NAVY DEPARTMENT
THE DAVID W. TAYLOR MODEL BASIN
WASHINGTON 7, D.C.

SUPPLEMENT TO A CATALOG OF
DAVID W. TAYLOR MODEL BASIN
UNCLASSIFIED PUBLICATIONS

ISSUED FROM OCTOBER 1950 TO SEPTEMBER 1951

January 1952

Report 597

2
03
597
appl.

MBL/WHOI

0 0301 0037242 1

INITIAL DISTRIBUTION

Copies

- 10 Chief, Bureau of Ships, Project Records (Code 324)
- 2 Chief of Naval Research, c/o Navy Research Section, Library of Congress
- 1 Commander, Boston Naval Shipyard, Boston 29, Mass.
- 1 Commander, San Francisco Naval Shipyard (Code 263L), San Francisco 24, Calif.
- 1 Commander, Mare Island Naval Shipyard, Vallejo, Calif.
- 2 Commander, Philadelphia Naval Shipyard, Naval Base, Philadelphia 12, Pa.
1 Code 263 sb
- 1 Commander, Puget Sound Naval Shipyard, Bremerton, Wash.
- 2 Commander, Norfolk Naval Shipyard (Code 243A), Portsmouth, Va.
- 1 Commander, Pearl Harbor Naval Shipyard
- 2 Director, U.S. Naval Research Laboratory, Technical Library, Anacostia, Washington 25, D.C.
- 1 Commanding Officer and Director, U.S. Navy Electronics Laboratory, San Diego 52, Calif.
- 2 Commanding Officer and Director, U.S. Naval Engineering Experiment Station, Annapolis, Md.
- 1 Commander, U.S. Naval Ordnance Test Station, Inyokern, China Lake, Calif. Attn: Technical Library
- 1 Commander, New York Naval Shipyard, Naval Base, Brooklyn 1, N.Y.
Attn: Design Superintendent
- 1 Commanding Officer, U.S. Navy Material Laboratory, Naval Base, Brooklyn 1, N.Y.
- 2 Commander, Portsmouth Naval Shipyard, Portsmouth, N.H.
1 Attn: Design Supt.
- 1 Commander, Charleston Naval Shipyard, Naval Base, S.C.
- 1 Commanding Officer and Director, U.S. Navy Underwater Sound Laboratory, Fort Trumbull, New London, Conn.
- 1 Commander, U.S. Naval Ordnance Laboratory
- 1 Commanding Officer, Office of Naval Research Branch Office, 150 Causeway St., Boston 14, Mass.
- 1 Commanding Officer, Surface Anti-Submarine Development Detachment, U.S.. Atlantic Fleet, Key West, Fla.
- 1 Officer in Charge, U.S. Naval Medical Research Laboratory, Submarine Base, New London, Conn.
- 1 Officer in Charge, U.S. Naval School, CEC Officers, Naval Construction Battalion Center, Naval Station, Port Hueneme, Calif.
- 1 Officer in Charge, U.S. Naval Civil Engineering Research and Evaluation Laboratory, U.S. Naval Construction Battalion Center, Port Hueneme, Calif.

Copies

- 1 Administrator, Webb Institute of Naval Architecture, Crescent Beach Rd., Glen Cove, Long Island, N.Y.
- 1 Director, Experimental Naval Tank, Dept. of Naval Architecture and Marine Engineering, University of Michigan, Ann Arbor, Mich.
- 1 Librarian, Massachusetts Institute of Technology, Cambridge 39, Mass.
- 2 Head, Dept. of Naval Architecture and Marine Engineering, Massachusetts Institute of Technology, Cambridge 39, Mass.
- 1 Senior Naval Architect, The American Shipbuilding Co., Foot of W. 54th St., Cleveland 2, Ohio
- 1 Senior Naval Architect, New York Shipbuilding Corp., Camden, N.J.
- 1 Senior Naval Architect, Sun Shipbuilding and Dry Dock Company, Chester, Pa.
- 1 Senior Naval Architect, Bethlehem Steel Corporation, Quincy, Mass.
- 1 Supervisor, Hydraulic Laboratory, Newport News Shipbuilding and Dry Dock Co., Newport News, Va.
- 1 Documents Librarian, University of Colorado Libraries, Boulder, Colo.
- 1 The University Library, University of California, 405 Hilgard Ave., Los Angeles 24, Calif. Attn: Mr. Martin E. Thomas, Gifts and Exchange Librarian
- 1 Glenco Corporation, Durham Ave., Metuchen, N.J. Attn: Mr. Abraham I. Dranetz, Director of Engineering
- 1 Friede and Goldman, Inc., 1420 National Bank of Commerce Building, New Orleans, La.
- 1 Combustion Engineering - Superheater, Inc., Combustion Engineering Building, 200 Madison Ave., New York 16, N.Y. Attn: Mr. Herbert Becker, Structures Engineer
- 1 Armour Research Foundation of Illinois Institute of Technology, Technology Center, Chicago 16, Ill. Attn: Miss Jo Ann Whipple, Librarian
- 1 Cornell Aeronautical Laboratory, Inc., 4455 Genesee St., P.O. Box 235, Buffalo 21, N.Y. Attn: Miss Elma T. Evans, Librarian
- 1 Westinghouse Electric Corporation, Sunnyvale, Calif. Attn: Mr. H.D. Ewing
- 1 Consolidated Vultee Aircraft Corporation, Fort Worth Division, Fort Worth, Texas. Attn: Mr. Keith G. Brown, Engineering Librarian
- 1 AiResearch Manufacturing Co., 9851-9951 Sepulveda Blvd., Los Angeles 45, Calif.
- 1 Westinghouse Electric Corp., Aviation Gas Turbine Division, Lester Branch P.O., Philadelphia 13, Pa. Attn: Mr. Robert R. Brearly, Design Engineer, Mechanics Section
- 1 Armour Research Foundation of Illinois Institute of Technology, Technology Center, Chicago 16, Ill. Attn: Mr. Henry J. Barten, Research Engineer

Copies

- 1 Department of Aeronautical Engineering, University of Illinois,
Urbana, Ill. Attn: Prof. Paul Torda
- 1 Librarian, Glenn L. Martin College of Engineering and Aeronautical
Sciences, University of Maryland, College Park, Md.
- 1 Dean, School of Engineering, The University of Texas, Austin 12,
Texas. Attn: A.A. Topractsoglou, Asst. Prof.
- 1 Librarian, Virginia Polytechnic Institute, Blacksburg, Va.
- 1 Timkin Roller Bearing Co., Canton 6, Ohio
- 1 Documents Librarian, University of Colorado Libraries, Boulder,
Colo.
- 1 Lessells and Associates, Engineers, 916 Commonwealth Ave., Boston
15, Mass.
- 1 Head, Aeronautical Engineering Department, Catholic University,
Washington, D.C.
- 1 Chairman, Dept. of Aeronautical Engineering, New York University,
University Heights, New York 53, N.Y.
- 1 Librarian, Texas Technological College, Lubbock, Texas
- 1 Librarian, Pacific Aeronautical Library, Institute of the Aeronau-
tical Sciences, 7660 Beverly Blvd., Los Angeles 36, Calif.
- 1 Ruge-DeForest, Inc., Consulting Engineers, 76 Massachusetts Ave.,
Cambridge 39, Mass.
- 1 Research Division, Austin Co., 16112 Euclid Ave., Cleveland 12,
Ohio
- 1 Steam Turbine Division, Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.
- 1 Librarian, Industrial Relations Division, Allis-Chalmers Mfg. Co.,
Milwaukee 1, Wis.
- 1 Propeller Division, Curtiss-Wright Corp., Caldwell, N.J.
- 1 Secretary, Welding Research Council, 29 West 39th St., New York
18, N.Y.
- 1 Director of Research, Shell Oil Co., Exploration and Production
Research Laboratory, 3705 Bellaire Blvd., Houston 5, Texas
- 1 Director of Engineering Research, Standard Oil Co. of Indiana,
910 So. Michigan Ave., Chicago 80, Ill.
- 1 Director, Institute of Aeronautical Sciences, 2 East 64th St.,
New York 21, N.Y.
- 2 Librarian, Carnegie Institute of Technology, Pittsburgh 13, Pa.
- 1 Librarian, Case Institute of Technology, Cleveland 6, Ohio
- 1 Librarian, Illinois Institute of Technology, 3300 Federal St.,
Chicago 16, Ill.
- 1 Librarian, Rensselaer Polytechnic Institute, Troy, N.Y.
- 1 Librarian, Franklin Institute, Parkway at 20th St., Philadelphia,
Pa.
- 1 Director, Guggenheim Aeronautics Laboratory, Stanford University,
Calif.

Copies

- 1 Librarian, Stanford University Libraries, Stanford University, Calif.
- 1 Dean, School of Engineering, University of Maryland, College Park, Md.
- 1 Librarian, University of Pennsylvania, Philadelphia 4, Pa.
- 1 Baldwin-Lima-Hamilton Corp., Eddystone Division, Philadelphia 42, Pa. Attn: Mr. F.G. Tatnall
- 1 Technical Library, Bell Telephone Laboratories, 463 West St., New York 14, N.Y.
- 1 Research Library, Caterpillar Tractor Co., Peoria 8, Ill.
- 1 Research Laboratory Library, General Electric Co., 1 River Road, Schenectady 5, N.Y.
- 1 Research Laboratory Division, General Motors Corp., Detroit 2, Mich.
- 1 Chief, Science and Industry Dept., Milwaukee Public Library, Milwaukee, Wis.
- 1 Librarian, Westinghouse Research Laboratories, East Pittsburgh, Pa.
- 1 Librarian, Daniel Guggenheim Aeronautical Laboratory, California Institute of Technology, Pasadena 4, Calif.
- 1 Director, Experimental Towing Tank, Stevens Institute of Technology, Hoboken, N.J.
- 1 Dean, College of Engineering, Cornell University, Ithaca, N.Y.
- 1 Librarian, College of Engineering, Cornell University, Ithaca, N.Y.
- 1 Librarian, New York University, University Heights, New York 53, N.Y.
- 1 Engineering Librarian, University of Illinois, Urbana, Ill.
- 1 Chief, Division of Metallurgy, Pennsylvania State College, State College, Pa.
- 1 Director, Hydraulics Laboratory, Dept. of Civil Engineering, Pennsylvania State College, State College, Pa.
- 1 Chairman, Dept. of Applied Mathematics, Carnegie Institute of Technology, Pittsburgh 13, Pa.
- 1 Director, Fritz Engineering Laboratory, Lehigh University, Bethlehem, Pa.
- 1 Dean, School of Engineering, University of California, Berkeley, Calif.
- 1 Director, Battelle Memorial Institute, Columbus 1, Ohio
- 1 University of Notre Dame, Engineering Library, Notre Dame, Ind.
- 1 Senior Naval Architect, Newport News Shipbuilding and Dry Dock Co., Newport News, Va.
- 1 Sparkman and Stephens, Inc., 11 East 44th St., New York, N.Y.
- 1 Senior Naval Architect, Gibbs and Cox, Inc., 1 Broadway, New York 4, N.Y.
- 1 Director, Geophysical Laboratory, Carnegie Institution, Washington, D.C.

Copies

- 1 Dr. A. Donald Hay, School of Engineering, Princeton University, Princeton, N.J.
- 1 Dr. M. Gensamer, School of Mines, Columbia University, New York 27, N.Y.
- 1 Dr. K.F. Herzfeld, Catholic University of America, Washington, D.C.
- 1 Prof. Lydik S. Jacobsen, Dept. of Mechanical Engineering, Leland Stanford University, Stanford University, Calif.
- 1 Dr. L.G. Straub, Director, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis 14, Minn.
- 1 Mr. C.A. Ludeke, Dept. of Mathematics, University of Cincinnati, Cincinnati, Ohio
- 1 Mr. John S. Parkinson, Johns-Manville Research Laboratory, Manville, N.J.
- 1 Mr. Frederick K. Lord, Naval Architect, 167 Centre Ave., New Rochelle, N.Y.
- 1 CAPT J. Ormondroyd, USNR, Dept. of Engineering Mechanics, University of Michigan, Ann Arbor, Michigan
- 1 Dr. Bruce G. Johnston, Professor of Structural Engineering, 301 West Engineering Bldg., University of Michigan, Ann Arbor, Mich.
- 1 Prof. Frank M. Lewis, Dept. of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge 39, Mass.
- 1 Dr. Arthur T. Ippen, Dept. of Civil and Sanitary Engineering, Massachusetts Institute of Technology, Cambridge 39, Mass.
- 1 Dr. T.C. Poulter, Associate Director, Stanford Research Institute, Stanford University, Calif.
- 1 Dr. LeVan Griffis, Armour Research Foundation, Chicago, Ill.
- 1 Dr. A. Nadai, 136 Cherry Valley Road, Pittsburgh, Pa.
- 1 Dr. D.S. Clark, California Institute of Technology, Pasadena 4, Calif.
- 1 Mr. W.E. Fermann, Naval Architect, 7939 St. Paul St., Detroit 14, Mich.
- 1 Dr. William R. Osgood, Chairman, Dept. of Mechanics, Illinois Institute of Technology, Technology Center, Chicago 16, Ill.
- 1 Mr. Leonard Meyerhoff, Research Associate, Department of Aeronautical Engineering and Applied Mechanics, Polytechnic Institute of Brooklyn, 99 Livingston St., Brooklyn 2, N.Y.
- 1 RADM Claude O. Kell, USN (Ret), Marietta Manufacturing Company, Point Pleasant, W. Va.
- 1 Dr. M.S. Plesset, California Institute of Technology, Pasadena 4, Calif.
- 1 Mr. P.G. Hubbard, Research Engineer, Iowa Institute of Hydraulic Research, State University of Iowa, Iowa City, Iowa
- 1 Prof. Carl E. Kinsvater, Hydraulics Laboratory, Georgia Institute of Technology, Atlanta, Ga.
- 1 Prof. F.K. Teichmann, Dept. of Aeronautical Engineering, New York University, University Heights, New York 53, N.Y.

Copies

- 2 Officer in Charge, Office of Naval Research Branch Office, London,
Navy No. 100, Fleet Post Office, New York, N.Y.
- 1 Inspector of Naval Material, 495 Summer St., Boston, Mass., for
Instrument Development Laboratories Inc., 163 Highland Ave.,
Needham Heights 94, Mass.
- 1 Inspector of Naval Material, Old Post Office Building, Pittsburgh
19, Pa.
- 1 Inspector of Naval Material; Buffalo District, 14th Floor Hotel
Buffalo, Washington and Swan Sts., Buffalo 3, N.Y. for Bell
Aircraft Corporation
- 2 BAR, Grumman Aircraft Engineering Corporation, Beth Page, L.I., N.Y.
- 2 BAR, Cornell Aeronautical Laboratory, Box 235, Buffalo 21, N.Y.
- 1 BAR, Allison Div., General Motors Corp., Indianapolis 6, Ind.
- 1 BAR, Pratt and Whitney Aircraft Division, United Aircraft Corp.,
East Hartford 8, Conn.
- 1 BAR, (Inglewood) North American Aviation, Inc., Los Angeles 45,
Calif.
- 2 BAR, McDonnell Aircraft Corp., Box 516, St. Louis 3, Mo.
- 1 BAR, Glenn L. Martin Co., Baltimore 3, Md.
- 1 BAR (Factory A), Lockheed Aircraft Corp., Burbank, Calif.
- 1 BAR, East Akron Station, Akron 5, Ohio
- 2 BAR, Westinghouse Electric Corp., Essington, Pa.
- 1 BAR, Consolidated Vultee Aircraft Corp., San Diego 12, Calif.
- 4 BAR, El Segundo Division, Douglas Aircraft Co., Inc., El Segundo,
Calif.
- 1 Superintendent, U.S. Naval Postgraduate School, Annapolis, Md.
Attn: Library
- 2 Superintendent, U.S. Naval Academy
1 Library
1 Department of Marine Engineering
- 1 Federal Security Agency, Public Health Service, National Institutes
of Health, Bethesda 14, Md. Attn: Mr. Robert L. Bowman, National
Heart Institute
- 1 Office of the Chief of Ordnance, Department of the Army
- 1 The Director, Waterways Experiment Station, Corps of Engineers, U.S.
Army, P.O. Box 631, Vicksburg, Miss. Attn: Mr. Alan G. Skelton,
Technical Librarian
- 2 The Chief, Armed Forces Special Weapons Project, P.O. Box 2610,
Washington 25, D.C. Attn: Miss Camp, Technical Library
- 1 Central Air Documents Office, U.B. Building, Dayton 2, Ohio
Attn: CADO-D1
- 1 Department of Commerce, Office of Technical Services, Washington
25, D.C. Attn: Librarian
- 2 Library, Bureau of Public Roads, 19th & F Sts., N.W., Washington
25, D.C.
- 1 Head, Technical Reference Section, U.S. Dept. of Interior, Bureau
of Reclamation, Denver Federal Center, Denver, Colo.

Copies

- 1 Director, Office of the Secretary of Defense, Weapons Systems Evaluation Group, Room 2E-1013A, The Pentagon, Washington 25, D.C. Attn: WSEG Library
- 1 U.S. Weather Bureau, Dept. of Commerce, 25th & M Sts., N.W., Washington 25, D.C.
- 1 Director, U.S. Bureau of Mines Central Experiment Station, 4800 Forbes Street, Pittsburgh 13, Pa.
- 1 Librarian, Technical Library, U.S. Atomic Energy Commission, Washington 25, D.C.
- 1 Director, U.S. Coast and Geodetic Survey, Washington 25, D.C.
- 2 Commandant, U.S. Coast Guard, Headquarters, 1300 E St., N.W., Washington, D.C.
- 3 Director, National Bureau of Standards, Washington 25, D.C.
- 1 Director, National Bureau of Standards, Hydraulic Laboratory, Washington 25, D.C.
- 1 Director, Technical Division, U.S. Maritime Administration, Washington 25, D.C.
- 1 Director, Forest Products Research Laboratory, Madison, Wis.
- 1 Oak Ridge National Laboratory, Post Office Box P., Oak Ridge, Tenn. Attn: Mr. Neal F. Lansing
- 1 Director, Laboratory Division, Frankford Arsenal, Philadelphia 37, Pa.
- 1 Commanding Officer, Redstone Arsenal, Huntsville, Ala. Attn: ORDDW-ORC Technical Library
- 1 Director, Woods Hole Oceanographic Institution, Woods Hole, Mass.
- 1 Humble Oil & Refining Company, Production Dept., Petroleum Engineering Division, P.O. Box 2180, Houston 1, Texas
- 1 Oklahoma Power & Propulsion Laboratory, Oklahoma A. & M. College, Stillwater, Okla.
- 1 California Institute of Technology, Seismological Laboratory, Pasadena, Calif.
- 1 Drexel Institute of Technology, Philadelphia 4, Pa. Attn: George Sonnenmann, Asst. Prof. of Aeronautical Engineering
- 1 The John Crerar Library, 86 East Randolph St., Chicago 1, Ill. Attn: Carmen Wilson, Chief, Technology Dept.
- 1 Great Lakes Engineering Works, River Rouge 18, Mich. Attn: Mr. Tom Corin
- 1 New York State Maritime College, State University of N.Y., Fort Schuyler, New York 61, N.Y. Attn: Mr. Terence J. Hoverter
- 1 Reed Research, Inc., 1048 Potomac St., N.W., Washington 7, D.C. Attn: Mrs. Helen M. Scherff, Librarian
- 2 Sandia Corporation, Sandia Base, Albuquerque, New Mexico. Attn: Mr. Dale N. Evans, Classified Document Division
- 1 School of Engineering, University of Connecticut, Storrs, Conn. Attn: Mr. Aron L. Mirsky

Copies

- 1 General Electric Co., Main Library, 1 River Rd., Schenectady, N.Y.
Attn: Miss Agnes G. Ruane, Order-Librarian
- 1 James Forrestal Research Center, Princeton University, Princeton,
N.J. Attn: Mr. Maurice H. Smith, Research Associate
- 1 George G. Sharp, 30 Church St., New York, N.Y.
- 1 Philip L. Rhodes, Naval Architects, 11 Broadway, New York 4, N.Y.
- 1 Mr. Frank C. Vibrans, Marine Engineer, Diesel Div., Fairbanks,
Morse and Co., 600 So. Michigan Ave., Chicago 5, Ill.
- 1 Mr. Charles Gosnell, Librarian, New York State Library, Albany, N.Y.
- 1 Mr. Herbert Saunders, Foster-Wheeler Corp., 27 Thames St., New
York, N.Y.
- 1 Mr. Maurice L. Anthony, Armour Research Foundation, 3140 South
Michigan St., Chicago 16, Ill.
- 1 Mr. P.G. Richards, Chief Mechanical Metallurgist, Hamilton Standard
Propellers, Div. of United Aircraft Corp., East Hartford 8, Conn.
- 1 Prof. N.W. Conner, Mechanical Engineering Dept., North Carolina
College of Agriculture and Engineering, Raleigh, N.C.
- 1 Mr. S. Logan Kerr, Room 514, 1528 Walnut St., Philadelphia 2, Pa.
- 1 Prof. W.S. Hamilton, Technological Institute, Northwestern Univer-
sity, Evanston, Ill.
- 1 Mr. C.A. Lee, Hydraulic Engineer, Research and Development Labora-
tories, Kimberly-Clark Corp., Neenah, Wis.
- 1 COMO H.A. Schade, USN (Ret), Director of Engineering Research,
201 Building T-3, University of California, Berkeley 4, Calif.
- 1 Dr. Finn Jonassen, Ship Structure Committee, National Research
Council, Washington, D.C.
- 1 Prof. Samuel T. Carpenter, Chairman of the Engineering Division,
Swarthmore College, Swarthmore, Pa.
- 1 CAPT W.P. Roop, USN (Ret), Anchorage Farm, Sewell, N.J.
- 1 Prof. William Prager, Graduate Division of Applied Mathematics,
Brown University, Providence 12, R.I.
- 1 Mr. H. Ziebolz, Vice President, Askania Regulator Co., 240 E.
Ontario St., Chicago 11, Ill.
- 1 Dr. Robert T. Knapp, California Institute of Technology, Pasadena
4, Calif.
- 1 Dr. R. Courant, New York University, Washington Square, New York,
N.Y.
- 1 Prof. T.J. Dolan, College of Engineering, University of Illinois,
Urbana, Ill.
- 1 Dr. N.M. Newmark, 111 Talbot Laboratory, University of Illinois,
Urbana, Ill.
- 1 Dr. Hunter Rouse, Director, Iowa Institute of Hydraulic Research,
Iowa City, Iowa
- 1 Dr. S. Lefschetz, Princeton University, Princeton, N.J.

