Shop and true boatbuilding craftsmanship, 108:6
- Wilkinson, Phil: on New Zealand boatbuilders, 55:5
- Willard Boat Works. *See also* Willar Marine Inc.
- Willard Marine, Inc.: aquirement of licensing rights from Crystaliner and Sea Ark Marine, 153:58; Angelman ketches/Hugh Angelman, 153:58; builder profile/obituary 47:15; Los Angeles pilot boats, 150:34; Rule 1162 compliance, 25:8; semi-submersible reef viewer/Alan Andrews, 154:36; *Silverado*/largest motoryacht, 153:52; transition from building recreational craft to commercial and military craft, 153:58; SOLAS and U.S. Navy RIBS, 153:58; Willard Buchanan, 153:58; William Garden-designed trawler-yachts, 153:58
- Willard, Winn: pilot boats/C. Raymond Hunt Associates, 150:34; on Rolf Eliasson design, 124:5
- Williams, Bob: on ozone-clean marine refrigeration/service, 26:17
- Williams, Dan: on marine advertising, 6:42, 6:47
- Williams, Daniel, Inc.: advertising/marketing, 6:42
- Williams, Paul N.: on marketing and promotion, 3:5
- Williams & Hussey Machine Co.: W-7 molder/planer, 12:60
- Willis Marine: flats/bay boat, 121:62, 125:8; kitted plywood outboard-powered sportfishermen, 125:8; recession business strategies/new markets, 121:62;
- Wills, John: on composites development, 38:30
- Wilson, Bruce: on interior design/Viking, 6:34; Viking product line, 46:16, 46:26
- Wilson, Charlie: on advanced composites in the Adirondacks, 99:4. *See also* Moore, Jim
- Wilson, Rich: Vendee Race 2009, 118:3
- Wilson, Rory: on Odyssey batteries and testing of a KROS (kite, rowing, ocean planing, solar energy) boat project, 115:6
- Wilsonart: screenprinted laminates/inlay program, 34:28, 34:32
- winches: Andersen stainless-steel, 5:26; Harken Radial electric winch, 132:6; Lewmar megayacht winch, 6:52; lightweight winches/"coffee grinders"/Aeromarine, 88:62; Lewmar automatic sheet winches/StoWinch, 117:54; Pontos winches, 157:14; Selden Mast/manual reversible winch, 132:6
- wind blade production, spin-off income for boatbuilding, 127:42
- wind-speed sensor: Autonnic/non-rotating parts sensor, 100:4
- wind turbines/generators/blades: Air Marine/introducing new product, 56:18; as builder sideline, 33:36, 41:28; NASA project and Gougeon Brothers research study, 173:76; regulator, 56:18; stud bonds, 15:21; systems technician training/certification, 57:99
- windlass: separate battery for, 39:56; vertical vs. horizontal, 93:76; electric handheld and foot switch types, 93:76



windows: aluminum/Freeman Marine, 41:62; dimensions for use as emergency exits, 118:30; direct glazing process/custom fabricated/American Marine Products, 111:12; frameless/Viking, 46:16; pilothouse/with "crease," 57:110; "smart"/photoelectrochromic, 57:88, 131:54; wraparound, 65:11  
 Windows software. See Microsoft  
 wind prediction program: WinDesign, 159:60  
 WindRider International: RAVE hydrofoiler, 135:46, 139:108; rotomolded polyethylene trimarans, 135:46  
*Windrose*, schooner: Alustar hull, 89:50  
 windshields: design/safety, 42:88, 48:79, 114:30; tempered glass, 81:42; enclosed flybridge windshield/Ovation 52 powerboat, 118:8  
 windshield wipers, 114:30, 115:36; waterproof 2.5 model/AFI Inc, 116:10; vertical wipers/Motor Lifeboat (MLB)47, 117:44  
 Windship Trident Shipworks: one-of tooling, 10:42; post-curing epoxy, 14:45; 65' sloop *Amoco Procyon*, 6:20, 10:42, 37:66  
 Windsor Craft: replica boats, 18:20, 19:4  
 Windsor, Crayke: on Tab A Into Slot B and aluminum kitbuilders/Alabama/Louisiana, 150:4  
 Windsor, Crayke, author: "The Cherubini Legacy," 112:28; "Fine Product. Failed Start-Up," 103:208  
*Windward Passage*, ocean racer, 151:24; builder Carl (Chappie) Chapman, 154:4. See also Gurney, Alan  
 Windward Isles Sailing Ship Co. Ltd.: sailing barque, 52:12