Copies

1 Mr. Will J. Worley, Assistant Professor of Theoretical and Applied
Mechanics, 306e Talbot Laboratory, University of Illinois,
Urbana, Ill.

1 Prof. James E. Forbes, Department of Aeronautical Engineering,
Massachusetts Institute of Technology, Cambridge 39, Mass.

1 Mr. Robert Zaborowski, c/o Roberts and Schaefer and Co., 254 West
54th St., New York, N.Y.

1 Mr. B. Saelman, 143 North Harvard, Los Angeles 4, Calif.

1 Mr. A.H. Church, Chairman, Mechanical Engineering Department,
New York University, University Heights, New York 53, N.Y.

1 Mr. C.L. Fenn, Assistant Chief Engineer, Edo Corporation, College
Point, L.I., N.Y.

1 Mr. Charles C. Perry, 2922 N. Blair Ave., Royal Oak, Mich.

1 Mr. Arthur Renstrom, Aeronautics Division, Library of Congress,
Washington 25, D.C.

1 Dr. Hans Reissner, Polytechnic Institute of Brooklyn, 85-99
Livingston St., Brooklyn 2, N.Y.

1 Dr. Erik Reissner, Department of Mathematics, Massachusetts
Institute of Technology, Cambridge 39, Mass.

1 Mr. Jennings Wood, Gifts and Exchange Librarian, Library of
Congress, Washington 25, D.C.

1 Mr. C.R. Haig, Bell Aircraft Corp., P.O. Box 1, Buffalo 5, N.Y.

1 Mr. A.O. White, General Electric Co., Branch Office, Shoreham
Building, Washington, D.C.

2 U.S. Naval Attache and Naval Attache for Air, London

9 British Joint Services Mission (Navy Staff)

2 Canadian National Research Council, Scientific Liaison Office

1 Mr. W.L. McKinnon, Office Manager, Shell Oil Co., Houston 5, Texas

1 Emhart Manufacturing Co., 333 Homestead Ave., Hartford 2, Conn.
Attn: Mr. C.R. Hammond, Technical Analyst

TABLE OF CONTENTS

	Page
Numerical Lists	
Regular Series	1
R- Series	42
Translations	51
Author Index	75
Subject Index	81

(In the indexes, numbers of reports of the regular series are given without prefix, those of reports of the R- series are preceded by "R-," and those of translations are preceded by "T-.")

CORRECTIONS FOR AND ADDITIONS TO REPORT 597

REGULAR SERIES

597. Add: Issued up to 30 Sep 1950. Feb 1951. 118 pp.
626. Add: A Resonant-Bridge Carrier System for the Measurement of Minute Changes in Capacitance, by George W. Cook. Feb 1951. 41 pp., 23 figs.
635. Add: Hydrostatic Pressure Tests on Thin Rectangular Diaphragms 21 Inches by 13-1/2 Inches, by John W. Day. Mar 1951. 44 pp., 22 figs.
636. Add: Hydrostatic Pressure Tests on Thin Rectangular Diaphragms 84 Inches by 54 Inches, by John W. Day. Apr 1951. 41 pp., 32 figs.
640. Delete: Distributed only upon authorization of U.S. Maritime Commission. Add: Distributed only upon authorization of U.S. Army Engineers.

TRANSLATIONS

14. Add: The Cavitation Tank of the Hamburgische Schiffbau-Versuchsanstalt [Der Kavitationstank der Hamburgischen Schiffbau-Versuchsanstalt], by Hermann Lerbs. 83rd Communication of the Hamburg Model Basin. Werft-Reederei-Hafen, Vol. 12, No. 11, 1 Jun 1931, pp. 191-194. Translated by M.C. Roemer. Feb 1936. 13 pp., 6 figs.
66. Delete: In preparation. Add: Translated by M.C. Roemer. Sep 1950. 26 pp., 12 figs.
68. Delete: In preparation. Add: Translated by M.C. Roemer. Sep 1950. 14 pp., 12 figs.
135. Delete: Unpublished...TMB Library. Add: Apr 1951. 23 pp., 3 figs.
188. Delete: Unpublished...TMB Library. Add: Apr 1951. 30 pp., 23 figs.

REGULAR SERIES

672. Evaluation and Development of Noise-Isolation Mounts and Mount Materials,
• by Leo Rubinowitz. Dec 1948. 6 pp.
673. Single-Screw Tanker Project T5-S-DP1. Part 1 - Resistance and Propulsion Tests and Lines of Flow of Model 4042-1, by R.S. Welch. Dec 1948. 12 pp., 3 figs. Distributed only upon authorization of U.S. Maritime Commission.
674. Withdrawn.
675. Single-Screw Tanker Project T5-S-DP1. Part 2 - Resistance and Propulsion Tests of Model 4042-2, by R.S. Welch. Jan 1949. 11 pp., 1 fig. Distributed only upon authorization of U.S. Maritime Commission.
678. Analysis of Standardization Trial Results for USS LSM458 Equipped with Kirsten-Boeing Cycloidal Propellers, by C.J. Wilson. Sep 1948. 15 pp., 8 figs. Distributed only upon authorization of Bureau of Ships.
679. Withdrawn.
680. Instruction Manual for Resonant-Bridge Carrier System, Condenser-Type Pressure Gage, and Associated Equipment, by Thomas A. Perls, Richard W. Armstrong, and Charles W. Hoffman. Jun 1949. 41 pp., 16 figs.
681. (Aero 761). Bureau of Aeronautics proprietary report.
682. Report of Model Tests of an Emergency Cargo Vessel Model 4117, by Lt. (jg) W.C. Sadler, USN. Feb 1949. 13 pp., 5 figs. Distributed only upon authorization of U.S. Maritime Commission.
683. Report of Model Tests of an Emergency Cargo Vessel Model 4115, by Jack Posner. Jun 1949. 17 pp., 6 figs. Distributed only upon authorization of U.S. Maritime Commission.
684. Report of Model Tests of an Emergency Cargo Vessel Model 4133, by Lt. Comdr. D. Furlong, USN. Apr 1949. 17 pp., 6 figs. Distributed only upon authorization of U.S. Maritime Commission.
685. Rolling Characteristics of Model 3705 Representing USS BURTON ISLAND (AG88), by S.C. Gover. Feb 1949. 10 pp., 6 figs.
686. Methods for the New Analysis of the Original Data for the Taylor Standard Series (Preliminary Report), by Morton Gertler. Feb 1949. 43 pp., 18 figs.
687. Tables for Computing the Equilibrium Configuration of a Flexible Cable in a Uniform Stream, by Leonard Pode. Mar 1951. 222 pp., 7 figs.
688. Lighting Banks for a Subsurface Camera, by Harold A. Eggers. May 1949. 12 pp., 7 figs.
689. Effect of Transverse Curvature on Frictional Resistance, by L. Landweber. Mar 1949. 10 pp., 1 fig.

REGULAR SERIES

691. Resistance and Propulsion Characteristics of a 630-Foot Single-Screw Tanker as Predicted from Tests on Model 4121-1, by S.S. Hagara. Mar 1949. 10 pp., 5 figs. Distributed only upon authorization of Sun Shipbuilding and Dry Dock Company.
- Supplement A - Comparison of Resistance and Propulsion Characteristics of a 630-Foot Single-Screw Tanker Predicted from Tests on Model 4121-1 and Model 4121-2, by S.S. Hagara. Sep 1949. 21 pp., 11 figs. Distributed only upon authorization of Sun Shipbuilding and Dry Dock Company.
- Supplement B - Resistance and Propulsion Characteristics of a 630-Foot Single-Screw Tanker as Predicted from Tests on Model 4121-3, by S.S. Hagara. Jun 1950. 11 pp., 4 figs. Distributed only upon authorization of Sun Shipbuilding and Dry Dock Company.
692. A Six-Component Dynamometer for the Measurement of Forces and Moments on Models of Ship Appendages, by Phillip Eisenberg, Morris S. Macovsky, and Walter L. Stracke. May 1949. 18 pp., 11 figs.
693. Performance of the Puget Sound Vibrograph, by Q.R. Robinson. Sep 1949. 10 pp., 4 figs.
694. (Aero 769). Bureau of Aeronautics proprietary report.
695. Powering Characteristics of a 290-Foot Ferry as Predicted from Tests with Model 4122, by M.S. Harper and G.R. Stuntz, Jr. May 1949. 18 pp., 6 figs. Distributed only upon authorization of Kindlund and Drake.
- Supplement A - Powering Characteristics of a 290-Foot Ferry as Predicted from Tests with Model 4122, by J.G. Hill and M.S. Harper. Sep 1949. 23 pp., 9 figs. Distributed only upon authorization of Kindlund and Drake.
- Supplement B - Powering Characteristics of a 290-Foot Ferry as Predicted from Tests with Model 4122, by M.S. Harper. Mar 1950. 11 pp., 5 figs. Distributed only upon authorization of Kindlund and Drake.
696. Power Characteristics of a Proposed 30,000-Ton D.W. Tanker as Predicted from Tests on Model 4111-2, by S.S. Hagara. May 1949. 14 pp., 5 figs. Distributed only upon authorization of New York Shipbuilding Corporation.
- Supplement A - Prediction of the Relative Performance of Three Propellers Tested on Model 4111-2 Representing a 30,000 DWT Single-Screw Tanker, by S.S. Hagara. Jul 1949. 19 pp., 9 figs. Distributed only upon authorization of New York Shipbuilding Corporation.
- Supplement B - Power Characteristics of a Proposed 30,000-Ton D.W. Tanker as Predicted from Tests on Model 4111-2, by S.S. Hagara. Jan 1950. 22 pp., 14 figs. Distributed only upon authorization of New York Shipbuilding Corporation.
697. Withdrawn.
698. Maneuvering Tests of Model 4013-1 Representing Twin-Screw Passenger Trailership, by C.R. Olson. Jun 1949. 14 pp., 10 figs. Preliminary Report. Rev. Ed. Jun 1949. 30 pp., 22 figs. Distributed only upon authorization of Sun Shipbuilding and Dry Dock Company.

REGULAR SERIES

699. Vibration-Generator Survey of the USS NIAGARA (APA87), by Norman H. Jasper. Dec 1948. 18 pp., 16 figs.
700. Measurement of Intensity of Turbulence in Water by Dye Diffusion, by M.S. Macovsky, W.L. Stracke, and J.V. Wehausen. Jul 1949. 23 pp. 10 figs.
701. Powering Characteristics of a 528-Foot AKA Prototype as Predicted from Tests with Model 4144, by Rachel Welch. Aug 1949. 17 pp., 8 figs. Distributed only upon authorization of U.S. Maritime Commission.
702. Model 4146, 588-Foot Cargo and Passenger Vessel for Mississippi Shipping Company Designed by George G. Sharp, by Rachel Welch and William Gustilo. Aug 1949. 18 pp., 8 figs. Distributed only upon authorization of George G. Sharp.
703. Power Characteristics of a Liberty Ship as Predicted from Tests with Model 3748-2, by W.H. Roundy. Aug 1949. 11 pp., 4 figs. Distributed only upon authorization of U.S. Maritime Commission.
704. A Theoretical and Experimental Investigation of a Dynamically Loaded Ring with Radial Elastic Support, by Edward Wenk, Jr., Dr.Eng. Jul 1950. 78 pp., 30 figs.
706. Calculation of the Normal Vertical Flexural Modes of Hull Vibration by the Digital Process, by Alice W. Mathewson. Feb 1950. 20 pp., 19 figs.
707. Service Tests of Experimental High-Speed Towing Targets Conducted off the Virginia Capes May 20 to 27, 1949, by John Plum. Sep 1949. 10 pp.
708. (Aero 732). Bureau of Yards and Docks proprietary report.
709. Transition Temperature of Ship Plate in Notch-Tensile Tests, by E.M. MacCutcheon, C.L. Pittiglio, and R. H. Raring. Jul 1950. 33 pp., 31 figs.
710. Analysis of Wave Resistance, by Georg P. Weinblum, Dr.Eng. Sep 1950. 110 pp., 40 figs.
711. Theory of the Water Brakes Type "Foettinger", by W. Spannhake. Sep 1950. 13 pp., 7 figs.
712. On the Mechanism and Prevention of Cavitation, by Phillip Eisenberg. July 1950. 75 pp., 37 figs.
713. An Experimental Investigation of the Hydrodynamic Forces on Stranded Cables, by Leonard Pode. May 1950. 20 pp., 5 figs.
714. The Effect of Propeller Design on Powering Characteristics of a Twin-Screw Passenger-Cargo Vessel as Predicted from Tests with Model 3931-1, by M.S. Harper. Nov 1949. 26 pp., 12 figs. Distributed only upon authorization of Bethlehem Steel Company.
715. The Steady-State Response of a Ship Hull to a Simple Harmonic Driving Force Computed by a Digital Process, by Emily J. Adams. May 1950. 25 pp., 15 figs.

REGULAR SERIES

716. (Aero 772). Bureau of Yards and Docks proprietary report.
717. A Method of Determining Optimum Lengths of Towing Cables, by Leonard Pode. Apr 1950. 15 pp., 8 figs.
718. Tests of a Trochoidal Propeller - TMB Propeller 3078, by J.G. Hill. Feb 1950. 6 pp., 4 figs. Distributed only upon authorization of Trochoidal Propeller Corporation.
719. Mathematical Formulation of Bodies of Revolution, by L. Landweber and M. Gertler. Sep 1950. 70 pp., 13 figs.
720. Evaluation of Selected Shock Instruments, by Thomas A. Perls and Harry L. Rich. Feb 1951. 64 pp., 56 figs.
721. (Aero 788). Bureau of Aeronautics proprietary report.
722. Twin-Screw Passenger and Trailership Model 4013-4. Wake Survey in Way of Propeller and at Two Locations Aft, by M.S. Harper. Jul 1950. 6 pp., 3 figs. Distributed only upon authorization of Sun Shipbuilding and Dry Dock Company.
723. A Bar-Magnet Velocity Meter, by Dr. Thomas A. Perls and Dr. Erich Buchmann. Feb 1951. 28 pp., 12 figs.
724. Effects of Turbulence Stimulators on the Boundary Layer and Resistance of a Ship Model as Detected by Hot Wires, by John P. Breslin and Morris S. Macovsky. Aug 1950. 44 pp., 22 figs.
725. A Low-Frequency Electronic Integrator, by B.H. Harrison. Feb 1951. 31 pp., 15 figs.
726. Progress Report on Research in Frictional Resistance. Sep 1950.
Note on Studies of the Resistance of Hydraulically-Rough Surfaces, by Phillip Eisenberg. 6 pp., 7 figs.
A Review of the Theory of the Frictional Resistance of a Smooth Flat Plate with Turbulent Boundary Layer, by L. Landweber. 8 pp., 2 figs.
Effect of Transverse Curvature on Frictional Resistance, by W.M. Ellsworth, Jr. 2 pp.
The Boundary Layer and Drag of Bodies of Revolution, by P.S. Granville. 4 pp.
Recent Progress in Hot-Wire Measurement of Turbulence in Water, by M.S. Macovsky and W.L. Stracke. 7 pp., 3 figs.
Model Basin Turbulence, by M.S. Macovsky and J.P. Breslin. 3 pp., 2 figs.
Effects of Turbulence Stimulation on the Boundary Layer and Resistance of a Ship Model as Detected by Hot Wires, by J.P. Breslin and M.S. Macovsky. 6 pp., 3 figs.
Experimentation to Develop Suitable Methods for Stimulating Turbulent Flow about Ship Models, by R.B. Couch and W.B. Hinterthan. 11 pp., 1 fig.
A Study of Rods as Stimulators of Turbulence in Boundary Layers, by M.S. Macovsky and J.P. Breslin. 7 pp., 3 figs.
On the Acoustic Stimulation of Turbulence, by M. St.Denis. 7 pp., 2 figs.
Prepared for American Towing Tank Conference.

REGULAR SERIES

727. The Drag and Shape of Air Bubbles Moving in Liquids, by Benjamin Rosenberg. Sep 1950. 26 pp., 14 figs.
728. Development of Wax Ship Model Manufacturing at the David Taylor Model Basin, by R.B. Couch. Aug 1950. 21 pp., 16 figs. Prepared for American Towing Tank Conference.
729. Skin Friction Resistance and the Effects of Surface Roughness, by F.H. Todd, Ph.D. Sep 1950. 15 pp., 1 fig. Prepared for American Towing Tank Conference.
730. Introductory Remarks to Discussion on Scale Effect on Self Propulsion Factors, by R.B. Couch. Sep 1950. 6 pp. Prepared for American Towing Tank Conference.
731. Scale Effect on Self Propulsion Factors, by J.G. Hill. Sep 1950. 3 pp. Prepared for American Towing Tank Conference.
732. Comparative Cavitation Tests, by J.G. Hill. Sep 1950. 6 pp., 3 figs. Prepared for American Towing Tank Conference.
- 733.
734. AGB 1 and 2, TMB Model 3705. Predictions of Performance with and without Ice Guards. Part 1 - Propulsion, by R.E. Fisher. Sep 1950. 14 pp., 10 figs. Distributed only upon authorization of Bureau of Ships, Code 420.
735. 528-Foot AKA Prototype, U.S. Maritime Commission Design S-X-DY, Models 4152 and 4191. Power Predictions, by M.S. Harper and S.E. Lee. Oct 1950. 20 pp., 14 figs. Distributed only upon authorization of U.S. Maritime Administration.
Supplement A - 528-Foot AKA Prototype, U.S. Maritime Commission Design S-X-DY, Models 4152 and 4152-1. Effect of Bow Alteration upon EHP, by M.S. Harper. Oct 1950. 9 pp., 4 figs. Distributed only upon authorization of U.S. Maritime Administration.
Supplement B - 528-Foot AKA Prototype, U.S. Maritime Commission Design S-X-DY, Models 4152 and 4152-2. Effect of Stern Alteration upon Power Predictions, by M.S. Harper and J.Z. McArdle. Jun 1951. 18 pp., 7 figs. Distributed only upon authorization of U.S. Maritime Administration.
736. Bending, Compression, and Shear Tests of Three Samples of Flight Deck Planking, by Everett E. Johnson. Oct 1950. 30 pp., 6 figs.
737. 450-Foot Twin-Screw Train Ferry, Models 4192-W, 4193-W, and 4194-1. Powering Characteristics as Predicted from Model Tests, by S.E. Lee. Oct 1950. 27 pp., 16 figs. Distributed only upon authorization of Canadian Vickers Limited.
738. Experimental Boat-Hull Form Test Program, Scheme J, Model 4310. Resistance Characteristics, by J.H. Curry. Oct 1950. 36 pp., 16 figs. Distributed only upon authorization of Bureau of Ships, Codes 452, 422.
739. Recent Developments in the Theory of Ship Vibration, by R.T. McGoldrick, A.N. Gleyzal, R.L. Hess, and G.K. Hess, Jr. Feb 1951. 56 pp., 4 figs.

REGULAR SERIES

740. Experimental Boat-Hull Form Test Program, Basic Form, Model 4300. Resistance Characteristics, by Eugene P. Clement. Nov 1950. 28 pp., 14 figs. Distributed only upon authorization of Bureau of Ships, Codes 452, 422.
741. (Aero 795). Bureau of Aeronautics proprietary report.
- 742.
743. The Development of a Turbulence Indicator for Liquids Utilizing Magnetic Induction, by A. Borden. Nov 1950. 8 pp., 2 figs.
744. (Aero 795). Bureau of Aeronautics proprietary report.
745. AGB 1 and 2, TMB Model 3705. Predictions of Performance with and without Ice Guards. Part 2 - Maneuvering, by F.D. Bradley. Feb 1951. 10 pp., 5 figs. Distributed only upon authorization of Bureau of Ships, Code 420.
746. (Aero. 797). Bureau of Aeronautics proprietary report.
747. Seatrain (Sun SB and DD Co. Contracts 581 and 582). Effective Horsepower and Shaft Horsepower Predictions, Model 4340-W, by M.S. Harper. Jan 1951. 28 pp., 14 figs. Distributed only upon authorization of Sun Shipbuilding and Dry Dock Company.
- Supplement A - Seatrain (Sun SB and DD Co. Contracts 581 and 582). Effective Horsepower and Shaft Horsepower Predictions, Model 4340-W, by M.S. Harper. May 1951. 9 pp., 4 figs. Distributed only upon authorization of Sun Shipbuilding and Dry Dock Company.
748. SS PENNSYLVANIA, Standardization Trial Analysis and Comparison with Model Test Results, by J.B. Hadler and C.J. Wilson. Jan 1951. 25 pp., 4 figs. Distributed only upon authorization of Bethlehem Steel Company, Shipbuilding Division.
749. The Response of Simple Floating Targets to Underbottom Explosion Attack, by Dr. Erich Buchmann. Jun 1951. 36 pp., 23 figs.
750. SS ESSO SUEZ, Standardization Trial Analysis and Comparison with Model Test Results, by J.B. Hadler and C.J. Wilson. Jan 1951. 20 pp., 3 figs. Distributed only upon authorization of Newport News Shipbuilding and Dry Dock Company.
751. The Response of a Ball Crusher Gage, by George Chertock. Apr 1951. 11 pp., 1 fig.
752. A Method for the Calculation of the Turbulent Boundary Layer in a Pressure Gradient, by Paul S. Granville. May 1951. 48 pp., 17 figs.
753. Measurement of Propeller Induced Hydrodynamic Pressures on Hull of USS CHARLES R. WARE (DD865), by LCDR. W.N. Ginn and F.E. Frillman. Jan 1951. 20 pp., 9 figs.
754. Instructions for the Preparation of Technical Instruction Manuals by Personnel of the Engineering Divisions of the Industrial Department, by J.G. McGinley. Jan 1951. 12 pp.