Wing Inflatables: EXTREME aluminum RIBs, 55:16; using CAD/CAM, 65:97, 78:86  
 wing masts. See composite wing masts  
 wing sails (inflatable): inflatable wing sail with retractable mast and electric fans/Next Technogics. See also Next Technogics  
 wing sails (solid sails): aerodynamics, geometry, predictability and control of, 133:70, 96; alternative to solid sails, 140:60; carbon and Nomex wing, 133:96; experimental wings for Moths/Object 2 Skiffworks, 133:70; Harbor Wing Technologies/autonomous unmanned surface vessels, 127:94; predictability and control, 133:70, 96; repair to C-Class catamaran *Orion*, 128:8; rotating 360-degree wing/X-1 Concept vessel, 133:96; three-element wing sail, 133:70  
 wing-sail rig: refinement of by Mladen Milidragovic, 63:10; vs. soft sail rig, 133:70, 140:60; theoretical performance of variable geometry wing sail (VGWS), 140:60; three-element wing sail rig, 133:70  
 wings: hull design software, 8:35; morphing/warping wings/FlexSys, 163:106. See also FlexSys  
 Winke, Dale R.: on survival/staying small, 47:5  
 Winkert, Peter, author: "Better Living Through Chemistry," 6:64; "Core Installation," 9:36  
 Winkley, Alan: on custom wheels, 111:4; on fuel tank venting, 87:4; on marine composites design, 108:6  
 Winner Boats: development of FRP boatbuilding, 38:30; grillage structure, 48:4

Winninghoff, Jack: on Thomas Colvin book, *Boatbuilding With Aluminum*, 85:4  
 Winter Yacht Basin: management, 35:25  
 Winterbon, Bruce: on drag reduction, 57:15  
 winterization: for water systems, 152:48, 154:4; at The Hinckley Co., 127:8; portable pump and flow-meter/antifreeze-delivery method, 131:54  
 Winters, Henry: on Navy river patrol boats (PBRs), 57:7 on Swift boats, 89:4; on steering system fundamentals and addition of technical details, 100:4  
 wiper motors: GM-1/GM-2, 33:75  
 wire/cable, marine: ABS/LR classification, 39:80; appliance wiring material (AWM), 36:4; for bilge pumps, 44:26, 57:48, 66:38; cable reduction benefits of higher voltages/diesel-electric, 109:140; chafe protection for, 152:58; chases/dragging tools, 28:14, 30:4; color-coding, 38:55, 44:26; excess lengths, 152:58; Flexo jacketing, 1:52; manufacturing/standards/sizing, 51:69, 55:99, 75:22; sizing/standards (ABYC/NFPA), 8:12, 8:24, 35:18, 36:41, 38:4, 66:58, 134:80; single stud for cable terminals/hazard, 152:58; sizing/minimizing risk of fire, 35:18, 36:4, 36:41, 38:4, 75:22; source/SaltWater, 23:54; SmartPlug vs. conventional twist-lock plug, 134:80, 135:4; thermoplastic (PVC) insulation, 51:69, 55:99; thermoset insulation, 55:99; three-wire European loom, 75:22. See *also* battery cables; cable cutters; cable ties; cable sheathing; electrical cables; wire/cable, marine, terminal connections  
 wire/cable, marine, conductors: manufacturing/standards/sizing, 51:69