REGULAR SERIES

755. Instructions for the Preparation of Engineering Reports by Personnel of the Engineering Divisions of the Industrial Department, by J.C. Boyle. Jan 1951. 8 pp.
756. (Aero 794). Bureau of Aeronautics proprietary report.
757. Model Test Results and Predicted EHP for Scheme "L" Experimental Boat-Hull Form Test Program from Tests of Model 4312, by J.H. Curry. Mar 1951. 28 pp., 15 figs. Distributed only upon authorization of Bureau of Ships, Codes 452, 422.
758. The Wave Resistance of Bodies of Revolution, by Dr. Georg P. Weinblum. May 1951. 64 pp., 35 figs. (Appendix by J. Blum).
759. Fast Cargo Vessel (George G. Sharp Design V-2248). Effective Horsepower and Shaft Horsepower Predictions, TMB Model 4342-W, by S.S. Hagara. Apr 1951. 19 pp., 9 figs. Distributed only upon authorization of George G. Sharp.
- 760.
761. The Axially Symmetric Potential Flow about Elongated Bodies of Revolution, by L. Landweber. Aug 1951. 67 pp., 5 figs.
762. Determination of Hull Critical Frequencies on the Ore Carrier SS E.J. KULAS by Means of a Vibration Generator, by R.T. McGoldrick. Jun 1951. 23 pp., 2 figs. (Appendix by E.H. Kennard).
763. Operating and Service Manual for the TMB Chronograph, by William M. Snyder. May 1951. 26 pp., 7 figs.
764. Model Test Results and Predicted EHP for Scheme I, Experimental Boat-Hull Form Test Program, from Tests of Model 4309, by Eugene P. Clement. Apr 1951. 29 pp., 14 figs. Distributed only upon authorization of Bureau of Ships, Codes 452, 422.
765. (Aero 795). Bureau of Aeronautics proprietary report.
766. Wave Effects in Isolation Mounts, by M. Harrison and A.O. Sykes. May 1951. 99 pp., 41 figs.
- 767.
768. Development of a Water-Spout Scoop for the TMB Planing Float when Used as a Towed Position-Indicator, by R.A. Ebner. May 1951. 10 pp., 6 figs.
769. Model Test Results and Predicted EHP for Bureau of Ships Design 52-Foot Aircraft Rescue Boat from Tests of Model 4377, by J.H. Curry. Jun 1951. 23 pp., 18 figs. Distributed only upon authorization of Bureau of Ships.
770. Critical Pressures for the Inception of Cavitation in a Large-Scale Numachi Nozzle as Influenced by the Air Content of the Water, by S.F. Crump. Jul 1951. 22 pp., 8 figs.

REGULAR SERIES

771. SS INDEPENDENCE, Standardization Trial Analysis and Comparison with Model Test Results, by LCDR. W.H. Garrett, USN. Jun 1951. 22 pp., 3 figs. Distributed only upon authorization of U. S. Maritime Administration.
772. The Separation of Viscous Drag and Wave Drag by Means of the Wake Survey, by Marshall P. Tulin. Jul 1951. 13 pp., 1 fig.
773. (Aero 794). Bureau of Aeronautics proprietary report.
- 774.
775. Power Predictions for a Prototype Emergency Cargo Vessel (U.S. Maritime Administration Design C3-S-DX) Models 4115-1, 4133-1, 4190W, by S.E. Lee and S.S. Hagara. Jun 1951. 33 pp., 26 figs. Distributed only upon authorization of U.S. Maritime Administration.
776. Model Test Results and Predicted EHP for Hacker Form Experimental Boat-Hull Form Test Program from Tests of Model 4315, by Eugene P. Clement. Jun 1951. 28 pp., 12 figs. Distributed only upon specific BuShips authorization.
- 777.
- 778.
- 779.
- 780.
- 781.
782. Model Test Results and Predicted EHP for Bureau of Ships Design 90-Foot Aircraft Rescue Boat from Test of Model 4375, by J.H. Curry. Jul 1951. 23 pp., 10 figs. Distributed only upon specific BuShips authorization.
- 783.
- 784.
- 785.

REGULAR SERIES

786.

787.

788.

789. Preliminary Report of Friction Plane Resistance Tests of Anti-Fouling
Ship Bottom Paints, by R.B. Couch. Aug 1951. 19 pp., 13 figs.

R- SERIES

279. (cont.)
 Part 23 - Notes on Plastic Deformation of Elliptical Plates under Hydrostatic Pressure, by M. Levenson. pp. 17-19.
280. Plastic Deformation and Energy Absorption of a Thin Rectangular Plate under Hydrostatic Pressure, by Dr. A.N. Gleyzal. Jan 1945. 18 pp., 3 figs.
282. Comparative Test of the NDRC Tourmaline and the TMB Diaphragm Air-Blast Gages, by B. Sussholz. Aug 1946. 33 pp., 19 figs.
294. Investigation of Hull Vibrations of USCGC PONTCHARTRAIN (WPG70), by R.B. Allnutt. Aug 1946. 9 pp., 6 figs.
296. Progress Report on Underwater Explosion Research - Bureau of Ships Symbol E139. Apr 1945.
 Part 24 - Analysis of the Explosion Damage from Two Small Charges Fired against the Hull of a Liberty Ship, by Dr. G.E. Hudson and Dr. M.A. Greenfield. pp. 1-15, figs. 1-15.
 Part 25 - Energy Absorption of Steel Plates of Different Thicknesses under Dynamic or Static Loading, by A.R. Cohen, Chief Specialist (X), USNR, and B. Stiller, Specialist (X) 1/c, USNR. pp. 16-23, figs. 17-22.
 Part 26 - The Resistance of Thick Fused-Quartz and Plastic Plates to Static and Underwater Explosion Pressures, by J.J. Donoghue, C.T. Johnson, and R.G. Hill. pp. 24-38, figs. 23-25.
304. A Study of the Surface Effects Caused by an Underwater Explosion. Part 2 - 1750-Pound Charges of Torpex near the Bottom and 40 Feet below the Surface, in 96 Feet of Water, by Lt. D.C. Campbell, USNR. May 1945. 17 pp., 12 figs.
310. Model Tests to Determine the Forces on the Stern-Gate Operating Mechanism of the ARD12 Class of Floating Drydocks in Waves, by M. Gertler. Feb 1947. 27 pp., 20 figs.
313. A Photographic Method of Printing Templates on Wood, by F.B. Kaye. Jul 1946. 6 pp., 3 figs.
317. Hydrodynamic Forces on an Anchor Cable, by L. Landweber. Nov 1947. 13 pp., 6 figs.
318. Photographic Methods of Observation at the David Taylor Model Basin. Part 1 - A Simple Spark Timer for the Eastman High-Speed Camera, Type III, by Lt. Comdr. D.C. Campbell, USNR. Jun 1946. 9 pp., 11 figs.
- 329.
334. Information for Companies Desiring Ship Model Tests. Jan 1946. 3 pp.

R- SERIES

338. Performance of Controllable-Pitch Propellers on Trials of the USS DAHLGREN (DDT87), by C.R. Olsen. Aug 1948. 20 pp., 15 figs.
Distributed only upon authorization of Bureau of Ships.
340. Development and Performance of a Catamaran-Float Arrangement for Towing a Portable Fathometer, by P. Eisenberg. Oct 1947. 23 pp., 21 figs.
344. (Aero 708). Wind-Tunnel Tests of 1/12-Scale Model of Towing Dynamometer No. 5. Apr 1951. 10 pp., 6 figs.
345. A Twenty-Lens High-Speed Motion-Picture Camera Developed at the David Taylor Model Basin, by Lt. (jg) N.T. Partch, USNR, and C.W. Wyckoff. Jun 1948. 37 pp., 24 figs.
- 346.
347. Tensile Tests of Small-Scale Welded Joints, by T.D. Tuft. Mar 1948. 20 pp., 8 figs.
348. Underwater Explosion Tests of Simple Structures Fabricated with Everdur Brazing, by T.D. Tuft. Dec 1947. 29 pp., 20 figs.
349. Static Structural Tests of Eleven Lightweight Anchors, by J.G. McGinley. Jan 1948. 33 pp., 11 figs. For distribution to Military establishments only.
350. Constructive Suggestions and Inventions by Personnel in the Naval Establishment, a Reprint of ALNAV 227 dated 8 May 1946. Sep 1946. 5 pp.
351. Operating and Service Manual for the TMB Type 1A Strain Indicator, by W.S. Campbell. Jul 1947. 32 pp., 19 figs.
356. Instructions for Preparing Correspondence for Duplication by the Ditto and DupliMAT Processes. May 1947. 6 pp., 2 figs.
365. The Diary of an Inspection Trip to Europe in October-December 1945, by Capt. H.E. Saunders. Jul 1947. 193 pp., 69 figs.
366. Model Basin Tests of Floats for Astern Fueling, by P. Eisenberg. Oct 1947. 16 pp., 11 figs.

TRANSLATIONS

196. Tests at Guidonia Model Basin on Electrically Propelled Aerial Torpedo F.F.F. 120-500-360 [Esperienze Alla Vasca Idrodinamica Di Guidonia Sulla Motobomba] Ministero Dell'Aeronautica Direzione Superiore Degli Studi e Delle Esperienze I Divisione - Aeromobili ed Aerodinamica Report No. 236. Translated by F.A. Raven, Ph.D. Sep 1950. 12 pp., 12 figs.
197. On Submerged Navigation of Submarines under Diesel Power [Per la navigazione dei sommergibili in immersione coi Motori Diesel], by P. Ferretti. Istituto di Guerra Maritima Sviluppo del Materiale Bellico. Translated by F.A. Raven. Unpublished. 31 pp., 19 figs. Reference copy available only in TMB Library.
198. Theoretical Investigations on Cooling of Gas Turbines [Theoretische Untersuchungen über Kühlung von Gasturbinen], by K.J. Müller. Deutsche Luftfahrtforschung, Forschungsbericht No. 1918, Published by Deutsche Versuchsanstalt für Luftfahrt E.V., Institut für Stromungsmaschinen, Berlin-Adlershof. Zentrale für wissenschaftliches Berichtswesen der Luftfahrtforschung des Generalflugzeugmeisters (Z W B), Berlin-Adlershof. Translated by F.A. Raven. Mar 1946. 34 pp., 23 figs.
- 199.
200. The General Principle of Similitude in Physics and Its Relation to the Theory of Dimensions and the Science of Scale Models [Das allgemeine Ähnlichkeitsprinzip der Physik und sein Zusammenhang mit der Dimensionslehre und der Modellwissenschaft], by Prof. Dr.-Ing. Moritz Weber. Jahrbuch der Schiffbautechnischen Gesellschaft, Vol. 31, 1930, pp. 274-354. Translated by F.A. Raven. Unpublished. Typed copy in TMB Translation Section.
- 201.
202. Stability of Ships in Operation [Die Stabilität des Schiffes im Betrieb], by Dipl.-Ing. E. Klindwort. VDI-Zeitschrift, Vol. 87, No. 23/24, 12 Jun 1943, pp. 359-365. Translated by R. Widmer. Unpublished. 18 pp., 5 figs. Reference copy available only in TMB Library.
203. Characteristic Curves for Breakage Radius of Window Glass Caused by Bomb Blasts [Zerstörungskennlinien von Fensterglas], by Dr.-Ing. Geppert. Ballistisches Institut der Technischen Akademie der Luftwaffe, Berlin-Gatow, 1944. Translated by R. Widmer. Unpublished. Rough draft in TMB Translation Section.
204. Stereophotogrammetric Wave Photographs [Stereophotogrammetrische Wellenaufnahmen], by Georg Weinblum and Walter Block. Jahrbuch der Schiffbautechnischen Gesellschaft, Vol. 37, 1936, pp. 214-250 and 259-276. Translated by F.A. Raven. Nov 1949. 79 pp., 47 figs.

205.

206.

TRANSLATIONS

207. The High-Speed Spark Camera [Die Funkenzeitlupe], by Dr. Alfred Keil. Translated by R. Widmer. Sep 1947. 13 pp., 7 figs.
209. Oscillation of the Gas Globe in an Underwater Explosion [Die Gasblasenschwingung bei einer Unterwassersprengrung], by Alfred Keil and Walter Wunderlich. Chemisch-physikalische Versuchsanstalt der Marine. Paper obtained in manuscript form by the United States Naval Technical Mission in Europe in 1944. Translated by R. Widmer. Oct 1947. 51 pp., 17 figs.
- 210.
211. Measurement of Deflection Curves on Aircraft and Ships [Biegelinien-Messung an Flugzeugen und Schiffen], by Dr.-Ing. H.G. Küssner. Archiv für Technisches Messen, V, 115-1. Paper obtained in manuscript form by the United States Naval Technical Mission in Europe in 1945. Translated by R. Widmer. Mar 1949. 22 pp., 6 figs.
212. Measurements on a Model of a Jet-Propulsion Nacelle [Messungen an dem Modell einer Strahlantriebsgondel], by Brennecke. Deutsche Luftfahrtforschung Forschungsbericht No. 1723, Aerodynamischen Versuchsanstalt zu Göttingen, 7 Jan 1943. Translated by C.J. Wenzinger. Oct 1946. 27 pp., 6 figs.
213. Measurements on Shock Waves in Water with the High-Speed Spark Camera [Messungen an Stosswellen in Wasser mit der Funkenzeitlupe], by Dr. A. Keil. Dänisch-Nienhof, July 1946. Translated by R. Widmer. Sep 1947. 29 pp., 15 figs.
214. Calculation for the Design of Oppositely Rotating Propellers or Contra-Propellers [Rechenschema zum Entwurf gegenläufiger Treibschrauben]. Report 906, Hamburg Model Basin. Translated by F.A. Raven. Unpublished. 3 pp., 1 fig. Reference copy available only in TMB Library.
215. Development of Parachutes for Bombs, Mines, and Torpedoes [Entwicklung von Fallschirmen für Bomben, Minen, und Torpedoes], by Dr.-Ing. Helmut Heinrich. Research Institute Graf Zeppelin Stuttgart-Ruit. Translated by R. Widmer. Jan 1949. 48 pp., 44 figs.
216. Report on the New Towing Carriage of the Hannover Model Basin [Bericht über die neue Schleppvorrichtung der Hannoverschen Versuchsanstalt], by Rudolf Eikenroth. Mitteilungen Hannoverschen Hochschule Gemeinschaft, No. 16, 1935, pp. 14-16. Translated by Martin A. Mason. Unpublished. 4 pp., 5 figs. Reference copy available only in TMB Library.
217. Wind-Tunnel Investigations of Jet Propulsion Models with Cold Jet [Windkanaluntersuchungen an Strahltriebwerkmodellen mit kaltem Strahl], by W. Lehmann. Deutsche Luftfahrtforschung Forschungsbericht Nr. 1902/1. Arado Flugzeugwerke, Brandenburg/Havel, 4 Nov 1943. Translated by C.J. Wenzinger. Dec 1946. 26 pp., 12 figs.
218. Wind-Tunnel Measurements of a Jet-Propulsion Model with Cold Jet and a Wing as a Boundary [Windkanalmessungen an einem Strahltriebwerkmodell mit kaltem Strahl und einem Flügel als Blende], by W. Lehmann. Deutsche Luftfahrtforschung Forschungsbericht No. 1902/2. Arado Flugzeugwerke, Brandenburg/Havel, 4 Nov 1943. Translated by C.J. Wenzinger. Jan 1947. 19 pp., 17 figs.

TRANSLATIONS

219. On the Use of Jet Drives for Wind Tunnels of High Velocity [Über die Verwendung des Strahlantriebes bei Windkanälen hoher Geschwindigkeit], by H. Winter. Deutsche Luftfahrtforschung Forschungsbericht Nr. 1103 Aerodynamische Versuchsanstalt Göttingen e. V., 7 Oct 1939. Translated by C.J. Wenzinger. Apr 1947. 25 pp., 8 figs.
220. Pressure Distributions over Bodies of Revolution for Axial Flow [Druckverteilungen von Rotationskörpern bei achsialer Anströmung], by M. Brand. Aerodynamische Versuchsanstalt Göttingen e. V. UM Nr. 3206, 30 Dec 1944. Translated by C.J. Wenzinger. Apr 1947. 49 pp., 74 figs.
221. Luminous Living Organisms [Les êtres vivants lumineux], by C. Puissegur. Science et Vie, Vol. LXX, No. 348, Sep 1946, Paris, France. Translated by R. Widmer. May 1947. 17 pp., 9 figs.
222. Study of Turning Tests at the Paris Model Basin [L'Etude de la Giration au Bassin D'Essais des Carenes], by J. Bleuzen, Ingenieur du Genie Maritime. Association Technique Maritime et Aéronautique, June 1946. Translated by R. Widmer. Sep 1949. 21 pp., 7 figs.
- 223.
224. Some Remarks on Stationary Schemes for Cavitation Flow about a Flat Plate [Nekotorye Zamechania o Statsionarnykh Skhemakh Kavitatsionnogo Obtekania Plastinki], by M.I. Gurevich. Izvestia Akademii Nauk, USSR, Otdelenie Tekhnicheskikh Nauk, 1947, No. 2, pp. 143-150. Translation and comments by J.V. Wehausen. Nov 1948. 19 pp., 17 figs.
225. Experimental Method for Determining the Virtual Mass for Oscillations of Ships [Eine Experimentelle Methode zur Bestimmung der Reduzierten Masse des Mitschwingenden Wassers bei Schiffschwingungen], by J.J. Koch. Ingenieur-Archiv, Vol. IV, Part 2, 1933, pp. 103-109. Translated by Georg Weinblum. May 1949. 11 pp., 13 figs.
226. The Elastic Stresses in Thin-Walled Tubes Caused by Internal Pressures Created by Explosions [Die Elastischen Spannungen in Dünnwandigen Rohren unter Explosionsartigem Innendruck], by Karl Klotter and Ruth Pich. Prepared at the request of the Arbeitsgemeinschaft für Stoßforschung by the Vierjahresplan-Institut für Schwingungsforschung, issued by the Amtsgruppe Mar Rüst/FEP in the OKM, Research Report No. 58, Berlin, 14 December 1944. Translated by E.N. Labouvie. Jul 1949. 27 pp., 2 figs.
227. Measurement of the Pitch-Damping Moment of the Submarine V-80 — An Experimental Method of Determining the Dynamic Stability of a Model of the Midget Submarine V-80 [Messung der Kippdämpfung des Bootes V-80], by Braun. Luftfahrtforschungsanstalt Hermann Göring Institut für Aerodynamik. Translated by W.B. Hinterthan. Dec 1949. 12 pp., 11 figs.

TRANSLATIONS

228. Stress Distribution in the Flanges of Driven I and T Beams [Die Spannungsverteilung in den Gurtungen gekrümmter Stäbe mit T- und I-förmigem Querschnitt], by Hans Bleich. Der Stahlbau, Beilage zur Zeitschrift "Die Bautechnik." Vol. 6, No. 1, 6 Jan 1933, pp. 3-6. Translated by E.N. Labouvie. Jan 1950. 12 pp., 10 figs.
- 229.
230. Cavitation on Marine Propellers and its Prediction Based on the Results of Tests with Profiles [Cavitacion en propulsores marinos y su prediccion mediante resultados de ensayos con perfiles], by Manuel L. Acevedo, Naval Engineer. Report read by the author at the 3rd Convention of Naval Engineering Session of 9 Nov 1948. Translated by E.N. Labouvie. Jan 1951. 51 pp., 28 figs.
- 231.
232. Investigations of Pitching [Recherches Sur Le Tangage], by Roger Brard. Association Technique Maritime et Aeronautique - Session Jun 1945. Translated by E.N. Labouvie. Sep 1951. 27 pp., 20 figs.
233. Influence of Reynolds Number on the Separation (Cavitation) Flow [Vliianie Chisla Reinoldsa na Otryvnoe Obtekanie], by V.A. Konstantinov, Izvestiia Akademii Nauk SSSR, Otdelenie Tekhnicheskikh Nauk 1946, No. 10, pp. 1355-1373. Translated by G. Weinblum. Nov 1950. 22 pp., 15 figs.
234. Tests on Wave Resistance of Immersed Bodies of Revolution [Versuche über den Wellenwiderstand Getauchter Rotationskörper], by G. Weinblum, H. Amsberg and W. Bock, Berlin. Mitteilungen der Preussischen Versuchsanstalt für Wasserbau und Schiffbau, Berlin, 1956. Translated by G. Weinblum and R. Widmer. Sep 1950. 24 pp., 20 figs.
- 235.
- 236.
- 237.

TRANSLATIONS

238. The Elasticity Problem for Thin Shells of Toroidal, Spherical or Conical Shape [Das Elastizitätsproblem für dünne Schalen von Ringflächen-, Kugel - oder Kegelform], by Ernst Meissner. Physik - Zeitschr. XIV, 1913. pp. 343-349. Translated by Wm. A. Nash. Jul 1951. 17 pp., 1 fig.
239. Saving of Power in Formation Flying [Leistungsparsparnis Im Verbandsflug], by H. Schlichting. Bericht des Aerodynamisches Institutes der Technischen Hochschule Braunschweig, No. 42/6, 15 June 1942. Translated by I. Pollin. Apr 1951. 41 pp., 24 figs.
240. Formation Flying in Stepped-Up Formation [Verbandsflug mit Höhenstaffelung], by H. Schlichting. Bericht des Aerodynamisches Institutes der Technischen Hochschule Braunschweig, No. 44/7, 15 February 1944. Translated by I. Pollin. Oct 1950. 25 pp., 9 figs.
241. The Method of Singularities for the Determination of Forces and Moments Acting on a Body in Potential Flow [Singulärtaetenverfahren zur Ermittlung der Draefte und Momente auf Koerper in Potentialstroemungen], by A. Betz, Goettingen. Ingenieur-Archiv, 1932. Translated by M. St.Denis. Rev. Ed. Jun 1951. 13 pp., 21 figs.