wire/cable, marine, terminal connections: ABYC E-11 technical standard/recent revisions, 118:64; crimped, 8:12, 10:52, 13:4, 44:26, 118:64, 143:22; Crimp'N Seal, 10:52; crimped and Elektralink, 30:60, 66:38; soldered, 8:12, 11:5, 13:4, 14:4, 30:60, 44:26, 143:22; types/tools/techniques, 8:12, 143:22. See *also* rigging, stainless steel, wire  
 wire-harness manufacture: harness boards for, 35:58; at Cruisers Yachts shop, 114:68  
 wireless instruments: Tacktick Micronet instrument system, 91:20  
 wire rigging. See rigging, stainless steel, wire  
 wiring, marine: AC/DC testers, 34:59; batteries, 18:44, 21:4, 22:4, 23:4; for bilge pumps, 44:26, 57:48, 60:5, 147:48; and bonding systems, 23:4; crimping wires vs. soldering, 147:6; for DC motors, 8:12, 9:5; for DC systems, 20:50, 22:4, 23:4, 97:148, 98:50; distributed power systems/E-Plex, 97:148; for electrical panels, 8:12, 66:38, 97:148; for electronics/instruments, 11:9, 97:148, 98:50; and galvanic/stray-current corrosion, 32:36, 33:28; Ground Fault Circuit Interrupter (GFCI), 66:38; ground plate, 66:38; grounding, 23:4; grounding/electrocution concerns, 9:5, 66:38; labeling/documentation, 132:80; layout accessibility, 124:32; liability, 8:24, 20:50; overcurrent protection, 36:41, 38:4, 133:24; oxidation/tinned copper, 60:5; running AC and DC wires together, 154:56; routing cables/3-D CAD modeling, 40:50; splicing, 143:22, 147:6; three-cable boat, 97:148, 98:50; tools, 8:12, 23:54, 143:22;

- training/techniques, 8:12; wire chases/dragging tools, 28:14, 30:4; wire-to-wire electrical connections, 143:22, 147:6, . See *also* battery cables; electrical cables; wire/cable, marine; wire cable, marine, terminal connections
- Wise Handling Ltd.: mobile boat hoist, 60:11
- Wishbone-boom, 62:58
- Wisniewski, Tom: on carbon-monoxide alarms, 45:32
- Witt, Capt. Mitchell: on repowering with edrive, 138:3
- Witt, Glen L.: obit for founder of Glen-L Marine, 169:6
- Wolfe, Art: on forensic composite testing, 87:62; on gelcoat application/troubleshooting, 11:42; on laminate repair, 66:78; on polyurethane adhesive/sealants, 28:27; on strength testing of composites, 4:27; on testing gelcoat hardness, 5:12
- Wolfe, Art, author: "What's Wrong with This Picture?," 58:104
- Wolfson Unit (University of Southampton, U.K.): Power Prediction Program, 61:10
- Wollard, Troy: FRP pioneer, 103:186; 120:62
- WOMBAT Junior tape-impregnating machine, 121:9
- Wombat*: Setzer Design Group's Classic Series, 97:82
- women in boating market: *Boating for Women* magazine, 40:62; canoe market, 42:16; dealer advisory board, 38:51; market research/International Women in Boating (IWB), 23:54, 24:58, 28:54; NMMA seminars/marketing to women, 38:51, 40:62; sailboat market, 6:20; *Women's Market Handbook*, 28:54
- women in production boatbuilding: Bertram Yacht, 39:70
- woodbending: Commodore Boats, 167:14; Fluted Beams, 126:8
- wood: for cold-molding (rolling-shear strength), 51:36; evolution of new products, 54:112; moisture content/detection of, 60:48; specific heats/laminating table, 45:68, 48:4; tropical hardwoods, 51:36. See *also* plywood, marine; teak; veneers, hardwood
- wood, engineered. See hardboard substrate
- Wood Epoxy Saturation Technique* (WEST System): manual by Gougeon Brothers, Inc., 61:116
- wood construction: price (vs. fiberglass), 23:41; paints/coatings, 52:54, 52:55; quality/workmanship, 17:64; replicas, 18:20; rot control/prevention, 51:36, 65:38; strength (vs. fiberglass), 51:36; strength/stiffness single-species laminations, 72:22; vocational training programs, 20:18, 20:21, 21:12, 22:4, 50:11. See *also* cold-molded construction; wooden boats; *specific wood construction entries below*; wooden ship building/restoration
- wood construction, carvel: hull strength, 51:36
- Wood Construction Center (Seattle Central Community College), 81:10
- wood construction, composite cored/sandwich: COVE system/ultralight wood-foam 77' cruiser, 55:79. See *also* cold-molded construction; wood laminates
- wood construction, interiors/joinerwork: CAD/CAM applications, 13:43, 40:42, 40:52; in-house prefabrication/aluminum