AUTHOR INDEX

- ABKOWITZ, D.E.**, R-240
 Acevedo, Manuel L., T-194, T-230
 Ackeret, J., T-20, T-22
 Adams, Emily J., 715
 and Davidson, Samuel, 613
 and Welch, Alice R., 582
 Adler, R.M., and Posner, Jack, 641
 Albrecht, J., T-179
 Allnutt, R.B., R-294
 and Mintz, F., 563
 Amtsberg, H., Weinblum, G., and Bock, W., T-234
 Anderson, L.D., 608
 Miller, B.L., and Shoub, H., R-213
 Sette, W.J., and McGinley, J.G., R-212
 Aquino, A.Q., 577, 578, 629
 and Schoenherr, K.E., 470
 Schoenherr, K.E., and Bowers, W.H., 513
 Armstrong, Richard W., Perls, Thomas A., and
 Hoffman, Charles W., 680
 Auerbach, Rudolph, T-112, T-113, T-114, T-125
- BANCROFT, D.**, 521
 and Cook, G.W., R-46
 Miller, B.L., and Campbell, D.C., R-66
 Barbré, Rudolf, T-78
 Barnett, William, R-209
 Barrillon, E.G., T-60, T-61
 Bauer, G., T-59, T-70
 Baxter, R.B., and Donoghue, J.J., R-202, R-244
 Beck, Friedrich, T-154
 Berdahl, Edgar O., 524, 539, 554
 Berg, S., T-65
 Betz, A., T-131, T-162, T-241
 and Prandtl, L., T-184
 Beyling, C., and Drekopf, K., T-168
 Bichel, C.E., T-157
 Bleich, Friedrich, T-30
 Bleich, Hans, T-228
 Bleuzen, J., T-222
 Block, Walter and Weinblum, Georg, T-204
 Blum, J., 758
 Bock, W., Weinblum, G., and Amtsberg, H., T-234
 Bollenrath, Franz, T-47, T-122
 and Cornelius, H., T-104
 Borden, Avis, 549, 743; R-244, R-248, R-269
 Bowers, C.E., Lee, C.A., and Bradley, F.D., 579
 Bowers, W.H., 505
 Schoenherr, K.E., and Aquino, A.Q., 513
- Boyle, J.C., 755
 Bradley, F.D., 745
 Lee, C.A., and Bowers, C.E., 579
 Brähmig, Rolf, T-118
 Brand, M., T-220
 Erard, Roger, T-36, T-232
 Braun, T-227
 Brennecke, T-212
 Breslin, John P., and Macovsky, Morris S., 724
 726
 Brooks, Boyd S., 538
 Brooks, S.H., and Gover, S.C., 607
 Bryant, F.B., R-187
 Bryn, T., T-132
 Buchmann, Erich, 749
 and Perls, Thomas A., 723
- CAFIERO, D.**, Garthune, R.S., Rosenberg, B.,
 and Olson, C.R., 601
 Campbell, D.C., 512; R-77, R-203, R-304, R-318
 and Saunders, H.E., R-252
 and Wyckoff, C.W., 520
 Bancroft, D., and Miller, B.L., R-66
 Campbell, W.S., 644, 645; R-351
 Carrigan, Helen I., and Roop, W.P., 503
 Cauldwell, F.S., 658
 Cecil, E.L., Jr., 612
 Chertock, George, 751
 Chrisler, V.L., and Lasky, M.L., 643
 Christiani, K., T-27
 Chwalla, E., T-79
 Clement, Eugene P., 740, 764, 776
 Cohen, A.R., and Stiller, B., R-157, R-265,
 R-296
 Cook, G.W., 561, 565, 626
 and Baneroff, D., R-46
 Cornelius, H., and Bollenrath, F., T-104
 Couch, R.B., 652, 662, 728, 730, 789
 and Hinterthan, W.B., 726
 Cranz, C., T-169
 Crook, Mary C., and Mayfield, G.B., 633
 Crump, S.F., 575, 770
 Curry, J.H., 738, 757, 769, 782
 and Posner, Jack, 588, 595, 669
 Curtis, W.F., R-154
 and McGoldrick, R.T., 518
 and Rich, H.L., R-246
 and Sette, W.J., R-54
 Czerlinsky, E., T-183

AUTHOR INDEX

- DAHLMANN, W.**, and Remmers, K., T-97
 Darnell, R.C., 292, 341
 Davidson, K.S.M., and Hugli, W.C., Jr., R-41
 and Suarez, Anthony, R-47
 Davidson, Samuel, and Adams, Emily J., 613
 Davis, Henry B.O., 648
 Day, J.W., 501, 631, 635, 636; R-123, R-188,
 R-249
 DeShazer, G.A., 272, 282, 340, 360
 Donoghue, J.J., R-83, R-177, R-202
 and Baxter, R.B., R-202, R-244
 Johnson, C.T., and Hill, R.G., R-296
 Drekopf, K., and Beyling, C., T-168
 Duke, Margaret E., and Wenk, Edward, Jr., 600
 Dutta, A.K., T-147
- EBEL, F.G.**, 315, 441
 Ebner, R.A., 667, 768
 and Gibbons, T., 655
 Eggers, H.A., 583, 688
 Eggert, E.F., 264, 268, 317
 Eikenroth, Rudolf, T-216
 Eisenberg, Phillip, 550, 573, 606, 647, 712,
 726; R-251, R-340, R-366
 and Landweber, L., 540
 and Pond, Hartley L., 668
 Macovsky, M.S., and Stracke, Walter L., 692
 Ellsworth, W.M., Jr., 726
 Evans, David L., T-124
 Evers, H., T-82
- FARRIN, J.M.**, and Landweber, L., 476
 Feiler, A.M., Raven, F. A., and Jespersen,
 Anna, R-81
 de Fériet, J. Kampe, Martinot-Lagarde, A., and
 Rollin, G., T-117
 Ferretti, P., T-197
 Fifer, S., and Gleyzal, A.N., 568
 Fischer, K., T-42, T-52
 Fisher, R.E., 734
 Fitzpatrick, H.M., 594
 Flügel, Gustav, T-23, T-134, T-195
 Foerster, E., T-144
 Fomin, V., Kornetzkii, M., and Steinitz, R.,
 T-161
 Föppl, August, T-4 [294]
 Föttinger, H., T-48, T-71
 Frankland, J.M., 469, 481
- Frillman, F.E., and Ginn, W.N., 753
 Frisby, R.E., 290, 375
 and Wilson, C.J., 639
 Fuchs, Rudolf, T-177
 Furlong, D., 684
- GARRETT, W.H.**, 771
 Garthune, R.S., Rosenberg, B., Cafiero, D.,
 and Olson, C.R., 601
 Gayhart, E.L., 132
 Gebers, Friedrich, T-81
 Geiger, J., T-96
 Geppert, T-203
 Gerloff, G., T-141
 Gertler, Morton, 576, 586, 657, 686; R-310
 and Landweber, L., 719
 and Welch, Rachel, 618
 Ghiron, E.F., T-41
 Gibbons, T., and Ebner, R.A., 655
 Ginn, W.N., and Frillman, F.E., 753
 Gleyzal, A.N., 490, 532; R-142, R-248, R-280
 and Fifer, S., 568
 McGoldrick, R.T., Hess, R.L., and Hess, G.K.,
 Jr., 739
 Goldman, Isidore, 585, 620
 Golovato, Paul, and Martin, Milton, 654
 Gover, S.C., 685
 and Brooks, S.H., 607
 Graff, W., and Heckscher, E., T-75
 Granville, P.S., 726, 752
 Greenfield, M.A., R-202, R-248
 and Hudson, G.E., R-296
 and Shapiro, M.M., 523
 Grier, B.J.W., 603
 Grottanelli, F., T-49
 Günther, K., and von Sanden, K., T-38
 Gurevich, M.I., T-224
 Gustilo, William, and Welch, Rachel, 702
 Gutsche, Fritz, T-37, T-123, T-172
- HABIB, E. T.**, and Shapiro, M.M., R-202, R-254
 Hadeler, Wilhelm, T-88
 Hadler, J.B., and Wilson, C.J., 748, 750
 Hagara, S.S., 691, 691A, 691B, 696, 696A, 696B,
 759
 and Lee, S.E., 775
 Hahnkamm, Erich, T-39, T-40
 Halberstadt, Siegfried, and Frausnitz, Paul H.,
 T-108

AUTHOR INDEX

- de Haller, P., T-133, T-188
 Hammerstein, A., T-192
 Harper, M.S., 602, 615, 634, 646, 650, 695B,
 722, 735A, 747, 747A
 and Hill, J.G., 695A
 and Lee, S.E., 735
 and McArdle, J.Z., 735B
 and Stuntz, G.R., Jr., 695
 Harrison, B.H., 725
 Harrison, Mark, and Sykes, A.O., 766
 Hauser, H., T-187
 Heckscher, E., and Graff, W., T-75
 Heinrich, Helmut, T-215
 Helmbold, H.B., T-15
 Henriquez, P. Cohen, T-43
 Hess, G.K., Jr., McGoldrick, R.T., Gleyzal,
 A.N., and Hess, R.L., 739
 Hess, R.L., McGoldrick, R.T., Gleyzal, A.N.,
 and Hess, G.K., Jr., 739
 Hewins, L.F., 14, 15, 54
 Hill, J.G., 660, 718, 731, 732
 and Harper, M.S., 695A
 Hill, R.G., Donoghue, J.J., and Johnson, C.T.,
 R-296
 Hill, Robert P., 659
 Hinterthan, W.B., and Couch, R.B., 726
 Hotdwalker, M., and Saunders, H.E., 569
 Hoffman, C.W., Perls, T.A., and Armstrong, R.W.,
 680
 Holl, H., T-18
 Hoppe, H., T-63
 and Kempf, Günther, T-136
 Hoppman, W.H., 354
 Horn, H., T-19, T-26
 Hort, Wilhelm, T-176
 Hudson, G.E., 507, 509; R-202, R-244, R-248,
 R-254
 and Greenfield, M.A., R-296
 Hugli, W.C., Jr., R-36
 and Davidson, K.S.M., R-41
 Hutchinson, J.F., 535; R-196
- ILLGEN, H.**, T-120
- JACOBSEN, A.**, T-99
 Janes, C.E., 487; R-43
 Jasper, Norman H., 699
- Jespersen, Anna, 616
 Raven, F.A., and Feiler, A.M., R-81
 Johnson, C.T., 610, 611; R-248, R-279
 Donoghue, J.J., and Hill, R.G., R-296
 Johnson, E.E., 736
 Johnson, P.K., and Klemmer, E.T., 649
- KARAS, K.**, T-135
 von Kármán, Theodore, T-1, T-86
 Kaye, F.B., R-313
 Keil, Alfred, T-207, T-213
 and Wunderlich, Walter, T-209
 Kempf, Günther, T-3 [275], T-34, T-35, T-54,
 T-90, T-91
 and Hoppe, H., T-136
 Kennard, E.H., 480, 489, 511, 517, 527, 762;
 R-182, R-244
 Kirschstein, F., T-170
 Kirstein, M., R-152
 and Thomas, H.R., R-206
 Kleinlogel, A., T-119
 Klemm, Alfred, T-137
 Klemmer, E.T., and Johnson, P.K., 649
 Klindwort, E., T-202
 Klotter, Karl, and Pich, Ruth, T-226
 Koch, J.J., T-225
 Koga, I., T-148
 Koning, J.G., T-98
 Konstantinov, V.A., T-233
 Kornetzkii, M., Fomin, V., and Steinitz, R.,
 T-161
 Krug, C., T-101
 Kucharski, W., T-55, T-83
 Küssner, H.G., T-211
- VAN LAMMEREN, W.P.A.**, T-67, T-68, T-72
 and Prohaska, C.W., T-57
 Landweber, L., 424, 460, 485, 689, 726, 761;
 R-42, R-68, R-317
 and Eisenberg, P., 540; R-80
 and Farrin, J.M., 476
 and Gertler, M., 719
 and Protter, M.H., 533
 and Thews, J.G., 374, 408, 414, 418, 422,
 430, 433, 442
 Lasky, M.L., and Chrisler, V.L., 643
 Laute, Wilmar, T-53
 Lecoq, Henry, T-189

AUTHOR INDEX

- Lee, C.A., Bowers, C.E., and Bradley, F.D.,
579
Lee, S.E., 737
 and Harper, M.S., 735
 and Hagara, S.S., 775
Lehmann, W., T-217, T-218
Lerbs, Hermann, T-9, T-10, T-14, T-24, T-25,
 T-46, T-85, T-89
Levenson, M., R-279
 and Sussholz, B., 572
Lindner, Werner, T-121
Loser, Ugo, T-12
Lottmann, Hermann, T-16
Luchsinger, W., T-115
- MACCUTCHEON, E.M.,** Pittiglio, C.L., and
 Raring, R.H., 709
McArdle, J.Z., and Harper, M.S., 735B
McEntee, William, 140
McGinley, J.G., 587, 589, 593, 754; R-349
 and Pittiglio, Clayton L., 596, 637
 Sette, W.J., and Anderson, L.D., R-212
McGoldrick, R.T., 305, 307, 372, 395, 449, 547,
 551, 762; R-189, R-226
 and Curtis, W.F., 518
 Gleyzal, A.N., Hess, R.L., and Hess, G.K.,
 Jr., 739
- Macovsky, M.S., 592, 670
 and Breslin, J.P., 724, 726
 and Stracke, W.L., 726
 Eisenberg, Phillip, and Stracke, W.L., 692
 Stracke, W.L., and Wehausen, J.V., 700
Malisius, R., T-93
Marage, M., T-155
 and Trefftz, E., T-76
Marguerre, K., T-73
Martin, Milton, and Golovato, Paul, 654
Martinot-Lagarde, A., de Fériet, J. Kampe, and
 Rollin, G., T-117
Mathewson, Alice W., 632, 706
Mayfield, G.B., 584, 664
 and Crook, Mary C., 633
Meissner, Ernst, T-238
Memmler, K., T-29
Mente, O., T-138
Meyer, Erwin, and Tamm, Konrad, T-109
- Mezger, G. Robert, 483, 502, 525, 526, 559;
 R-51, R-78, R-86, R-201, R-214
Miller, B.L., 482, 536
 Anderson, L.D., and Shoub, H., R-213
 Bancroft, D., and Campbell, D.C., R-66
Minorsky, N., 534, 546, 558, 564; R-48, R-140
Mintz, F., 506
 and Allnutt, R.B., 563
von Mises, R., T-5 [309], T-6 [366]
 and Pollaczek-Geiringer, H., T-77
Mueller, Hans, T-185
Müller, H., T-116
Müller, K.J., T-198
- NEUBER, H.,** T-74
Nikuradse, J., T-173
Norley, W.H., 580, 598, 640, 656
- OLSON, C.R.,** 698; R-338
 Garthune, R.S., Rosenberg, B., and Cafiero,
 D., 601
Ostertag, P., T-94
Ottenheimer, M.J., T-171
- PABST, WILHELM,** T-13, T-153
Parkinson, J.S., 488
 and Roop, W.P., 491
Partch, N.T., and Wyckoff, C.W., R-345
Perls, Thomas A., 625, 651
 and Buchmann, Erich, 723
 and Rich, Harry L., 720
 Armstrong, R.W., and Hoffman, C.W., 680
Pfriem, H., T-158, T-159
Pich, Ruth, and Klotter, Karl, T-226
Pickert, F., T-146
Pietzker, Felix, T-2
Pitre, A.S., 390, 403
 and Thews, J.G., 397, 398
Pittiglio, C.L., 638, 642
 and McGinley, J.G., 596, 637
 MacCutcheon, E.M., and Raring, R.H., 709
Flesset, Ernst, R-79
Plum, John, 666, 707
Pode, Leonard, 661, 687, 713, 717
Pond, Hartley L., and Eisenberg, Phillip, 668
Posner, Jack, 630, 683
 and Adler, R.M., 641
 and Curry, J.H., 588, 595, 669

AUTHOR INDEX

- Prandtl, L., and Betz, A., T-184
 Prausnitz, Paul H., and Halberstadt, Siegfried, T-108
 Prohaska, C.W., and van Lammeren, W.P.A., T-57
 Protter, M.H., and Landweber, L., 533
 Puisségur, C., T-221

VON RAJAKOVICS, E., T-178
 Raring, R.H., MacCutcheon, E.M., and Pittiglio, C.L., 709
 Raven, F.A., Feiler, A.M., and Jespersen, Anna, R-81
 Remmers, K., and Dahlmann, W., T-97
 Rich, Harry L., and Curtis, W.F., R-246
 and Perls, Thomas A., 720
 Riecke, F., T-105
 Robinson, Q.R., 614, 693
 Roemer, M.C., R-277
 Rogowski, W., T-130
 Rollin, G., de Fériet, J. Kampe, and Martinot-Lagarde, A., T-117
 Roop, R.W., R-62
 Roop, W.P., 297, 467, 479, 492; R-63, R-207, R-243, R-265, R-276
 and Carrigan, Helen I., 503
 and Parkinson, J.S., 491
 and Windenburg, D.F., R-271
 Rosenberg, B., 727
 Garthune, R.S., Cafiero, D., and Olson, C.R., 601
 Roundy, W.H., 671, 703
 Rubinowitz, Leo, 672

SADLER, W.C., 628, 682
 St. Denis, M., 726
 von Sanden, K., and Günther, K., T-38
 and Tolke, F., T-33
 Saunders, H.E., R-72, R-365
 and Campbell, D.C., R-252
 and Hotdwalker, M., 569
 Schadlofsky, E., T-7 [382]
 Schardin, Hubert, T-156
 and Struth, W., T-107
 Schlichting, H., T-239, T-240
 Schlichting, Otto, T-56, T-87
 Schmidt, F., T-106
 von Schmidt, Oswald, T-139
 Schmieden, C., T-31
 Schmierschalski, H., T-160
 Schnadel, George, T-11, T-28, T-32, T-45, T-50, T-64, T-66, T-92
 Schneider, Wilhelm, T-102
 Schnurmann, Robert, T-110, T-111
 Schoenherr, K.E., 176, 267, 293; R-216
 and Aquino, A.Q., 470
 Bowers, W.H., and Aquino, A.Q., 513
 Schubert, F., T-193
 Schultz, P.G., 653
 Schultz-Grunow, F., T-143
 Schulze, Reinhold, T-58
 Selenyi, P., T-167
 Serat, M.E., and Thews, J.G., 348
 Sette, W.J., R-254
 and Curtis, W.F., R-54
 Anderson, L.D., and McGinley, J.G., R-212
 Shapiro, M.M., and Habib, E.T., R-202, R-254
 and Greenfield, M.A., 523
 Shoub, Harry, 570
 Miller, B.L., and Anderson, L.D., R-213
 Simonot, M., T-186
 Smith, Drewry M., R-267
 Smith, G.L., and Wilcoxon, K.H., R-143
 Snyder, William M., 763
 Sobrero, L., T-103
 Sörensen, Christian, T-142
 Spannhake, W., 590, 591, 621, 711
 Späth, Wilhelm, T-51, T-166
 Specht, R.D., R-279
 Speth, O., T-165
 Spillman, W., T-174
 Staley, R.R., 557
 von den Steinen, Carl, T-44
 Steinitz, R., Kornetzki, M., and Pomin, V., T-161
 Stemmer, Henry, T-100, T-182
 Stiller, B., and Cohen, A.R., R-157, R-265, R-296
 Stracke, W.L., and Macovsky, M.S., 726
 Eisenberg, Phillip, and Macovsky, M.S., 692
 Macovsky, M.S., and Wehausen, J.V., 700
 Struth, W., and Schardin, H., T-107
 Stuntz, G.R., Jr., and Harper, M.S., 695
 Suarez, Anthony, and Davidson, K.S.M., R-47
 and Wong, Lan J., R-35
 Sussholz, B., R-282
 and Levenson, M., 572

AUTHOR INDEX

Sykes, A.O., and Harrison, Mark, 766

TAMM, KONRAD, and Meyer, Erwin, T-109

Taylor, D.W., 61

Taylor, G.I., 510

Theis, A., T-164

Thews, J.G., 296, 333, 371; R-50

and Landweber, L., 374, 408, 414, 418, 422,
430, 433, 442

and Pitre, A.S., 397, 398

and Serat, M.E., 348

Thomas, H.R., and Kirstein, M., R-206

and Windenburg, D.F., 622

Timoshenko, S., T-8 [402]

Tiselius, Karl, T-175

Todd, F.H., 663, 729

Tolke, F., and von Sanden, K., T-33

Treffitz, E., and Marguerre, K., T-76

Trilling, Charles, 285, 396

and Windenburg, D.F., 385

Trutnovsky, Karl, T-95

Tuft, T.D., Jr., R-347, R-348

Tulin, Marshall P., 772

VASTA, J., 440, 445, 452; R-1

WALCHNER, OTTO, T-21

Wannow, H.A., T-140

Wehausen, J.V., T-224

Macovsky, M.S., and Stracke, W.L., 700

Weinblum, Georg, 710, 758; T-180

and Block, Walter, T-204

Amtsberg, H., and Bock, W., T-234

Weitbrecht, H.M., T-62, T-84

Welch, Alice R., 581

and Adams, Emily J., 582

Welch, Rachel S., 623, 673, 675, 701

and Gertler, Morton, 618

and Gustilo, William, 702

Wenk, Edward, Jr., 599, 627, 665, 704; R-127

and Duke, Margaret E., 600

Westergaard, H.M., 529

Wilcoxon, K.H., and Smith, G.L., R-143

Wilson, C.J., 619, 678

and Frisby, R.E., 639

and Hadler, J.B., 748, 750

Windenburg, D.F., 262, 265, 269, 271, 356,

387, 457, 474; R-53

and Roop, W.P., R-271

and Thomas, H.R., 622

and Trilling, Charles, 385

Winter, H., T-219

Wong, Lan J., and Suarez, Anthony, R-35

Wrobbel, Gustav, T-17

Wunderlich, Walter, and Keil, Alfred, T-209

Wyckoff, C.W., and Campbell, D.C., 520

and Partch, N.T., R-345

YOURKEVITCH, V., T-69

SUBJECT INDEX

- ABSORPTION** of gas bubbles and droplets in liquids, T-108
- Abstracts of technical literature, need for, T-181
- Acceleration, of towing carriage, 259
- Acceleration measurements, in high seas, T-26
- Acceleration pickups, 563
- Accelerometer, 563; R-189, R-246, R-267; T-141
evaluation for shock tests, 720
- Jacklin six-component recording, performance of and specifications for, 614
See also other specific gages.
- Acoustic analyzer, R-62
- AEG light-flash stroboscope, T-190
- AEG slow-motion camera, T-149
- AEG spark-flash apparatus, T-190
- Aerial torpedo, Guidonia model basin tests, T-196
- Aeronautics, problems of, T-86
- Air bubbles, implosion of, T-107
shape and size in liquids, 727
speed of rise in liquids, 727; T-132
See also Gas bubbles.
- Air content, of water, influence on cavitation, 575, 770
- Air film, to reduce frictional resistance, R-131
- Air purifier, tests on, 37, 42, 58
- Air-backed plates, resistance to underwater explosions, 610, 611
- Air-blast gages, R-282
- Air-bubble generators, R-83
- Air-bubble screen, effect of, on underwater explosion pressures, R-177
- Air-content meter, 549
- Aircraft, safety harness for pilots of, 633
- Aircraft carrier, JUPITER (LANGLEY, CV1),
rolling tests on, model, 8, 13
LANGLEY (CV1), rolling tests on, model, 18
wind effects on, model, 109
- Aircraft rescue boat, Hacker form, model tests of, 776
- 90-foot, model tests of, 769, 782
- Airflow, about airfoil, photographs of, model, 557
over bridge of minesweeper, model, R-209
- Airfoil, NACA 23015, photographs of air flow, model, 557
- Airfoils, theory of, T-27
- Airplane catapult, speed meter for, 126
- Airplane design 54, launching tests of, model, 183
- Airplane engine, resistance of, model, 45
- Airplane floats, model, 222
type of step in, model, 438
- Airplane hulls, pressure distribution on, full-scale, T-1
- AKA prototype, 528-foot vessel, model tests of, 701, 735, 735A, 735B
- ALABAMA (BB60), launching calculations and tests for, model, R-27
vibration data for, full-scale, 547
- Alcohol, polyvinyl, sensitization of, for printing plates, T-179
- American Shipbuilding Corporation, ore carrier, model tests of, 671
- American Society of Mechanical Engineers, boiler construction code, 329
- American Standard symbols and abbreviations, 616
- American Towing Tank Conference, 1942, R-72
1950, reports for, 726, 728, 729, 730, 731, 732
liberty-ship series, towing tests of, model, 615
- Amphibian hull, Boeing, model tests for, 159
- Amphibian tractor (LVT), fatigue test of grousers of, 664
- Amphibians. See Seaplanes.
- Amphibious vessels. See specific type.
- Amplifier, self-stabilizing, R-78
stable direct-coupled, 644; R-86
- Analogues, dynamical, integration by, R-140
- Anchor, lightweight, static structural tests of, R-349
tensile test of, R-188
- Anchor cable, hydrodynamic forces on, R-317
- Anchor design, advances in, T-129
- Anchor lines, model, 550
- ANDERSON (DD411), noise survey of, full-scale, R-12
- Anemometer, hot-wire, for velocity measurements in water, 592
recording, for ship speed trials, 282
- Aquaflow hull, comparative tests of, model, 669
- Armor, resistance of, 24, 463
- Armor plate, projectile impact on, T-107

SUBJECT INDEX

- Astern-fueling floats, model-basin tests of, R-366
- Atlantic Refining Company, tanker, model tests of, 577, 594
- AUK (AM57), launching data for, full-scale, R-50
- Axial flow, pressure distribution for, T-220
- Axial loading, of gun foundation, R-127
- Axial vibration, of propulsion systems, full-scale and model, 551
- BAGLEY (DD386)**, noise survey on, full-scale, R-4, R-8
service strain on, full-scale, 467
strain measurements on, full-scale, R-6
- Ball-crusher gages, calibration of copper balls for, R-240
response of, 751
- Ballistics, piezoelectric measuring methods in, T-120
- Balsa wood, reduction in buoyancy when submerged deeply in water, R-196
- Bank suction, on ships in canals, 601
- Barges, model tests for, 194
- Bar-magnet velocity meter, 723
- Battleship, ALABAMA (BB60), launching calculations and tests for, model, R-27
BB49-54, rolling tests on, model, 6
BB57-60, vibration in propelling machinery, 547
BB61-66, axial vibration of propulsion systems of, full-scale and model, 551
- Brazilian, SÃO PAULO, mast vibration on, full-scale, 10
- CALIFORNIA (BB44), stability model of, 121
turret foundation of, full-scale design, 207
- COLORADO (BB45), standardization trials of, full-scale, 140
- CONNECTICUT (BB18), towing of, full-scale, 71
- DELAWARE (BB28), propeller data for, model, 66
design for, model tests of, 273
- IOWA (BB61), axial vibration of propulsion system of, full-scale, 551
- MARYLAND (BB46), standardization trials of, full-scale, 140
- NEW JERSEY (BB62), axial vibration of propulsion system of, full-scale, 551
- NEW MEXICO (BB40), speed and power data, full-scale and model, R-139
- Battleship [Continued]
NORTH CAROLINA (BB55), propelling machinery, vibration in, full-scale, 518
retardation after launching, model, R-24
propellers of, model, 428
SÃO PAULO, mast vibration on, full-scale, 10
SCHARNHORST, launching data for, full-scale and model, T-100, T-105
SOUTH DAKOTA (BB57), vibration data for, full-scale, 547
TIRPITZ, launching data for, model, T-100
WASHINGTON (BB56), retardation after launching, model, R-24
vibrations of, full-scale, 518; R-22
WEST VIRGINIA (BB48), standardization trials of, full-scale, 140
- Battleship hull, proposed, rolling of, 374
- Battleships, modifications to, resistance and propulsion effects of, model, 429
- Beacon, NAJ, design and development of, 659
- Beams, curved, stress distribution in, T-228
deformation of, 529
elastically clamped, vibration of, R-279
See also Girders.
- Bearings, propeller shaft, coefficient of friction for, 360
- Bellevue gage, 278
- Bending load, ship models under, 298
- Bending measurements, on aircraft, T-211
on ships, T-211
- Bending tests, on flight deck planking, 736
- Bethlehem Steel Company, passenger-cargo vessel, standardization trials of, full-scale and model, 771
passenger-cargo vessel, twin-screw, model tests of, 714
passenger ship, twin-screw, model tests of, 602
tanker; single-screw, model tests of, 646
single-screw, standardization trials of, full-scale and model, 748
- Betz-Prandtl vortex theory of screw propeller, T-15
- Bibliography, of cavitation, R-81
of ship vibration, 739
- Bibliographies, annotated, need for, T-181
- Bilge, effect on roll damping, model, 442
- Bilge keels, cavitation on, model, 371
effect of, in model tests, 6

SUBJECT INDEX

- BLACK FALCON, standardization trials on, full-scale, 344
- Blast load, response to, 572
- Blast pressure, measurement of, R-282
- Blast tests, on hatch seal locks, T-191
- Blasting, shock waves produced by, T-102
- Bodies having specified critical cavitation numbers, development of, 647, 668
- Body of revolution, as form for displacement float, 573
- boundary layer and drag of, 726
- designations of, T-220
- elongated, calculation of flow about, 761
- immersed, wave resistance of, 758; T-234
- mathematical definition of, 719
- Boeing amphibian hull, tests for, model, 159
- Boiler construction code, A.S.M.E., 329
- Boiler heads, stresses in, T-143
- Bomb, effect of, on reinforced concrete, T-165
- techniques for, T-215
- Bossings, effect on steering, model, 331
- effect on turning, full-scale and model, 397, 403
- Bottom, double, effective width in, T-50
- ships', fouling of, 398
- Bottom paint, effect on frictional resistance, 789
- Boundary layer, effect of turbulence stimulators on, 724
- of body of revolution, 726
- of ship models, turbulence in, 662
- resistance of, 193, 227, 267, 275, 333
- turbulence in, method of detecting, 662
- turbulent, calculation of, in pressure gradient, 752
- Box girders, effective width in, T-50
- stress on, 441; T-28
- Brake, water, type "Foettinger," 711
- Brakes, hydraulic, theory of, 482
- Brazilian battleship, SÃO PAULO, mast vibration on, full-scale, 10
- BRAZOS, natural frequency of, full-scale, 263
- Bridge, resonant, for condenser-type pressure gage, 625
- resonant, for condenser-type pressure gage, instruction manual for, 680
- for measurement of capacitance changes, 626
- British frictional-resistance coefficients, conversion of, 657
- British method of testing self-propelled models, T-127
- Bubble generators, R-83
- Bubble screen. See Air-bubble screen.
- Bubbles, cataphoresis of, T-137
- damping effect of, T-158
- industrial uses of, R-83
- pressure waves around, 517
- shape and size of in liquids, 727
- vertical motion of, 510, 727; T-132, T-146
- See also Air bubbles; Gas bubbles; Gas globe.
- Buckling, experimental tests in, T-29
- of compression members, T-30
- of plates, T-31, T-32, T-64, T-66, T-78
- of thin plates, T-64
- Buffers, 482
- Bulkheads, for submarines, model tests on, 280
- Buonocore propeller, T-163
- Buoyancy, reduction of, by submergence, R-196
- relative, of various materials, R-196
- Buoys, current-indicator, resistance and stability tests, model, 667
- for sono-radio equipment, model, 550
- BURTON ISLAND (AG88), rolling characteristics of, model, 685
- CABLE, anchor, hydrodynamic forces on, R-317
- anchor, tables for computing equilibrium of, 687
- flexible, tables for computing equilibrium of, 687
- for towing, deep-towed body at high speed, theoretical requirements for, 661
- forces in, full-scale, 584, 589
- optimum length of, 717
- resistance of, 418, 666
- tables for computing equilibrium of, 687
- tension in, 422, 533, 595, 666
- stranded, hydrodynamic forces on, 713
- Cable function tables, 687
- Calculated stresses, determination of error in, 600
- Calibration, of condenser-type pressure gage, 625
- of gages, 468, 476, 627; R-244, R-246, R-248, R-269

SUBJECT INDEX

Calibration [Continued]

of ring dynamometer, 599
 of six-component dynamometer, 692
 of strain indicator, Type 5A, 645
 Type 13A, 608
 of thrustmeter, 370
 of vibrograph, Mare Island, 612
 Puget Sound, 693
 of water samplers, 655
 CALIFORNIA (BB44), stability of, model, 121
 turret foundation of, full-scale design, 207
 Camera, high-speed spark, T-207, T-213
 optographic, use of, T-211
 slow-motion, T-149
 subsurface, lighting banks for, 688
 twenty-lens high-speed motion-picture, R-345
 Canadian Vickers Limited, ferry, 450-foot twin-
 screw, model tests of, 737
 Canal, effect of design and dimensions on
 controllability of ships in, 601
 performance of ships in, 601
 Canal locks, resistance of ships in, model, 189
 Capacitance, measurements of minute changes
 in, 626
 Cargo vessel, emergency, model tests of, 682,
 683, 684, 775
 See also passenger-cargo vessel.
 Cargo vessel (fast), Geo. G. Sharp design
 V-2248, model tests of, 759
 Carrier system, for resonant bridge, 625
 for resonant bridge, instruction manual for,
 680
 Carrier-type strain indicator, 1A, 565
 1A, manual for, R-351
 5A, 645
 15K160, 648
 Catalog. See Index.
 Catamaran, tests on, model, 354
 Catamaran float arrangement, model, R-251,
 R-340
 Catapult, airplane, speed meter for, 126
 Catapult test, 77, 78
 Cavitation, 110, 277, 511, 527; T-21, T-22,
 T-36, T-89, T-188
 about a flat plate, T-224
 bibliography of, 712; R-81; T-10, T-22, T-188
 bilge keel, 371
 critical pressures for inception of, 575, 770

Cavitation [Continued]

effect of, on propeller efficiency, T-131
 effect of air content of water on, 549, 575,
 770
 erosion by, T-133
 generation of, T-10
 in relation to propeller design, T-18, T-23,
 T-24, T-230
 in water, investigation of, T-20
 influence of Reynolds number on, T-233
 mechanism of, 712
 on parallel cylinders, 485
 on propellers, T-9, T-25, T-46, T-71, T-230
 comparative tests, 732
 on turbines, pumps, and propellers, T-71
 prevention of, 712
 steady-state, 668
 survey of information on, 712
 theory for determining extent of, T-224
 with underwater explosions, 520
 Cavitation method, for development of forms
 with specified critical cavitation
 numbers, 647, 668
 Cavitation number, definition of, 647
 Cavitation tank, at Hamburg Model Basin, T-14
 at Netherlands Model Basin, T-98
 Cellulose hydrolyzers, torque converter for,
 590, 591
 Cement, for mounting strain gages, R-213
 See also Mortar.
 Charcoal, resistance of, to flow of air, 58
 CHARLES R. WARE (DD865), hull pressure measure-
 ments, 753
 Chronograph, TMB, operating and service manual
 for, 763
 Cinematography, spark, T-107
 See also Photography.
 Cladded and uncladded joints, tensile strength
 of, 642
 CLAIRTON, in restricted channels, model, 460
 in shallow water, model, 414
 standardization trial data for, full-scale,
 317
 wind effects on, model, 334
 Coast Guard Cutter, POINTCHARTRAIN (WPG70), hull
 vibrations of, R-294
 Coast Guard Cutter 96-98, Ice Breaker. See Ice
 Breaker (AGB1-2).

SUBJECT INDEX

- Coefficients, frictional resistance, conversion of, from Froude to Schoenherr, 657
 frictional resistance, tabulation of, 576
 Colloidal physics of disperse gases, T-125
 Colloids, reaction of, to supersonic waves, T-140
 COLORADO (BB45), standardization trials of, full-scale, 140
 Compiling, time-saving methods of, R-277
 Compression members, theory and design of, T-30
 Compression shock, measurement of, T-193
 Compression tests, in ship-structure assemblies, 452
 on copper balls, R-240
 on flight deck planking, 736
 Compressive strength, of longitudinals on CL51-54, R-9
 of tee stiffeners, 445
 Computers, electronic, low-frequency integrator type of, 725
 Concrete, reinforced, effect of bombs on, T-165
 Condenser scoops, comparative tests on, model, 384
 effect of, on resistance of flow of water, model, R-43
 Condenser-type pressure gage, development and theory of, 625
 instruction manual for, 680
 Conical shell, elastic theory of, T-238
 CONNECTICUT (BB18), towing of, full-scale, 71
 Construction of boilers subjected to external pressure, 329, 356, 387
 Contax lenses, analysis of, 424
 CONTE DI SAVOIA, stabilization of, full-scale, 430
 Control circuit, for condenser-type pressure gage, 625
 Conversion of coefficients from Froude to Schoenherr, 657
 Cooling, of gas turbines, theory of, T-198
 Copper balls, compression testing of, R-240
 Cork, reduction in buoyancy when submerged deeply in water, R-196
 Correspondence, preparation of, by duplicating process, R-356
 Corrosion of turbines, pumps, and propellers, T-71
 Corrosion. See Erosion.
 Corrosion-resisting steel, modulus of elasticity of, R-16
 Cox and Stevens, Inc., Yangtze river vessels, model tests of, 586
 Crane ship (AB1), rolling tests for, model, 69
 Crankcases of diesel engines, strength tests, 501
 Crash trials, of German minesweeper EMS-1, full-scale, 649
 Critical strength, of flat plates, R-1
 Cruiser, CB1-6, pitching and rolling of, model, 4
 CL51-54, strain tests on longitudinals, model, R-9
 turning tests, model, R-25
 PENSACOLA (CA24), rolling of, full-scale, 316
 PHOENIX (CL46), noise survey of, full-scale, R-3
 service strain on, full-scale, 467, 468
 PRINZ EUGEN, launching of, model, T-100
 rolling of, model, 270, 295, 685
 rudder tests on, model, 214
 ST. LOUIS (CL49), noise survey of, full-scale, R-7
 service strain on, full-scale, 467, 468
 SALT LAKE CITY (CA25), rolling characteristics of, model, 685
 WICHITA (CA45), noise survey of, full-scale, R-15
 wind, effect of, on model, 276
 Crystal accelerometers, R-246
 Current-indicator buoy, resistance and stability tests, model, 667
 Currents, navigation in, T-144
 Curvature, transverse, effect on frictional resistance, computation of, 689
 Curved beams, stress distribution in, T-228
 Curves, for planing surfaces, R-80
 CUYAMA (AO3), elasticity of, full-scale, 297
 service strain on, full-scale, 467
 vibration of, full-scale, 263
 Cycloidal propellers, trials conducted, full-scale, 649
 trials conducted, full-scale and model, 678
 Cylinders, parallel, flow about, 485
 towed, frictional resistance of, 689
 leveling of, R-68
 water-filled, resistance of, T-186

SUBJECT INDEX

Cylindrical shells, stability of, T-33

Cylindrical tubes, pressure on, 309 [T-5],
366 [T-6], 385, 396; T-226

DAHLGREN (DD187), propeller trials of, full-scale, R-338

Damping, of roll, by turn of bilge, 442
of vibrations, 449

Damping apparatus, design of, 269

Damping effect, of gas bubbles, T-109

David Taylor Model Basin. See Model Basin,
David Taylor.

Davidson, K., tests on 2-foot model submitted
by, 333

Deadlights, ventilation tests on, 190

Dead-pull trials, of German minesweeper EMS-1,
full-scale, 649

Deflection, of plates, 506, 610, 611; R-66,
R-142

Deflection measurements, on aircraft, T-211
on ships, T-211

on steel plates, R-142

Deflection meter, T-141

Deflector, wind, for pilot-house windows, 199

Deformation, elastic, of ellipsoidal shells, 606
in knees and beams, 529

in welded joints, T-47

of plates, 490, 491, 492, 509, 527, 532, 611;
R-202, R-244, R-248, R-254, R-265, R-279,
R-280

plastic, of medium steel, 503

theoretical calculation of, 532

under pressure, 490, 532; R-279, R-280

DELAWARE (BE28), propeller tests for, model, 66

Depth charge, direction indicator, R-46, R-51

Depth recorder, catamaran float with, R-251,
R-340

Design, of machine tools, T-101

Destroyer, ANDERSON (DD411), noise survey of,
full-scale, R-12

BAGLEY (DD386), noise survey of, full-scale,
R-4, R-8

service strain on, full-scale, 467

strain measurements on, full-scale, R-6
cavitation on, full-scale and model, 110

CHARLES R. WARE (DD865), hull pressure
measurements, 753

DAHLGREN (DD187), propeller trials of, full-scale, R-338

Destroyer [Continued]

DD186-335, cavitation effects on, full-scale, 277

propulsion tests for, full-scale and
model, 390

DD187, propeller trials of, full-scale, R-338

DD348-358, rudder tests for, full-scale and
model, 397

DD364-379, condenser scoops for, model, 384

DEWEY (DD349), service strain on, full-scale,
467

DOWNES, reduction of resistance of, model,
R-131

ELLYSON (DD454), firing trials on, full-scale,
R-57

FARRAGUT (DD348), rudder tests for, full-scale
and model, 397

tactical data for, model, 336, 397

FLUSSER (DD368), service strain on, full-scale, 467

gun foundations on, full-scale, R-57

HAMILTON (DD141), propulsion tests on, full-scale and model, 390

service strain on, full-scale, 467

shaft bearings on, full-scale, 360

shaft bossing of, vibration of, full-scale,
305

thrusters for, full-scale, 370

vibration data for, full-scale, 372

wind effects on, model, 312

HAMMANN (DD412), noise survey of, full-scale,
R-12

HUGHES (DD410), noise survey of, full-scale,
R-10

LANG (DD399), noise survey of, full-scale,
R-23

MAHAN (DD364), service strain on, full-scale,
467

metacentric height of, model, 287

MUGFORD (DD389), noise survey of, full-scale,
R-4

MUSTIN (DD413), noise survey of, full-scale,
R-14

PRESTON (DD327), modulus of elasticity of
steel from, full-scale, 318

RUSSELL (DD414), noise survey of, full-scale,
R-19

standardization trials, full-scale and model,
19, 28

SUBJECT INDEX

Destroyer [Continued]

transom sterns on, tests of, model, 339
 TUCKER (DD374), service strain on, full-scale, 467
 WOLF, elasticity tests on, full-scale, T-45
 WORDEN (DD352), standardization trials, full-scale and model, 403
 Detonating blast-type explosions, T-168
 DEWEY (DD349), service strain on, full-scale, 467
 Diaphragm blast gage, R-282
 Diaphragm bulkheads, 280
 Diaphragm pressure gage, condenser-type, theory and development of, 625
 condenser-type, instruction manual for, 680
 low-pressure type, theory and development of, 665
 Diaphragms. See Plates.
 Diazotype, advantages of, T-43
 Diesel engine, crankcases of, 501
 dynamic strains in, R-154
 for submerged submarines, T-197
 Differential equations, 534, 546, 558, 564
 for motion in viscous fluid, 267
 for response to impact, 481
 integration of, R-140
 Differentiator, for ship calculations, T-124
 Digital process, for calculation of amplitudes of hull vibration, 715
 for calculation of flexural modes of hull vibration, 706
 preparation of data for, 632
 Direct-coupled amplifier, 644; R-86
 Direction indicator, of a depth charge, R-46, R-51
 Direction of velocity in fluid, instrument for determining, T-117
 Disperse gases, T-112, T-113, T-114, T-115
 colloidal physics of, T-125
 Displacement boats, testing of, model, 153
 Displacement float, for supporting submerged loads, 573
 Displacement flow, around hull, T-85
 Displacement gage, retraction-type, applications of, 651
 retraction-type, design and construction of, 651
 evaluation of, 720