- megayachts, 53:28; mock-ups, 9:28, 10:4, 45:47. *See also* interiors, joinerwork/cabinetry
- wood construction, lapstrake: hull strength, 51:36
- wood construction, production
  - methods/marketing: Beetle Cat, 23:32; Nexus Marine, 23:37; plank bending on restoration of Wahl fish boat *Silver Mist*/Commodore Boats, 167:14; Rybovich, 25:42, 25:49; use of UHMW-PE (ultra high molecular weight polyethylene) for sistering tired wooden hull ribs, 167:14, 168:4
- wood construction, strip-planked: built-in fuel/water tanks, 52:18; cedar covered with plywood/glass sheathing, 57:110, 69:156. *See also* strip planking
- wood decay: on freeze/thaw and wet balsa core study, 96:16, 97:4; prevention maintenance, 65:38
- wood dust. *See* dust, wood
- Wood, Jeffrey N. Casciani: on interpreting moisture meter readings, 62:5
- wood laminates: vs. carbon, 130:52; vs. fiberglass/composites, 4:64; moisture content/detection of, 60:48; strength testing, 4:22, 173:76. *See also* balsa core; cold-molded construction; plywood, marine entries, veneers, hardwood
- Wood, Melissa, author: "Boat Breaker," 160:40; "A Tempest in Tampa: Evolution of the 44-FCI," 153:8; "The Unresolved Afterlife of Composite-Built Boats," 163:44; "What's Burning?" 161:8; "Young Canadians," 171:60
- wood veneers: specialty wood veneers/Oakwood Veneer Co., 153:8
- wooden boats: attachment of ballast keels, 39:4; bonding systems, 33:28; storage/covering, 18:28; vocational training, 47:34, 50:11. *See also* wood construction
- wooden ship building/restoration: Bay Ship & Yacht, 20:8, 21:38, 56:10; Commodore Boats, 167:14; history/naval architecture, 60:66; shipwrights/job market, 21:42; specialized tools, 21:42; vocational training programs, 20:18, 20:21, 21:12. *See also* ships
- wood resins: allergic reaction to, 3:19
- wood rot: contamination by resident decay, 65:38; deterioration of balsa cores, 54:5, 55:5, 57:7
- Woodtape: Oberflex hardwood-veneer laminates, 35:58
- Wooldridge Boats Inc: profile of, 116:52
- Wooldridge, R. Kent: hull identification numbers and new label maker (Monarch Manufacturing), 63:5
- Woolsey: Dolfinite bedding compound, 28:27
- Workbenches on wheels: at Holland Jachtbouw, 143:40
- work force (employees): advice on gaining experience, 172:76; asbestos exposure/compensable claims, 35:52; building and keeping of, 171:3; CAL/NCC, 38:47; changing attitudes in, 75:160, 77:5; cross-training, 12:10, 13:54, 25:42, 26:20, 29:22, 46:16, 47:34, 57:76, 107:52; customer service, 29:8, 35:25, 41:72; database for tracking labor, 50:59; developing recruiting strategies, 149:84; disabilities, 23:3, 23:13; in downturn/reorganization, 9:13, 10:20, 11:34, 123:26; drug testing, 23:13; efficiency/productivity, 29:22, 29:29, 41:72, 75:160; employee policy handbook, 103:34;

empowerment/communication/response to management, 8:64, 12:10, 13:54, 29:8, 29:22, 29:29, 35:25, 38:47, 39:52, 41:28, 103:34, 107:52; ethnic mix, 39:70, 116:112; fire-emergency preparedness/training, 1:50, 7:28, 17:34, 26:18, 35:25, 39:44, 44:18, 44:22, 44:25; hurricane preparations/training, 27:18, 27:21; 41:72; injuries/prevention/safety, 17:2, 23:13, 23:14, 28:54, 125:72; insurance considerations, 7:28, 8:64; labor/billable hours, 35:25, 37:60, 37:61, 57:74, 152:36; leadership, 13:54; for megayacht construction, 32:18, 53:28; non-compete agreement, 143:80; and outsourcing/subcontractors, 37:16, 38:14, 38:47, 57:76; performance reviews/incentive programs/promotion, 35:25, 41:72, 46:16, 103:34; product development, 26:20; in rapid expansion, 10:20, 11:34; safety/hazardous waste, 27:8, 140:18; safety/health programs, 17:2, 23:13, 23:14, 24:62, 28:54; size of/industry trends, 12:10, 44:3, 123:26; team-building, 13:54, 24:58, 26:20, 29:22, 51:52, 53:28; training/education, 5:32, 8:64, 12:10, 13:54, 14:4, 17:2, 26:20, 35:25, 41:28, 46:16, 116:112, 143:80, 172:76; training/pros and cons, 143:80; transition/commercial to yacht market, 40:24; wages/bonuses/benefits/retirement, 1:38, 5:32, 9:13, 26:20, 32:64, 35:25, 41:72; wages/piecework basis, 41:72; whiteboard for tracking labor/Moores Marine, 146:18; women, 39:70; workers' comp premiums/cost control, 23:13, 23:14, 24:11; wrongful discharge suit, 103:34. *See also* training, of employees;

training, vocational; worker safety/occupational health  
work force (employees), hiring: defense/aerospace skills, 25:64; disabilities, 23:3, 23:13, 103:34; manual test, 23:37; screening/Alumaweld, 26:20; skilled workers, 138:3; 140:18, 172:76; stable work force/Volvo Penta, 167:54; unique experiences from other professional pursuits, 172:3  
work space/environment: facilities at SanJuan Yachts, 107:52; heatable tent in storage shed, 19:25; plant layouts, 17:34, 67:110; reduced VOC emissions/air-makeup/filtration systems, 42:20, 42:24, 45:47; reduced VOC emissions/closed-molding processes, 26:34, 26:44, 31:42, 39:90, 41:28, 41:30, 44:30; for varnishwork, 19:36; at Volvo Penta Vara plant (Sweden), 167:54. *See also* paint shop/spray booth; production boatbuilding, plant/facilities; VOC emissions, reduction/compliance  
workboats. *See* commercial vessels; ferries; fishing boats, commercial, construction; powerboats, utility skiffs; tugboats  
workers. *See* work force (employees)  
worker safety programs. *See* worker safety/occupational health  
worker safety/occupational health: asbestos exposure, 35:52; blood clots/phlebitis, 41:55; chemistry, 6:64; epoxy exposure, 3:19, 42:62, 45:105, 48:104, 53:40, 55:5, 57:7; dermatitis/sensitization/allergies, 3:19, 36:88, 38:6, 42:62, 45:105, 48:104, 64:5; fire prevention/preparedness, 1:50, 7:28, 17:34, 39:44; foundries, 42:46; hauling and storage, 50:38;

hearing loss/protection, 3:19, 5:42, 8:54, 48:104, 92:30; heart disease, 39:52; material safety data sheets (MSDS) on CD-ROM, 23:54; at Morris Yachts, 92:30; Multiple Chemical Sensitivities (MCS), 36:88, 38:6; nasal/respiratory problems, 48:104, 75:72; nonskid surfaces/walkways, 45:105; in Norway, 2:67; at Princess Yachts, 129:26; repetitive-motion injuries/elimination of/air tools, 33:58; stress/empowerment and, 39:52, 39:54, 39:55, 67:110, 129:26; tools/ergonomics/vibration, 37:71; tuberculosis exposure, 36:74; safety/health manuals, 1:30, 4:10, 20:8, 36:78; safety/health programs/information, 17:2, 23:13, 23:14, 24:62, 28:54; safety programs/workers' comp, 23:13, 23:14; styrene exposure, 1:30, 2:27, 40:17, 40:20, 53:73, 57:7; workers' rights/OSHA reform legislation, 17:2. *See also* See *also* accidents/injuries, workplace; allergies/allergic reactions; clothing, work/protective; OSHA (Occupational Safety and Health Administration); personal protective gear workers' comp. *See* insurance, workers' compensation

workers' rights: chemical hazards, 1:30; safety and health/OSHA-reform legislation, 17:2

World Robotic Sailing Championship: SailBots/U.S. Naval Academy, 126:8

Worth, Dick: on a plea for a nautical Model T, 137:4

Worton Creek Marina: fire protection/compliance, 44:18, 44:25

Wrap Boats: vinyl wrap for retrofits, 169:28; wrapping a Cutwater Cruiser, 169:28; wrapping a 102' Ocean Alexander,