Displacement measurements, retraction-type gage for, 651
 Distant-reading apparatus, 340
 Ditto process, instructions for, R-356
 Diverters. See Paravanes.
 Diving bell. See Rescue chamber.
 Documentation, of technical literature, T-181
 DOWNES, reduction of resistance of, model, R-131
 Drag. See Resistance.
 Dravo Corporation, river towboat, model tests of, 656
 Drydock, floating, forces on stern-gate operating mechanism, model, R-310
 floating, model, 74
 DupliMAT process, instructions for, R-356
 Dye-diffusion method, for velocity measurement in water, 670, 700
 Dynamic load, measurement of, R-154; T-65
 on structures, R-30
 Dynamic load factor, 572
 Dynamic stability, of midget submarine, German V-80, from wind-tunnel tests, T-227
 Dynamical analogues, integration by, R-140
 Dynamometer, ring, development of, 599
 six-component, for testing ship appendages, 692
 Dynamometer No. 5, towing, wind-drag tests on, model, R-344
 E.J. KULAS, ore carrier, vibration survey of, full-scale, 762
 EAGLE Class patrol boats, moment of wind on, model, 15
 Eccentricity, joint, effect of, on strength of plates, 440
 Eddies, 485
 separation of, T-184
 Eddy resistance, 193, 227, 267, 275, 333
 Edge compression, strength of plates under, 469
 Effective horsepower, methods of predicting, 576
 Effective horsepower of ships. See Specific ship or model test.
 Eight-oared shell, design and propulsion of, model, 117
 Elastic deformation, of thin shells, 606
 Elastic stability, of tee stiffeners, 457
 Elastic structures, impact on, 481
 static loads in, 507
 Elastic theory, of thin shells, 606; T-238

SUBJECT INDEX

- Elastically supported ring, experiments with, 704
frequency equation for, 704
- Elasticity, measurement of, on WOLF, full-scale, T-45
modulus of, of materials for periscope tubes, R-16
of steel from PRESTON (DD327), full-scale, 318
of box girders, 441
of ships, full-scale, 297; T-2
model, 298
theory of, 294
in shipbuilding, T-2
- Elaterite, frictional resistance of, 14
- Electric power supply system, 561
- Electric sparks, brilliance and duration of, T-161
- Electrical analogy, use of, in solving hydrodynamic problems, T-225
use of in solving vibration problems, 551; R-226
- Electrical engine-pressure-indicating device, 559
- Electrical insulators, rigging, tensile tests of, 587
- Electrographic oscillograph, T-151
- Electrography, T-167
- Electromagnetic damping apparatus, 269
- Electromagnetic distant-reading apparatus, 340
- Electronic circuit, for condenser-type pressure gage, 625
for diaphragm-type low-pressure gage, 665
- Electronic integrator, low-frequency, 725
- Electronic methods of observation, 626; R-51, R-54, R-62, R-78, R-79, R-86, R-201, R-214
- Electronic regulation, of d-c power supply, 526
- Electronic transmitter, for underwater sound, 659
- Electronic voltage regulator, 483, 502; R-51, R-62
- Elin-Hafergut method of welding, T-187
- Ellipsoid, elastic deformation of, 606
- ELLYSON (DD454), gunfiring trials on, full-scale, R-57
- Emergency cargo vessel. See Cargo vessel.
- Enemy minesweeper EMS-1, full-scale trials with Voith-Schneider propellers, 649
- Energy absorption, of circular plate, R-202
- Energy-compression curves, for copper balls, R-240
- Engine, marine, stopping and reversing, T-106
See also specific kind of engine.
- Engine-pressure-indicating device, electrical, 559
- Entrainment of frequency, 558
- Entropy diagrams, internal-combustion engines, T-94
- Equations, methods of solution of, T-77
polynomial, method for calculation of roots of, 568
polynomial of sixth degree, for bodies of revolution, 719
- Erosion, bibliography, T-188
by cavitation, T-133, T-188
See also Corrosion.
- Errors in calculated stresses, determination of, 600
- ESSO SUEZ (SS), tanker, standardization trials of, full-scale and model, 750
- European diary, of Capt. H.E. Saunders, R-365
- European method of testing self-propelled models, T-127
- European model basins. See Model Basins, European.
- Everdur brazing, for welding models, R-347, R-348
- Excitation, parametric, 558
- Experimental boat-hull form, basic form, model tests of, 740
Hacker form, model tests of, 776
Scheme I, model tests of, 764
Scheme J, model tests of, 738
Scheme L, model tests of, 757
- Explosions, damage by, analysis of, R-296
detonating blast-type, T-168
effect of, on freely suspended target, R-279
internal pressures created by, in tubes, T-226
recording of, by high-speed photography, R-39; T-121
tests of, on hatch seal locks, T-191
See also Underwater explosions.
- Explosive load, behavior of steel diaphragms under, R-66

SUBJECT INDEX

- Explosive load [Continued]
 resistance of steel to, R-30
- Explosives, primers, T-49
- Extensometers. See Strain gage.
- External pressure, on cylindrical tubes,
 309 [T-5]
 on unfired pressure vessels, 329, 356, 387
- "E" Boat, German, apparent slip and tactical
 diameters of, full-scale, 628
- FAILURE**, of medium steel, R-207
- Falling body, stability of, R-42
- FARRAGUT (DD348), rudder tests for, full-scale
 and model, 397
 turning movements of, full-scale and model,
 336, 397
- Fathometer, catamaran float arrangement for
 towing, R-340
- Fatigue, in amphibian tractor grousers, 664
- Fatigue strength, of materials, T-104, T-122
 of submarine hulls, T-189
- Fatigue tests, 474
 on amphibian tractor grousers, 664
- Federal Shipbuilding and Dry Dock Company,
 tanker, single-screw, model tests of,
 585, 620
- Ferry, 290-foot, power characteristics of,
 model, 695, 695A, 695B
- 450-foot twin-screw, model tests of, 737
- Fighter BSI, experiments with model of, 33
- Fighting ships, remodeling of, T-82
- Figures, preparation of, R-128
- Filter, electrical, in transducers, 521
- Firing tests, of ELLYSON (DD454), full-scale,
 R-57
- Fittings, for valves, hydrostatic tests of,
 637, 638
- Fleet tanker. See Tanker.
- Flettner wind rotors, for ship propulsion, 108
- Flight-deck planking, strength tests on, 736
- Float, catamaran, model, R-251, R-340
 displacement, for supporting submerged loads,
 573
 5000-pound single, tests on, model, 142
 for astern fueling, R-366
 planing, design and performance of, model,
 540
 for supporting submerged loads, 573
- Float [Continued]
 planing, water-spout scoop for, 768
- Float problems, solution of, 540
- Floating drydock. See Drydock, floating.
- Floats, airplane, model, 222
 airplane type of step in, 438
 seaplane. See Seaplane floats.
- Flow, about airfoil, photographs of, model, 557
 about parallel cylinders, 485
 about ships and ship models, instruments and
 methods for measuring, 487
 axial, pressure distribution for, T-220
 axially symmetric, about elongated bodies of
 revolution, 761
 cavitation and separation, influence of
 Reynolds number on, T-233
 displacement, around hull, model, T-85
 investigation of, on ship model, T-53
 potential, forces and moments on a body in,
 T-241
 theory of, T-48
 See also Airflow.
- Flow lines, delineation of, 535
 of planing hull, model, 669
 See also specific ship or model test.
- Fluid, direction of velocity in, instrument for
 determining, T-117
 pressure in, elastic-tube gage for measuring,
 627
 instrument for determining, T-117
- FLUSSER (DD368), service strain on, full-scale,
 467
- Flying boats. See Seaplane floats; Seaplane
 hulls; Sea-sled.
- Foamglas, reduction in buoyancy when submerged
 deeply in water, R-196
- Foettinger, torque converter, 590
 water brake, 711
- Forced-vibration calculation, of hull vibration,
 739
 of hull vibration, by digital process, 715
- Forces and moments, on body in potential flow,
 T-241
 on ship appendages, six-component dynamometer
 for measuring, 602
- Form resistance of ships, 392
- Formation flying, saving of power in, T-239,
 T-240

SUBJECT INDEX

- Formica, stress-strain characteristics of, R-74
- Forms. See Bodies.
- Formulas, for stress, T-28
- friction, Schoenherr. See Schoenherr friction formula.
- Fouling of ships' bottoms, 398
- Frame, testing, for multidirectional loading of models, development of, 599
- Fredholm integral equations, first kind, for calculation of flow about elongated bodies of revolution, 761
- Freighter, Great Lakes, resistance tests of, model, 618
- Frequency, entrainment of, 558
- of background noise in test basins, 643
- of hull vibration, calculation of, 632, 706
- See also Vibration.
- Frequency analyzer, 643
- Frequency deviation methods, for measuring mechanical changes, R-79
- Friction formula, Schoenherr. See Schoenherr friction formula.
- Frictional resistance, 193, 227, 267, 275, 333
- determination of, methods of, 663
- due to lapped butts, 73
- due to temperature, 267, 333
- effect of bottom paint on, 789
- effect of roughness on, 729
- effect of transverse curvature on, 689, 726, 729
- equations for, 267
- reduction of, by hull design, model, 117
- research progress report for ATTC, 726
- theory for smooth flat plate with turbulent boundary layers, 726
- Frictional-resistance coefficients, British, conversion of, 657
- tabulation of, 576
- Frictional values, determination of, 360
- Froude, W., and Froude, R.E., resistance experiments of, 663
- Froude and Schoenherr frictional constants compared, 657, 729
- Froude naval experimental station, establishment of, T-81
- Froude's law, as applied to ship model tests, T-194
- Fueling floats, model-basin tests of, R-366
- GABLE roof, pressure distribution on, T-116
- Gage. See specific gage.
- Gage diaphragm, derivation of response, 625
- Gas bubbles, cataphoresis of, T-137
- damping of vibration by, T-158
- in liquids, industrial uses of, R-83
- size of, T-108, T-110, T-111
- speed of rise, T-146
- spherical, vertical motion of, 510
- vibration of, T-109
- See also Gas globe.
- Gas bubbles and droplets, in liquids, size of, T-108
- Gas expulsion, by supersonic waves, T-142
- Gas globe, displacement of, in water, T-171
- effect of gravity on, R-182
- oscillation of, in underwater explosions, T-209
- pressure changes in, T-159
- pressure on, 520
- underwater, 512, 517
- Gas turbines, bibliography, T-177
- cooling of, T-198
- development of, T-177
- entropy diagrams for, T-94
- Gases, disperse, T-112, T-113, T-114, T-115
- disperse, colloidal physics of, T-125
- General Electric slow-motion camera, T-149
- Generator, linear-sweep, 483
- George G. Sharp. See Sharp, Geo. G.
- German, ex-, destroyers Z-37 and Z-39, hydrostatic tests of steam valves from, 596
- German "E" Boat, apparent slip and tactical diameters of, full-scale, 628
- German minesweeper, R130-Class, reduction and analyses of trials for, 649
- R130-Class, trials conducted, full-scale, 649
- German ships, launching of, full-scale and model, T-100, T-105
- German SS NJASSA, test station aboard, T-63
- German versus U.S. trial results, on German minesweeper EMS-1, 649
- Girders, box, effective width in, T-50
- box, stress on, 441; T-28
- warping of, with off-center welds, T-93
- See also Beams.
- Glass plate, projectiles fired through, T-107
- Globe. See Gas globe.

- Göteborg Model Basin, electrical equipment of, T-175
- Graphical solution, of 45° strain-rosette data, 600
- Graphs, preparation of, R-128
- Gravity, effect of, on underwater gas globes, R-182
- Great Lakes freighter, resistance tests of, model, 618
- Grouting, use of dry mortar for, 538
- Gun firing trials. See Firing tests.
- Gun foundation, analysis of, R-127
on destroyers, full-scale, R-57
stress on, T-2
- GUNARD, hull of, model, 165
- Gunboat, river, model, 82
- Gunfire, shock waves produced by, T-102
- HAMBURG Model Basin.** See Model Basin, Hamburg.
- HAMILTON (DD41), propulsion tests on, full-scale and model, 390
service strain, full-scale, 467
shaft bearings on, full-scale, 360
shaft bossing of, vibration of, full-scale, 305
thrustmeters for, full-scale, 370
vibration data for, full-scale, 372
wind effects on, model, 312
- HAMMANN (DD412), noise survey of, full-scale, R-12
- Hand strain gage, 285, 292
- Harness, safety, for aircraft pilots, strength of, 633
- Hatch seal locks, explosion or blast tests on, T-191
- Heating water, by mixing with steam or hot water, 219
- High-frequency square-wave generator, R-201
- High-frequency vibrations, recorded by scratch process, T-13
- High seas, tests during, T-26
- High-speed displacement boats, model, 153
- High-speed motion-picture camera, twenty-lens, R-345
- High-speed photography. See Photography, high-speed.
- High-speed spark camera, T-207, T-213
- High-speed towable target. See Target, high-speed towing.
- High-voltage d-c power supply, regulated, 561
- Hip roof, pressure distribution on, T-116
- Homing device, for air-sea rescue work, 659
- Hot plastic paint, effect on frictional resistance, 789
- Hot-wire measurements, theory of as a velocity meter, 724
- Hot-wire method, for turbulence measurements in water, 726
for velocity measurements in water, 592, 670
- H.S.V.A. See Model Basin, Hamburg.
- HUGHES (DD410), noise survey of, full-scale, R-10
- Hull, amphibian, tests for, model, 159
Aquaflow, tests of, model, 669
design of, in relation to frictional resistance, model, 117
impact loads on, full-scale, 488
interaction with propeller, model, 470
seaplane. See Seaplane hulls.
service strains on, full-scale, 467
smooth-bottom planing, tests of, model, 669
submarine. See Submarine hulls.
- Hull forms, experimental boat, basic form, model tests of, 740
experimental boat, Hacker form, model tests of, 776
Scheme I, model tests of, 764
Scheme J, model tests of, 738
Scheme L, model tests of, 757
geometry of, 710
of minimum resistance, T-69
- Hull vibration, calculation of flexural modes of, 632, 706
calculation of frequency of, 582
full-scale, 263, 699, 762; R-294
model, 382 [T-7], 395
steady-state, calculated by digital process, 715
theory of, 739
- Huron-Eddy Hacker form aircraft rescue boat, model tests of, 776
- Hydraulic flow, turbulent, T-173
- Hydrodynamic flow, 485
- Hydrodynamic forces, on anchor cable, R-317
on stranded cables, 713
- Hydrodynamic increase in mass, in oscillating bodies, T-118

SUBJECT INDEX

- Hydrodynamic noise, development of hot-wire methods for velocity measurements in water, 592
- Hydrofoils, hydrodynamic characteristics of, 341
- Hydroplane. See Hydrofoils.
- Hydrostatic tests, of valves, high-pressure steam, 638
- of valves, high-pressure steam, from ex-German destroyers Z-37 and Z-39, 596
- low-pressure water, 637
- on diaphragms, large, 636
- small, 635
- on submarine rescue chamber, model, 315
- YRC-6, 631
- Hydrovane Wing T, model experiments for, 25, 34
- Hydrovanes, experiments on seaplanes with and without, 80
- ICE BREAKER**, AGB1-2, maneuvering tests of, 745
- AGB1-2, model tests of, 734
- BURTON ISLAND (AG88), rolling characteristics of, model, 685
- Ice guards, for AGB1-2, effect on maneuvering, model, 745
- for AGB1-2, effect on propulsion, model, 734
- Illumination, for subsurface camera, 688
- Illustrations, preparation of, R-128
- Impact, effect of, 481, 572
- measurement of, R-246
- on free-edge plates, 488
- on plates, T-135
- Impact waves, in water, measurements of, T-213
- Impedance method, solution of vibration problems by, R-226
- Implosion pressure waves, T-107
- Inconel, modulus of elasticity of, R-16
- INDEPENDENCE (SS), passenger-cargo vessel, standardization trials of, full-scale and model, 771
- Index of technical information, author, 597
- miscellaneous, R-211
- Model Basin reports, 597
- subject, 597
- translations, 597
- Indexing, time-saving method of, R-277
- INDIANA (BB58), vibration in propelling machinery, 547
- Induced current, in a-c meter disk, T-130
- Inertia-operated trigger, for use with reed gage, mathematical analysis of, 654
- Inland tanker, single-screw, model tests of, 640
- Instructions, for chronograph operation, 763
- for condenser-type pressure gage, operation of, 680
- for preparation of correspondence by duplicating process, R-356
- for preparation of engineering reports, 755
- for preparation of illustrations, R-128
- for preparation of letter correspondence, 556
- for preparation of technical manuals, 754
- for preparation of technical reports, 616
- for typing and layout of reports and translations, R-225
- Instruments, for vibration and shock measurement, 563
- for vibration and shock measurement, evaluation of, 720
- Insulation, against sound, T-99
- Insulators, rigging, fiberglas micarta, tensile tests of, 593
- rigging, porcelain, tensile tests of, 587
- Integrals, auxiliary, evaluation of, 758
- Integration, by means of dynamical analogues, R-140
- Integrator, for ship calculations, T-124
- low-frequency electronic, 725
- Internal combustion engines, entropy diagrams for, T-94
- Inventions, by Naval-establishment personnel, R-350
- Iron, tests on, 205
- Isolation mounts, noise, wave effects in, 672, 766
- JACKLIN** accelerometer, six-component recording, performance of and specifications for, 614
- Jet drive, for high-velocity wind tunnels, T-219
- Jet propulsion, model tests of nacelle for, T-212
- with cold jet, model testing of, T-217, T-218
- Joints, clad and unclad, tensile strength of, 642
- in stationary machine parts, T-95

SUBJECT INDEX

Joints [Continued]

sealed, bibliography, T-95

JUPITER [LANGLEY (CVI)], rolling tests on model of, 8, 13

KINDLUND and Drake, 290-foot ferry, model tests of, 695, 695A, 695B

Kingsburg thrustmeter, 370

Knees of frames, deformation in, 529
strength of, R-53
stresses in, 529

Kolin's electromagnetic velocity meter, 743

Kort nozzles, for river towboat, model tests of, 656

KULAS. See E.J. KULAS.

LAMINAR flow, about ship models, 299

Landing craft, LCVF, effective horsepower of, 619

Landing ship, LSM458, standardization trials on, full-scale and model, 678

LANG (DD399), noise survey of, full-scale, R-23

LANGLEY (CVI), formerly JUPITER, leeway due to wind on model of, 109
rolling tests on, model, 18

Launching, catapult, 126
of ALABAMA (BB60), data for, model, R-27
of large ships, T-100, T-182
of NORTH CAROLINA (BB55), data for, model, R-24
of PRINZ EUGEN, data for, T-100
of SCHARNHORST, data for, T-100, T-105
of TIRPITZ, data for, model, T-100
of WASHINGTON (BB56), data for, model, R-24

Launching data, photographic methods of obtaining, full-scale, R-50

Leeway due to wind, on model of LANGLEY (CVI), 109

Lenses, Contax, analysis of, 424

Leveling a towed cylinder, devices for, R-68

Liberty ship, EC2, effect of turbulence-stimulating devices on models of, 662
model tests of, 640, 703
underwater explosion research with, R-296

Liberty-ship series, towing tests of, for ATTC, model, 615

Lichtenrade Model Basin, T-87

Lift, of devices for leveling a towed cylinder, R-68

Lightweight design, for machine tools, T-101

Lignum-vitae bearings, friction in, 360

Linear-sweep oscillator, 483

Lines of flow. See Flow lines.

Linton Rigg and Co., ex-submarine chaser, tests of alternate sterns, model, 658

Liquids, absorption of gas bubbles and droplets in, T-108
air bubbles in, shape and size of, 727
speed of rise, 727; T-132
gas bubbles in, size of, T-110, T-111
speed of rise, T-146
vibration of, T-109
tensile strength of, 712

Load capacity, of stressed plate, T-76

Loading, multidirectional, frame for, 599
of a ship in ocean waves, T-11

Loading measurements, on aircraft, T-211
on ships, T-211

Longitudinal step, location of, 435

Losenhausen vibration generator, 539, 554

Low-frequency electronic integrator, 725

Low-frequency transit detector, R-51

Low-pressure gage, diaphragm-type, 665

Luminosity, in living organisms, T-221

MACHINE parts, stationary, joints in, T-95

Machine tools, design of, T-101

MAHAN (DD364), service strain on, full-scale, 467

MALOLO, model tests for, 145

Maneuvering tests, for ice breaker, AGB1-2, model, 745
for passenger-trailer ship, twin-screw, model, 698
vertical steering control, of submarine, 1600-ton, model, R-134, R-135
of submarine, 1750-ton, model, R-137
of submarine, 03-10 Class, model, R-136
of submarine, S-3, model, R-133
of submarine, S48-51 and 159-162 Class, model, R-138
See also tactical data and specific tests.

Manometer, T-162

Mare Island vibrograph, calibration and performance of, 612

Mark 4, Mod 1 subsurface camera, lighting banks for, 688

SUBJECT INDEX

- Mark 13 torpedo, wake survey of, 583
- MARYLAND (BB46), standardization trials of, full-scale, 140
- Mathematics, value of, in research, R-48
- Mechanical changes, electronic measurement of, R-79
- Mechanics, nonlinear, 534, 546, 558, 564
- Medium steel. See Steel, medium.
- Merchant vessel, model tests on propellers for, 27
- Metacentric height, changes in, model, 287
- Metal sheets, method of welding, T-178, T-187
- Metalelectric strain gage. See Strain gage, wire-resistance.
- Meter, bar-magnet velocity, 723
for measuring air content of water, 549
- Meter disk, induced current in, T-130
torque of, T-130
- Microflash photography, time-delay circuit for, 525
- Micromanometer, T-162
- Midget submarine. See Submarine, midget.
- Migration, of underwater gas globes, R-182
- Mine-laying submarine SM1, steering control of, model, 101
- Mine-mooring cables, device for passing, model, R-143
- Mines, techniques for, T-215
- Minesweeper, airflow over bridge of, model, R-209
AUK (AM57), launching data for, full-scale, R-50
EMS-1, German R130-Class, trials conducted, full-scale, 649
- Minesweeping gear, 573
- Mississippi River towboats and barges, model tests for, 194
- Mississippi Shipping Co., passenger-cargo vessel, model tests of, 702
- Model Basin, David Taylor, manual for visitors to, 569
David Taylor, measurement of turbulence in, 726
reports and translations of, 597
wax model manufacture at, 728
- Göteborg, electrical equipment of, T-175
- Guidonia, tests on aerial torpedo, T-196
- Hamburg, cavitation tank of, T-14
- Model Basin [Continued]
Hamburg, development of ship model testing at, T-90
tests in water tunnel, T-25
- Hamover, towing carriage of, T-216
- Lichtenrade, T-87
- Netherlands, variable-pressure water tunnel of, T-98
- U.S. Experimental, activities of, 54
building of models at, 323
description of, 118
manufacture of model propellers at, 290
reports and translations of, 597
velocity of water currents in basins of, 304
- Model Basins, development of ship model testing at, T-90
European, R-365; T-87, T-98, T-175
manufacture of model propellers at, 290
reports on, at 1942 American Towing Tank Conference, R-72
small, uses of, 286
- Model tests, correlated with full-scale trials, T-61
expansion of, 275 [T-3]; T-90
ship, for companies, 652; R-334
For correlation between ship and model see specific ship or model number.
- Models, ship. See Ship models.
structural, multidirectional loading of, frame for, 599
- Mudugno gage, 506
- Modulus of elasticity, for metals, R-16
of steel from PRESTON (DD327), full-scale, 318
- Moldwood, for ship propellers, R-206
- Moment of inertia, of propellers, 307
- Moment of wind, determination of, on model, 15
- Moments and forces. See Forces and moments.
- Mooring lines, model, 550
- Mortar, dry, as bearing and grouting material, 538
- Motion-picture camera. See Camera.
- Motion-picture photography. See Photography.
- Motions, in shock-testing machines, 536
- Motor boats, V-bottom, model tests of, R-47
- Motor torpedo boat, development of, T-88
turning tests for, model, R-36, R-41
For U.S. boats, see Patrol vessels.
- Mounting cements, for strain gages, R-213

SUBJECT INDEX

- Mounts, noise-isolation, materials for,
progress report, 672
noise-isolation, wave effects in, 766
- Movements of large ships in launching, model,
T-100
- MUGFORD (DD398), noise survey of, full-scale,
R-4
- Multichannel strain indicator, Type 13A,
operating manual for, 608
- Multidirectional loading, frame for, 599
- Multifrequency reed-type shock gage, design
of, 654
evaluation of, 720
performance, 603
record analysis, 603
theoretical study of, 613
- MUSTIN (DD413), noise survey of, full-scale,
R-14
- Model 3588, Seatrain, tests of, 747
- Model 3632, tanker, tests of, 594
- Model 3705, ice breaker, AGB1-2, maneuvering
tests of, 745
ice breaker, AGB1-2, tests of, 734
rolling characteristics of, 685
- Model 3748-2, liberty ship, tests of, 640, 703
- Model 3801, victory ship, tests of, 640
- Model 3839, U.S. Maritime Commission design
C1-M-AV8, tests of, 629
- Model 3846, LSM147, SP tests compared with
standardization trials, 678
- Model 3867, tanker, tests of, 577, 594, 640
- Model 3886, inland tanker, tests of, 640
- Model 3928, LSM458, SP tests compared with
standardization trials, 678
- Model 3931, passenger ship, tests of, 602
- Model 3931-1, passenger-cargo vessel, SP tests
compared with standardization trials, 771
passenger-cargo vessel, twin-screw, tests
of, 714
- Model 3934-2, passenger ship, tests of, 623
- Model 3946-2, passenger liner, tests of, 598
- Model 3973, liner, rudder force test of, 607
- Model 3994, Great Lakes freighter, tests of,
618
- Model 4005 }
4005-1 } Yangtze river vessels, tests of,
4006 } 586
- Model 4009, EMS-1, German R130-Class mine-
sweeper, SP tests compared with full-
scale trials, 649
- Model 4013, passenger-trailer ship, twin-screw,
tests of, 578, 580, 634, 639
- Model 4013-1, passenger-trailer ship, twin-
screw, maneuvering tests of, 698
passenger-trailer ship, twin-screw, tests of,
634, 639
- Model 4013-2 } passenger-trailer ship, twin-
4013-3 } screw, tests of, 634
- Model 4013-4, passenger-trailer ship, twin-
screw, wake survey on, 722
- Model 4030, tanker, single-screw, tests of, 585
- Model 4030-1, tanker, single-screw, tests of,
620
- Model 4031 }
4032 } landing craft, LCVF, effective
horsepower, comparison of, 619
- Model 4042-1, tanker, single-screw, tests of,
673
- Model 4042-2, tanker, single-screw, tests of,
675
- Model 4057, tanker, single-screw, SP tests
compared with standardization trials, 748
tanker, single-screw, tests of, 646
- Model 4062, river towboat, tests of, 656
- Model 4075, tanker, single-screw, SP tests
compared with standardization trials, 750
tanker, single-screw, tests of, 653
- Model 4077 }
4077-1 } ex-submarine chaser, tests of
4077-2 } alternate sterns, 658
- Model 4098, ore carrier, tests of, 671
- Model 4111-2, tanker, tests of, 696, 696A, 696B
- Model 4115, emergency cargo vessel, tests of,
683, 775
- Model 4115-1, emergency cargo vessel, tests of,
775
- Model 4117, emergency cargo vessel, tests of,
682, 775
- Model 4121-1 }
4121-2 } tanker, single-screw, tests of,
4121-3 } 691, 691A, 691B
- Model 4122, 290-foot ferry, tests of, 695, 695A,
695B
- Model 4133, emergency cargo vessel, tests of,
684, 775

SUBJECT INDEX

- Model 4133-1, emergency cargo vessel, tests of, 775
- Model 4144, AKA prototype, 528-foot vessel, tests of, 701
- Model 4146, passenger-cargo vessel, tests of, 702
- Model 4152, AKA prototype, 528-foot vessel, tests of, 735, 735A, 735B
- Model 4152-1, AKA prototype, 528-foot vessel, tests of, 735A
- Model 4152-2, AKA prototype, 528-foot vessel, tests of, 735B
- Model 4187W } tanker, single-screw, tests of,
4187W-1 } 650
- Model 4190W, emergency cargo vessel, tests of, 775
- Model 4191, AKA prototype, 528-foot vessel, tests of, 735
- Model 4192W, ferry, 450-foot twin-screw, tests of, 737
- Model 4193W, ferry, 450-foot twin-screw, tests of, 737
- Model 4194-1, ferry, 450-foot twin-screw, tests of, 737
- Model 4300, experimental boat hull, basic form, tests of, 740
- Model 4309, experimental boat hull, Scheme I, tests of, 764
- Model 4310, experimental boat hull, Scheme J, tests of, 738
- Model 4312, experimental boat hull, Scheme L, tests of, 757
- Model 4315, experimental boat hull, Hacker form, tests of, 776
- Model 4340W, Seatrain, tests of, 747, 747A
- Model 4342W, fast cargo vessel, tests of, 759
- Model 4375, aircraft rescue boat, 90-foot, tests of, 782
- Model 4377, aircraft rescue boat, 52-foot, tests of, 769
- NACELLE**, for jet propulsion, model tests of, T-212
- NAF Beacon, design and development of, 659
- NATCHEZ, tests of, model, 167
- National Defense Research Committee tourmaline gage, R-282
- Natural frequency. See Frequency; Vibration.
- Naval experimental station, establishment of, T-81
- Lichtenrade, T-87
- NavTechMisEu. See U.S. Naval Technical Mission in Europe.
- NECHES, natural frequency of, full-scale, 263
- Neoprene waterproofing, method of applying to strain gages, 627
- Netherlands Model Basin. See Model Basin, Netherlands.
- Netherlands SS ORANJE, design of, model, T-128
- Neutralizers, of vibrations, 449
- NEW JERSEY (BB62), axial vibration of propulsion system of, full-scale, 551
- NEW MEXICO (BB40), speed and power data, full-scale and model, R-139
- Newport News Shipbuilding and Dry Dock Company, liner, rudder force test of, model, 607
- tanker, single-screw, model tests of, 653
- single-screw, standardization trials of, full-scale and model, 750
- New York Shipbuilding Corporation, tanker, model tests of, 696, 696A, 696B
- NIAGARA (APA87), vibration survey of, full-scale, 699
- NJASSA, test station aboard, T-63
- No-load tests, of German minesweeper, EMS-1, full-scale, 649
- Noise, background, levels and frequency distribution of in test basins, 643
- hydrodynamic, development of hot-wire methods for velocity measurements in water, 592
- isolation of, by mounts, progress report, 672
- wave effects in mounts for, 766
- Noise-isolation mounts, evaluation of, progress report, 672
- wave effects in, 766
- Noise survey, of ANDERSON (DD411), full-scale, R-12
- of BAGLEY (DD386), full-scale, R-4, R-8
- of HAMMANN (DD412), full-scale, R-12
- of HUGHES (DD410), full-scale, R-10
- of LANG (DD399), full-scale, R-23
- of MUGFORD (DD389), full-scale, R-4
- of MUSTIN (DD413), full-scale, R-14
- of PHOENIX (CL46), full-scale, R-3
- of RUSSELL (DD414), full-scale, R-19
- of ST. LOUIS (CL49), full-scale, R-7

SUBJECT INDEX

- Noise survey [Continued]
 of WICHITA (CA45), full-scale, R-15
 Nonlinear boundary-value problem, T-192
 Nonlinear mechanics, analytical methods, 546
 nonlinear resonance, 558
 relaxation oscillations, 564
 topological methods, 534
 NORTH CAROLINA (BB55), retardation after
 launching, model, R-24
 vibration data for, full-scale, 518
 Notch stress, T-74
 Nozzle, venturi-type, critical pressure for
 inception of cavitation in, 770
 Numachi nozzle, critical pressure for incep-
 tion of cavitation in, 770
- NA 810-060, 625, 680
- NE 051-427, 606, 692
- NS 011-043, 709
 NS 123-012, 637, 638
 NS 700-001, 772, 789
 NS 711-001, 699
 NS 711-002, 603, 613
 NS 711-110, 720
 NS 712-064, 693, 739, 762
 NS 712-065, 632, 706, 715
 NS 713-049, 700
 NS 713-065, 575, 770
 NS 713-201, 743
 NS 713-219, 766
 NS 715-084, 752, 758, 761
 NS 715-085, 734, 745
 NS 715-086, 724, 726, 738, 740, 757, 764,
 769, 776, 782
 NS 724-001, 723, 751
 NS 724-002, 749
 NS 724-004d, 651
 NS 724-004e, 570
 NS 830-100, 687
 NS 870-001, 704
 NS 880-019, 713, 717
 NS 724-008, 610, 611, 635, 636
 NS 731-038, T-238
 NS 731-040, 736
- OBH frequency analyzer, 643
 Ocean waves. See Wave, ocean.
- Oiler, A09-Class, rudders of, model, 268
 A019-Class, propulsion and steering of, full-
 scale, 350
 BRAZOS (A04), vibration of, full-scale, 263
 CUYAMA (A03), elasticity of, full-scale, 297
 service strain on, full-scale, 467
 vibration of, 263
 elasticity of, full-scale, 297
 NECHES (A05), vibration of, full-scale, 263
 PATOKA (A09), rudder resistance of, model, 268
 SALINAS (A019), propulsion and steering of,
 full-scale, 350
 vibration of, full-scale, 263
 OKLAHOMA (BB37), natural frequency of, full-
 scale, 263
- One-way traffic in a restricted channel, 579
 Optical system, of twenty-lens high-speed
 motion-picture camera, R-345
 Optograph, use of, T-211
 ORANJE, design of, model, T-128
 Ore carrier, E.J. KULAS, vibration survey of,
 full-scale, 762
 660-foot, model tests of, 671
 Orientation, of suspended body, R-37
 Oscillating bodies, hydrodynamic increase in
 mass in, T-118
 Oscillations, measurement of, in high seas, T-26
 of gas globes in underwater explosions, T-209
 of ships, determination of virtual mass for,
 T-225
 relaxation, 564
 self-excited, entrainment of, T-170
 Oscillator, sweep, 483
 Oscillograph, electrographic, T-151
 Oscillograph loops, T-152
- PADDLEWHEELS**, model tests with, 176
 Paint. See kind of paint, e.g., Bottom paint,
 Hot plastic, Zinc chromate.
 Pallograph, 563; T-176
 Panama Canal, model tests for design of, 601
 restricted channel tests for, 579, 601
 Parachutes, for bombs, mines, and torpedoes,
 development of, T-215
 Paraffin models versus wooden models, 319
 Paraffin models. See Wax models.
 Parallel cylinders, flow about, 485
 Parametric excitation, 558

SUBJECT INDEX

- Paravanes, 533
- Paris Turning Basin, T-222
- Passenger-cargo vessel, model tests of, 702
 SS INDEPENDENCE, standardization trials of, full-scale and model, 771
- twin-screw, model tests of, 714
- Passenger liner, rolling experiments on, model, 7
- rudder force test of, model, 607
- 775-foot, model tests of, 598
- Passenger ship, 880-foot, model tests of, 623
- twin-screw, model tests of, 602
- Passenger-trailer ship, twin-screw, maneuvering tests of, model, 698
- twin-screw, model tests of, 578, 634, 639
- wake survey of, model, 580, 722
- Passing device, for passing mine-mooring cables, model, R-143
- PATOKA (A09), rudders of, model, 268
- Patrol vessels, diesel engines for, 501
- EAGLE Class, moment of wind on, model, 15
- Pendulum oscillations, forced, T-192
- PENNSYLVANIA (SS) tanker, standardization trials of, full-scale and model, 748
- PENSACOLA (CA24), rolling of, full-scale, 316
- turret foundation of, full-scale, design of, 207
- Periscope, submarine, wake of, model, R-152
- Periscope tubes, modulus of elasticity of materials for, R-16
- PHOENIX (CL46), noise survey of, full-scale, R-3
- service strain on, full-scale, 467, 468
- Photoelectric time-interval meter, for instantaneous velocity measurements, R-214
- Photogrammetry, wave research by, T-204
- Photographic methods, for determining angle of heel, full-scale and model, 397
- for obtaining launching data, full-scale, R-50
- for printing templates, R-313
- for recording behavior of steel diaphragms, R-66
- Photographic study, of flow about an airfoil, model, 557
- of gas globe under water, 512
- of underwater explosions, 520; R-39, R-65
- of underwater shock waves, R-77, R-203
- Photography, high-speed, R-318; T-107, T-190
- high-speed, for recording explosion phenomena, T-121
- schlieren method, T-121, T-156
- time-delay circuit for, 525
- time-recording device for, R-318; T-154
- twenty-lens motion-picture camera for, R-345
- microflash, time-delay circuit for, 525
- slow-motion, T-149
- underwater, lighting equipment for, 688
- use of, in deflection measurements, T-211
- Photolith printing method, T-138
- Photomechanical printing, T-43
- Piezoelectric gage, 523; R-157
- calibration of, R-244, R-246, R-248, R-269
- Piezoelectric measuring method, in ballistics, T-120
- Pine, white, reduction in buoyancy when submerged deeply in water, R-196
- Pitch-damping moment, of midget submarine, German V-80, from wind-tunnel tests, T-227
- Pitch recorder, calibration of, 116
- Pitching, of ships, model, T-232
- Pitching experiments, on cruiser, model, 4
- Pitching tests, model, T-232
- Pitot tube, cylindrical, 487; T-172
- spherical, 487; T-172
- 13-hole, 487, 583
- Planing float, design and performance of, model, 540
- for supporting submerged loads, 573
- used as astern-fueling float, R-366
- water-spout scoop for, 768
- Planing surfaces, curves for, R-80
- Plastic behavior, of steel, R-243
- Plastic bodies, projectiles fired through, T-107
- Plastic deformation, of plate, under pressure, 490, 532; R-279, R-280
- of steel, medium, 503
- Plastic sheets, stress-strain characteristics of, R-74
- Plastic strain, of medium steel, 503
- tests of, on steel plates, R-142
- Plates, air-backed, resistance to underwater explosions, 610, 611
- buckling of, T-31, T-32, T-64, T-66, T-78
- compressed, stability problems of, T-79

SUBJECT INDEX

Plates [Continued]

- deflection of, 506, 610, 611, 635, 636;
 - R-66, R-142
 - deformation of, 490, 491, 492, 509, 527, 532, 611; R-202, R-244, R-248, R-254, R-265, R-279, R-280
 - effect of joint eccentricity on strength of, 440
 - effect of stiffeners on, 452, 635; T-31, T-78
 - energy absorption of, 635, 636; R-248, R-280, R-296
 - flat, cavitation flow about, T-224
 - critical strength of, R-1
 - frictional resistance of, 689
 - tensile strength of, 446
 - free-edge, impact measurements on, 488
 - fused-quartz and plastic, resistance to
 - underwater explosions, R-296
 - in assemblies, strength of, 452
 - pressure on, 527
 - quartz, in transmitters, T-148
 - steel, energy absorption of, 635, 636; R-296
 - fracture of, R-271
 - plastic strain and deflection tests on, R-66, R-142
 - resistance to underwater explosions, 610, 611
 - rupture of, 611; R-265, R-276
 - transition temperature of, in notch-tensile tests, 709
 - stiffened, stability of, 402 [T-8]
 - stressed, load capacity of, T-76
 - under lateral impact, T-135
- Plating, strength of, under edge compression, 469
- Plywood, for ship propellers, R-206
- Polynomial equation, method for calculation of roots of, 568
 - sixth degree, coefficients for, 719
 - for bodies of revolution, 719
 - tables for, 719
- Polyvinyl alcohol, sensitization of, for printing plates, T-179
- PONTCHARTRAIN (WPG70), vibration data for, full-scale, R-294
- Pontoon. See Seaplane floats.
- Portable strain gage, 272, 292
- Position indicator, towed, 540, 768
- Power, for ship propulsion, estimate of, 132
 - in formation flying, saving of, T-239, T-240
 See also Effective horsepower.
- Power data, for NEW MEXICO (BB40), full-scale and model, R-139
- Power supply, d-c, for laboratory work, 526
 - d-c, in electronic development work, 526
 - regulated, 561
- Prandtl micromanometer, improvement of, T-162
- Pressure, blast, measurement of, R-282
 - engine, electrical device for indicating, 559
 - in fluid, elastic-tube gage for measuring, 627
 - instrument for determining, T-117
 - internal, in tubes, elastic stresses caused by, T-226
 - on airship hulls, T-1
 - on bubbles, 510
 - on cylindrical tubes, 309 [T-5], 356, 366 [T-6], 385, 396
 - on gable and hip roofs, T-116
 - on ship model, T-53
 - on valves and fittings, high-pressure steam, 596, 638
 - low-pressure water, 637
- Pressure coefficient, definition of, 647
- Pressure distribution, over bodies of revolution for axial flow, T-220
- Pressure gage, 479, 523; R-157, R-202, R-282
 - calibration of, 625, 627; R-269
 - capsule-type, for measuring hull pressures, 753
 - condenser-type, development and theory of, 625
 - instruction manual for, 680
 - diaphragm-type, for measuring low pressures in fluids, 665
 - elastic-tube, 627
- Pressure-time records, for thin-walled tubes, T-226
- Pressure vessels, rules for construction of, 329, 356, 387
- Pressure waves, around sphere of gas, 517
 - produced by blasting and gunfire, T-102
- PRESTON (DD327), modulus of elasticity of steel from, full-scale, 318
- Printing, photolith method, T-138
 - photomechanical methods, T-43
- Printing plates, sensitization of coating for, T-179

SUBJECT INDEX

- PRINZ EUGEN, launching data for, model, T-100
 Prohl's method, for calculating flexural critical frequencies of ships, 582
 Projectiles fired through various media, T-107
 Propagation of sound waves, anomalies in, T-41
 Propeller, Buonocone, T-163
 trochoidal, tests of, 718
 Propeller blades, interference tests on, model, 375
 Propeller design, analysis of, 621
 and cavitation, T-18, T-23, T-24, T-230
 Betz-Prandtl vortex theory, T-15
 Propeller efficiency, T-131
 Propeller-pump design, analysis of, 621
 Propeller sections, T-18, T-23
 Propeller struts, effect of, on steering of twin-screw ship, 331
 Propeller tests, 57, 187, 375; T-70
 analysis of, T-19
 comparative cavitation by several agencies, 732
 effect of scale of model on, T-37, T-54
 on DELAWARE (BB28), model, 66
 on SS TANNENBERG, full-scale, T-91
 procedure for, 505
 Propeller thrust, deduction of, 428
 measurement of, T-58, T-59
 Propellers, cavitation tests on, model, T-9, T-24
 contra-rotating, T-214
 controllable-pitch, on DAHLGREN (DD187), full-scale, R-338
 cycloidal, trials conducted, full-scale, 649
 trials conducted, full-scale and model, 678
 design and manufacture of model, at model basins, 290
 efficiency of, 61
 interaction of, with hull, model, 470
 Kort nozzle for, 656
 mass moment of inertia of, 307
 Moldwood, R-206
 oppositely rotating, T-214
 partly submerged, on sea-sled, model, R-132
 regenerative, tests of model of, 27
 scale effect on, model, 660
 screw, cavitation on, T-46
 singing of, T-123
 theory of, T-36
- Propellers [Continued]
 thrust distribution in, T-134
 torque on, 513; T-36
 vibration measurements of, 649
 Propelling machinery, vibration in, full-scale, 518, 547, 551
 Propulsion, as affected by shaft struts and spectacle frames, 256
 by wind rotors, 108
 components of, scale effect on, T-68
 efficiency of, 147
 of battleships, model, 429
 of destroyers, full-scale and model, 390
 of SALINAS (AO19), full-scale, 350
 of ships, economic, T-34
 in shallow water, model, 640
 power for, estimate of, 132
 vibration in machinery for, full-scale, 518, 547, 551
 Propulsion tests, turbulence-stimulating devices for, model, 662
 Propulsive performance, with bosses, full-scale and model, 403
 with struts, full-scale and model, 403
 PT boats. See Patrol vessels.
 Publications. See Reports.
 Puget Sound vibrograph, calibration and performance of, 693
 Pump design, analysis of, 621
 Putty gage, 563
- QUARTZ gage, for measuring underwater explosion pressures, 523
 Quartz plates, in transmitters, T-148
- REED gage, 563
 design of, 654
 performance, 603
 record analysis, 603
 theoretical study of, 613
 Reflecting wall, wave destruction at, 296
 Reinforced concrete, effect of bombs on, T-165
 Reinforced tubes, under external pressure, 262
 Relaxation oscillations, 564
 Remodeling fighting ships, T-82
 Reports, of David Taylor Model Basin, index of, 597
 preparation of, 616, 754, 755

SUBJECT INDEX

Reports [Continued]

typing and layout of, R-225

Rescue chamber, hydrostatic pressure tests on,
model, 315

hydrostatic pressure tests on, YRC-6, 631

strength of, model, 315

strength of YRC-6, 631

towing of, model, 288

Rescue work, air-sea, homing device for, 659

Resin, for embedding, 625

Resistance, effect of condenser scoops on,
model, R-43

effect of restricted channel on, 460

effect of roughened hull on, model, T-67

effect of shallow water on, model, 408, 414,
640

form, of ships, model, 392

frictional, 193, 227, 267, 275, 333

determination of, methods of, 663

due to lapped butts, 73

due to temperature, 267, 333

effect of roughness on, 729

effect of transverse curvature on, 689,
726, 729

equations for, 267

reduction of, by hull design, model, 117

research progress report for ATTC, 726

theory for smooth flat plate with turbulent boundary layers, 726

minimum, in hulls, T-69

of armor, 24, 463

of battleships, model, 429

of body of revolution, 726

of bombs and fuel tanks, reduction of, T-215

of cable for towing, 418, 666

of current-indicator buoys, model, 667

of hull, stepped-type, model, 669

of hydraulically-rough surfaces, 726

of motor boats, V-bottom model, R-35, R-47

of plates to underwater explosions, 610, 611

of ships, in canal locks, model, 189

in shallow water, T-56, T-84

of steel, to shock loads, R-30

of structures, to explosive load, R-30

of towed targets, model, 595, 630

of trawler models, T-75

of 2-foot model submitted by Prof. K. Davidson, 333

Resistance [Continued]

of water-filled cylinder under pressure, T-186

prediction of, by cavitating method, 668

reduction of, by air film, R-131

residuary, of ships, 392

viscous and wave, separation of, 772

wave, of immersed body of revolution, 758;
T-234

of ships, 710

Resistance coefficients, tabulation of, 576

Resistance distant-reading apparatus, 340

Resistance gage, 523

See also Strain gage, wire-resistance.