169:28. *See also* vinyl wrap, interior joinerwork/cabinetry, paint, coatings/paint, 3M (3M) Corporation, Marshall Gregory, NA

wrench: Squeeze-Wrench tool system, 14:57

Wright, Ed: on video production, 22:42

Wright, Jeffrey: on EcoPoxy's claim as non-toxic, non-corrosive, 124:6

Wright, Wilson: on final stages of Chris-Craft and OMC flag, 82:4

Writers Inc.: safety information/training programs, 24:62

writing: for marketing and promotion, 2:17, 2:20. *See also* builder's contracts/estimating/bidding; catalogs/product brochures, builders' WSMs. *See* water-soluble molecules (WSMs)

Wurtele, Scot: on seeking more designers for *Boat Plans International*, 28:6

Wyatt, Tison: Accucure chemical reaction monitor, 52:12

Wyliecat boats: 75:38; Wylie Rabbit, 165:70

Wylie, Tom: *American Express* racing boat, 75:38; *Jade*/(new *Como Nova*) aluminum sleep/defective aluminum plate, 152:6; profile/designer of wood-foam sailing yachts, 55:79; research vessel *Derek M. Baylis*/Wylie Charters. 165:10; Roxanne 60' family cruiser/Jim Betts, 129:40

Wyman, David B: speed prediction formula/Wyman's formula, 54:96, 55:5, 57:7

Wyman, David B., author: "Wyman's Formula," 54:96, 57:7

Wynne, Jim: Coronet 24/Botved Boats, 132:36, 161:8; on designing for

production, 2:60; and Walt Walters,  
132:36; Wyn-Mill racer, 132:36

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

Xanthakis, Jannis: C24 metal boat, 133:40;  
Design Challenge, 129:18, 133:40;  
*Piero M*, mini-trawler yacht, 129:18. *See also* Fanello, Guiseppe.  
xenon lights: 87:90; 100:4  
X-Serts (Click Bonds): acrylic-adhesive-  
based attachment system, 18:4  
XSR48 stepped hull superboat, 110:12  
X-weave fabric: applications/sources,  
36:34, 37:71. *See also* patches/patching  
techniques  
Xylem/Rule Brand LoPro pump, 157:14  
xylene: MACT standards, 34:40  
XSYacht: first series-produced fiberglass  
motoryacht in Manchuria/Shenyang  
Mechanical and Electrical, 163:14  
XYZ Trading Company: Oil-Wet sealant,  
8:54

---

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

---

Yachtcare Maintenance Management:  
marine batteries, 20:50  
yacht carrier: semi-submersible Super  
Servant 3, 74:9  
yacht-builder apprenticeship, 79:77  
yacht classification. *See* classification;  
classification societies  
yacht containment systems: Techno Craft  
S.L., 144:48; economic advantages of,  
144:48. *See also* shrink wrapping.  
Yacht Design Institute: courses by  
mail/Bob Wallstrom, 101:106

yacht designer: and technological changes,  
165:88, 167:3  
yacht market: vs. commercial  
boats/marketing/finish standards, 40:24,  
40:28, 40:36, 40:40  
Yachting Solutions: retrofit of vintage  
Huckins motoryacht with Volvo Penta's  
Inboard Propulsion System (IPS),  
129:54  
yachts. *See* custom/semi-custom/one-off  
construction; megayachts; powerboats,  
motoryachts; powerboats, offshore  
sportfishing yachts; sailboats; sailboats,  
offshore cruising/racing; sailboats,  
offshore racing/performance; small  
yachts  
Yachtsaver: Yachtsaver II  
airbags/emergency flotation system,  
13:70, 23:24  
Yacht Systems, Inc.: Stoppani varnish,  
26:54  
yacht transport: Zevenster Yachttransport,  
62:12  
Yacht Vision Symposium (New Zealand),  
116:46  
Yamaha: stern-drive engine, 6:52;  
TriFoiler/Water Spyder, 6:20  
Yanmar engine: 4 cylinder engines/high-  
pressure common rail (HPCR) fuel  
injection system, 158:64; fuel  
cleanliness/filer specifications, 158:64.  
*See also* biodiesel.  
Yanmar Technical Bulletin: alternators and  
temperature sensors, 170:32. *See also*  
batteries  
yard boats: designs, 42:34  
Yeargin, Bill: on boatyard  
management/training, 35:25  
Yellow Jacket Boat Co. (Texas):  
runabout/hotmolded/Industrial Shipping

Co. hulls, 147:64. See *also* Industrial Shipping Company.

YLA, Inc.: RS-1 resin system, 39:30

York, Charlie: Beetle Cat builder profile, 23:32

York, Michael: acquisition of Fitzgerald 36 design, 71:6

*Young America* (Bruce Farr design): damage to, 63:10; Faro Arm and Faro Tracker, 78:94; repairing, 65:66, 72:38, 78:94

Young America Syndicate, and Bruce Farr boats, 61:68

Young, Rick: on mesopic vision under low-light conditions/interior cabin lighting, 89:4

Young, Syd: builder of classic runabouts, 62:12

Young's modulus: 72:22

---

**A B C D E F G H I J K L M N**  
**O P Q R S T U V W X Y Z**

---

Z-Clad: SP Systems and SPRINT, 79:114

Z-drive tugs, 104:12, 127:104

Zazz Engineering: Moisture Rejection Closure (MRC) product line, 165:10

Zeller, Steven D.: on resin systems/exposure, 57:7

Zemonek, Richard, and Gary Larimer, authors: "Another Look at Flotation Foams," 57:41

ZF Beneteau: parallel hybrid system, 127:30

ZF Marine: Hybrid Sail Drive/Foundation Beneteau, 134:18; joystick maneuvering system (JMS), 134:78; pod drives, 138:18; 300 ATS two-speed transmission, 71:123; and Fabio Buzzzi's Trimax surface drives, 71:123; and

Seven Marine/joystick docking system, 138:6. See *also* ZF Trimax

ZF Trimax: Fabio Buzzzi's Trimax surface drives, 71:123, 134:36; two-speed gearbox, development of, 71:123

Zimmerman, Peter, author: "Exporting to Europe," 41:38; "Rethinking the Owner's Manual," 27:46

Zimmerman Marine: Charger 40 prototype, electric-powered displacement craft, 77:82; cored decks, 27:61; post-curing/print-through prevention, 34:18; repair of *Palawan*, 82:40

zinc anodes: aluminum anodes vs. zinc anodes/Navalloy 138:18, 157:94; bonding systems, 33:28, 54:70, 65:38, 138:18; determining area/testing circuits, 33:28, 33:34, 34:5; problems with, 157:94; vs. magnesium anodes, 157:94; US Navy's MILSPEC rating for anodes, 157:94. See *also* aluminum anodes, magnesium anodes; EPA; Canada Metal Pacific (CMP); Clean Boating Foundation

Zodiac International: extension of planing surface for soft bottom inflatables, 67:13; 11m RIB hull design/Michael Peters, 127:69

Zodiac of North America: DuraRib foam collar, 78:86; Over the Horizon Rigid Inflatable Boat (OTH RIB), 66:11; shock absorbing hull and cockpit/Structural Composites Inc, 143:10

Zoll, Vern: on CAD/CAM for interior joinerwork/Chris-Craft, 40:42

Zolotone: splatter paint/aluminum boats, 21:26, 37:36, 37:42

Zoltek Companies Inc.: profile/carbon fiber supplier, 58:36, 58:52

zoning regulations: marine insurance/hurricanes, 27:18, 27:21



Z-plane hulls: Stingray Boats, 127:30  
 Zseleczky, John: technical  
     paper/measuring peak  
     accelerations/Third Chesapeake Power  
     Boat Symposium, 145:106  
 Zuccarnini, John: on fiberglass fabric  
     (bindings/blistering), 15:60  
 Zurn, Doug, designer: and Bruckman  
     daysailer, 139:74; Gloucester 20  
     sportfisherman, 100:42; Marblehead  
     22/Samoset Boatworks, 127:8; MJM 34z  
     design, 84:18; motoryacht MJM34z  
     design, 99:52, 100:42; profile of, 100:42;  
     Salish Sea IS48 Pacific Northwest  
     cruiser, 134:6; Shelter Island 38 and  
     50/Billy Joel boat, 84:18, 100:42,  
     116:10; partnership with J Boats, 84:18;  
     Zurn 50 gentleman's day cruiser, 144:10  
 Zvanik, Marco: on cored bottoms/foam  
     cores, 53:4, 56:5, 72:5; on FRP  
     sandwich construction, 3:5; on semi-  
     rigid PVC cores/performance, 35:4  
 Zydler, Tom, author: "Anchor Stowage,"  
     22:28  
 Zyron panels, 121:100  
 Zytel glass reinforced nylon (GRN)  
     through-hull fittings, 114:120