Resistance-test data, analysis of, 686

method of calculating effective horsepower
of ships from, 576

Resistance tests, effect of turbulence stimulators on, 724

turbulence stimulators for, 662, 726

Resonance, nonlinear, 558

Resonant-bridge carrier system, for condenser-type pressure gage, 625

for condenser-type pressure gage, instruction manual for, 680

for measurement of capacitance changes, 626

Response, of ball-crusher gage, 751

of floating targets, to underwater explosions,
749

Restricted channel, effect of, on resistance,
460

performance of model ships in, 579, 601

Restricted channel tests, for the Panama Canal,
579, 601

Retardation of vessel after launching, R-24,
R-27; T-100, T-105, T-182

Reynolds numbers, influence on cavitation, T-233

in relation to model ship tests, 663; T-194

Rigging insulators, fiberglass micarta, tensile tests of, 593

porcelain, tensile tests of, 587

Rigid-frame knees, strength of, R-53

Rigid-frame models, tests of, R-63

Ring, elastic stresses in, T-226

with radial elastic support, theoretical and experimental investigation of, 704

Ring dynamometer, development of, 599

Ring-type pickup extensometer, T-164

River vessels, Yangtze, model tests of, 586

SUBJECT INDEX

- Robot II camera, lighting banks for, 688
- Roll recorder, 116
- Roll stabilization, power cost of, on CONTE
DI SAVOIA, full-scale, 430
- Rolling, damping of, model, 442
factors affecting, 348
in waves, 301, 303
measurement of, model, 433
of cruisers, model, 270, 295
of proposed 1935 battleship hull, 374
reduction of, model, R-130
testing of models in, 433
- Rolling experiments, on aircraft carriers,
model, 8, 13, 18
on battleship, model, 6
on crane ship, model, 69
on passenger liner, model, 7
- Roof designs, comparison of, T-116
- Rosette. See type of rosette, e.g., Strain-
rosette.
- Rotating shafts, measurement of stresses in,
R-54
- Roughened ship model, tests with, T-67
- Roughness, effect of bottom paint on, 789
effect on skin friction resistance, 729
- Roughness allowances, determination of, 576,
663
with Schoenherr friction formula, R-56
- Roughness recorder, TMB, 726
- Rubber band, for displacement gage, 651
- Rudder forces, calculation of, T-52
- Rudder tests, for cruiser model, 214
for FARRAGUT (DD348), full-scale and model,
397
- Rudders, comparative performance of, on
SALINAS (A019), full-scale, 350
design of, T-83
horizontal stern, with Submarine S3, model,
R-133
resistance of, with PATOKA (A09), model, 268
- Rupture, of steel plates, 611; R-265, R-276
- RUSSELL (DD414), noise survey of, full-scale,
R-19
- SAFETY** harness, for aircraft pilots, strength
of, 633
- ST. LOUIS (CL49), noise survey of, full-scale,
R-7
- ST. LOUIS (CL49) [Continued]
service strain on, full-scale, 467, 468
- SALINAS (A019), natural frequency of, full-
scale, 263
propulsion and steering of, full-scale, 350
wind effect on, model, 345
- SALT LAKE CITY (CA25), rolling characteristics
of, model, 295, 685
- SAN FRANCISCO, strain measurement on, full-
scale, T-11
vibration, acceleration, and wave measurements
on, full-scale, T-26
voyage for stereophotogrammetric wave research,
T-204
- SANTA ROSA, analysis of standardization trial
data for, 363
wind effect on, model, 362
- SÃO PAULO, mast vibrations on, full-scale, 10
- Scale effect, in model ship tests, T-68, T-194
on model propellers, 660; T-37
on self-propelled models, 730, 731
- SCHARNHORST, launching data for, full-scale and
model, T-100, T-105
- Schlieren method of photography, for recording
explosion phenomena, T-121, T-156
- Schoenherr and Froude frictional constants
compared, 657, 729
- Schoenherr friction formula, advantages of,
663, 729
for calculating effective horsepower of ships,
576
roughness allowance with, R-56
- Scoop, condenser, tests of, model, 384
water-spout, for planing float, 768
- Scouts and destroyers, cavitation in, full-
scale and model, 110
- Scratch gage, 468; T-13
- Screens. See specific type, e.g., Air-bubble
screen.
- Sea-sled, partly submerged propellers of,
model, R-132
- Sea waves. See Wave.
- Seaplane floats, model, 2, 3, 9, 12, 21 to 23,
30 to 32, 35, 36, 38, 40, 43, 44, 49, 53,
59, 60, 63, 65, 67, 68, 72, 75, 76, 80,
81, 84, 85, 87, 88, 100, 103, 105, 113,
123, 124, 127, 129, 131, 133 to 137, 141,
143, 144, 146, 148, 151, 152, 155, 156,

SUBJECT INDEX

Seaplane floats [Continued]

158, 160, 162, 163, 165, 168 to 170, 172 to 174, 178 to 181, 184 to 186, 195, 196, 201, 203, 204, 208, 212, 220, 224, 228, 238, 243, 247, 251, 254, 257, 258, 266, 281, 284, 300, 302, 306, 308, 313, 314, 320 to 322, 324, 327, 337, 338, 342, 346, 347, 349, 351 to 353, 355, 357 to 359, 361, 364, 365, 367 to 369, 373, 378, 379, 383, 386, 388, 393, 394, 399, 400, 404, 406, 409, 413, 415, 419, 436, 437, 444, 451, 454, 465

See also Hydrofoils; Sea-sled.

Seaplane hulls, model, 5, 11, 16, 39, 46, 47, 51, 70, 79, 89, 90, 92 to 95, 97 to 99, 102, 104, 107, 111, 120, 138, 139, 150, 154, 157, 161, 164, 165, 171, 175, 177, 182, 188, 192, 197, 202, 209, 211, 213, 215 to 218, 221, 223, 229 to 237, 239 to 242, 244 to 246, 248, 249, 253, 255, 257, 258, 274, 279, 300, 302, 306, 308, 310, 311, 313, 314, 320, 321, 324 to 326, 330, 335, 337, 342, 343, 346, 351, 352, 355, 368, 373, 376, 377, 380, 381, 388, 389, 391, 401, 405, 407, 409 to 412, 416, 417, 420, 423, 425 to 427, 431, 432, 434, 439, 443, 448, 455, 456, 461, 462, 464, 669

See also Sea-sled.

Seaplanes, list of models tested, 50
model tests for, 145

Seatrain, model tests of, 747, 747A

Self-propelled models, British method of testing, T-127

scale effect on, 730, 731

Sensitization of polyvinyl alcohol, as coating for printing plates, T-179

Separation of drag (resistance), by wake survey, 772

Service measurements, on aircraft, T-211
on ships, T-211

Service strain tests, on hull structure, full-scale, 467

technique and procedure, full-scale, 468

Shaft bearings, friction in, 360

reduction of vibration in, T-39

Shaft bossing, on HAMILTON (DD141), vibration tests on, full-scale, 305

Shaft horsepower of ships. See specific ship or model test.

Shaft stresses, circuits for measuring, R-187
in submarine chaser, full-scale, R-187

Shaft struts, effect of, on propulsion, 256

Shallow water, effect of, on performance,
model, 640

effect of, on resistance, 408, 414, 460; T-56,
T-84

wave of translation in, 408

Shapes. See Bodies.

Sharp, Geo. G., fast cargo vessel design, 759
passenger-cargo vessel design, 702

Shear, of stiffened plates, T-31

Shear tests, on flight deck planking, 736

Shekleton's report on underwater explosions,
479

Shell shock, T-155

Shells, eight-oared, tests of, full-scale and
model, 283

thin, elastic deformation of, 606

elastic theory of, 606; T-238

Shimmer method of photography, for recording
explosion phenomena, T-121, T-156

Ship calculations, graphic integrator and differentialiator, T-124

Ship data, reduction and analysis of, 649

Ship design, model, 298

Ship models, effect of size on predicted effective horsepower, 618

effect of transverse curvature on frictional resistance of, 689

essential specifications for, 652; R-334

geometrically similar, towing tests of, 615

liberty-ship series, towing tests of, for

ATTC, 615

self-propelled, conditions for testing, T-127

wax, manufacturing of at TMB, 728

wood, building of, at U.S. Experimental Model Basin, 323

wooden versus paraffin, 319

Ship plates, buckling of, T-66

iron and steel, 474

transition temperature of, in notch-tensile tests, 709

Ship stabilization. See Roll stabilization.

Ship trials, methods and equipment, 476

See also Standardization trials; Tactical data; Turning tests.

SUBJECT INDEX

- Shipboard Fighter BS1, experiments with model of, 33
- Shipbuilding, theory of elasticity in, T-2
theory of strength in, T-17
- Shock. See Impact; Shell shock.
- Shock displacement gages, 563
- Shock gage, reed, design of, 654
reed, performance, 603
theoretical study of, 613
- Shock measurement, T-141
instruments for, 563, 720
evaluation of, 720
with ball-crusher gage, 751
with crystal accelerometer, R-246
with reed gage, 603
- Shock motion, response of system of single degree of freedom to, 613
- Shock pressure tube, for pressure gage calibration, 753
- Shock testing machine, motions and stresses in, 536
- Shock waves, in air, photography of, 525
in liquids and solids, propagation of, T-139
in water, measurements of, T-213
photographic study of, R-77, R-203
protection against, R-49
- Silver-plating, Brashear process, R-267
- Similitude, laws of, in model tests, T-194
- SIMON BOLIVAR, propulsion data for, model, T-68
tests on, model, T-67
- Singing of ship propellers, T-123
- Singularities, method of, for determination of forces and moments on a body in potential flow, T-241
- Sink. See Source-sink.
- Sinkage of ships in canals, 601
- Sinkage of ships in shallow water, model, 640
- Six-component dynamometer, for testing ship appendages, 692
- Skeg, effect of on resistance of high-speed target, 641
on WASHINGTON (BB56), natural frequency of, full-scale, R-22
- Skin friction, 193, 227, 267, 275, 333
effect of roughness on, 729
- Slip stream. See Flow.
- Slotted tensile specimens, study of, 622;
R-243, R-271
- Slow-motion camera, T-149
- Smooth-bottom hull, comparative tests of, model, 669
- Sonar dome, forces and moments on, measurement of, model, 692
pressure distribution on, 606
- Sound, insulation against, T-99
underwater. See Underwater sound.
- Sound dome. See Sonar dome.
- Sound waves, anomalies in propagation of, T-41
- Source-sink envelope, of a torpedo form, 271
- SOUTH DAKOTA (BB57), vibration in propelling machinery, 547
- Spark camera, high-speed, T-207, T-213
- Spark-flash apparatus, AEG, T-190
- Sparks, electric, brilliance and duration of, T-161
- Spectacle frames, effect of, on propulsion, 256
- Speed, uniform, of streamlined falling body, R-42
- Speed data, for NEW MEXICO (BB40), full-scale and model, R-139
- Speed meter, for airplane catapult, 126
- Sperry roll and pitch recorder, 116
- Spherical shell, elastic theory of, T-238
- Square-wave generator, R-201
- SR-4 strain gage. See Strain gage, wire-resistance.
- Stability, dynamic, of midget submarine, German V-80, from wind-tunnel tests, T-227
elastic, of tee stiffeners, 457
of body falling through fluid, R-42
of ships, method of determining, T-202
of stiffened plates, 402 [T-8]
of trawler models, T-75
- Stability on course, theory of, T-180
- Stability problems, in compressed plates, T-79
in thin cylindrical shells, T-33
treatment of, T-73
- Stability tests, on current-indicator buoys, model, 667
- Stabilization, of CONTE DI SAVOIA, power cost of, full-scale, 430
of cylinder towed through fluid, R-68
of ships, full-scale, T-44
by vanes, model, R-130
- Standardization trials, on BLACK FALCON, full-scale, 344

SUBJECT INDEX

Standardization trials [Continued]

on CLAIRTON, reduction of data from, full-scale, 317

on COLORADO (BB45), full-scale, 140

on DAHLGREN (DD187), full-scale, R-338

on destroyers, full-scale, 19

full-scale and model, 28

on LSM458, full-scale and model, 678

on MARYLAND (BB46), full-scale, 140

on minesweeper, German EMS-1, full-scale, 649

on SANTA ROSA, full-scale, 363

on SS ESSO SUEZ, full-scale and model, 750

on SS INDEPENDENCE, full-scale and model, 771

on SS PENNSYLVANIA, full-scale and model, 748

on WEST VIRGINIA (BB48), full-scale, 140

on WORDEN (DD352), full-scale and model, 403

Static load, on elastic structures, 507

Steel, clad and unclad, weld test of, 642

for lightweight machine tools, T-101

high-tensile, plastic strain and deflection tests on, R-142

medium, brittle failure of, R-207, R-265

plastic strain and deflection tests on, 503; R-142

modulus of elasticity of, 318

plastic behavior of, R-142, R-243

resistance of, to shock loads, R-30

special-treatment, plastic strain and deflection tests on, R-142

welding of, 642; R-123, R-249

structural, toughness of, 622

See also Iron.

Steel plates. See Plates.

Steel welding, of models, R-347

Steering, of SALINAS (AO19), full-scale, 350

of ships, effect of thrust direction and position on, model, R-216

theory of, T-55, T-180

twin-screw ship, model, 331

Steering control, of ex-German Submarine U111, full-scale, 41

of submarine, cruiser, model, 86

fleet, model, 115

German, model, 64

Steering control [Continued]

of submarine, mine-laying, model, 101

03-10 Class, model, R-136

1600-ton, model, R-134, R-135

1750-ton, model, R-137

R1-20 Class, model, 112

S3, model, 17; R-133

S48-51 and 159-162 Class, model, R-138

SS163-171 Class, model, 20, 26

V1-3 Class, model, 130

V5-6 Class, model, 128

Steering-gear data. See Tactical data.

Steering maneuvers, investigation of ships on, T-42

Stepped-type hull, comparative tests of, model, 669

Steps, longitudinal location of, on model, 435

pointed, in airplane floats, model, 438

Stereophotogrammetry, wave research by, T-204

Stiffeners, effect of, on plates, T-31, T-78

strength of, 452

tee, compressive strength of, 445

elastic stability of, 457

Stiffening rings, effect of, on cylindrical shells, 396

Strain, plastic, formulas for, 503

plastic, on steel plates, 532; R-142

service, on BAGLEY (DD386), full-scale, R-6

on hull structures, full-scale, 467

technique and procedure of testing, 468

See also Stress-strain.

Strain characteristics, of wire, R-212

Strain distribution, in fatigue test, 474

Strain gage, 563

calibration of, 468

comparative tests of, R-282

Experimental Model Basin, 292

functions and types of, 468

hand, 285, 292

portable, 272, 292

pressure, 523; R-157

wire-resistance, 278, 627, 645; R-212, R-213, R-254, R-351; T-164, T-183

for measuring large strains, 570

for testing ship appendages, 692

Strain indicator, Type 1A, carrier type, 565

Type 1A, carrier type, manual for, R-351

Type 5A, 645

SUBJECT INDEX

Strain indicator [Continued]

Type 13A, manual for, 608

Type 15K160, carrier type, manual for, 648

Strain measurement, on BAGLEY (DD386), full-scale, R-6

on CL51-54, model, R-9

on diesel engine, full-scale, R-154

on SAN FRANCISCO, full-scale, T-11

on ships underway, full-scale, T-97

on submarine rescue chamber, model, 315

YRC-6, 631

on valves and fittings, high-pressure steam, 596, 638

low pressure water, 637

with ring-type pickup, T-164

with wire-resistance strain gages, 570

Strain-rosette data, 45°, graphical solution of, 600

Streamlines. See Flow.

Strength, in ships, T-2, T-17

of materials, 294 [T-4]

of submarines, T-38

Stress, distribution of, in beams, curved, T-228

dynamic, measurement of, T-65

elastic, T-103

in thin-walled tubes, T-226

formula for, T-28

in beams, 529

in boiler heads, T-143

in knees of frames, 529

in plates, T-78

in rotating shafts, R-54

in shock testing machine, 536

in thin-walled tubes, T-33

lines of, 291

notch, T-74

on box girders, T-28

on ship members, T-92

on ships underway, full-scale, T-97

tangential, in thin-walled tubes, T-226

unit, 294 [T-4]

See also Shear; Tension.

Stress-strain characteristics of formica, R-74

Stressed plate, load capacity on, T-76

Striation phenomenon, 573

Stroboscope, 563

AEG light-flash, T-190

Structural models, multidirectional loading of, frame for, 599

Structural steel, toughness of, 622

Structures, elastic, impact on, 481

elastic, static loads in, 507

resistance of, to explosive loads, R-30

Struts, effect of, on steering of twin-screw ship, 331

effect of, on turning, 397, 403

Stuffing boxes, friction in, 360

Submarine, bulkheads for, model, 280

cruiser, steering control of, model, 86

design of. See Cylindrical shells, tubes, etc.

fleet, steering control of, model, 115

German, U181-190, steering control of, model, 64

ex-, U111, steering control of, full-scale, 41

midget, German V-80, dynamic stability of, from wind-tunnel tests, T-227

O3-10 Class, steering control of, model, R-136

1600-ton, steering control of, model, R-134, R-135

1750-ton, steering control of, model, R-137

R1-20 Class, steering control of, model, 112

S3, steering control of, model, 17; R-133

S48-51 and 159-162 Class, steering control of, model, R-138

S163-171 Class, steering control of, model, 20, 26

SM1, mine-laying, steering control of, model, 101

steering control of, model, 17, 20, 26, 41, 86, 101, 112, 115, 128, 130; R-133 to R-138

strength of, model, T-38

submerged navigation of, T-197

V1-3 Class, steering control of, model, 130

V5-6 Class, steering control of, model, 128

See also Body of revolution.

Submarine chaser, ex-, tests of alternate sterns, model, 658

stresses in shaft of, full-scale, R-187

Submarine hulls, fatigue strength of, T-189

Submarine periscope. See Periscope, submarine.

Submarine rescue chamber. See Rescue chamber.

Subsurface camera, lighting banks for, 688

SUBJECT INDEX

- Suction, bank, on ships in canals, 601
- Suggestions, by Naval establishment personnel, R-350
- Sun Shipbuilding and Dry Dock Company,
passenger-trailer ship, maneuvering tests of, 698
- passenger-trailer ship, model tests of, 578, 580, 634, 639
- twin-screw, wake survey on, model, 722
- Seatrain, model tests of, 747, 747A
- tanker, model tests of, 691, 691A, 691B
- Supersonic waves, in liquids, T-147
- measurement of, T-142
- Supersonics, in colloid research, T-140
- Surface friction, tests for, 14
- Suspended body, orientation of, R-37
- Sweep oscillator, 483
- Sweep wire passing device for mine mooring cables, model, R-143
- Swell, reference scales for, R-221
- Synchronism of ships with waves, 301
- System, plane, elastic stresses in, T-103
- TABULATING**, time-saving method of, R-277
- Tactical data, for destroyer. See specific destroyer.
- for minesweeper, German EMS-1, full-scale, 649
- Tactical trials, methods and equipment for, 476
- Tanker, design T2-SE-A1, model tests of, 594
- design T5-S-DP1, model tests of, 673, 675
- effect of turbulence-stimulating devices on model of, 662
- single-screw, model tests of, 640
- 600-foot single-screw, model tests of, 585, 620
- 630-foot single-screw, model tests of, 691, 691A, 691B
- SS ESSO SUEZ, standardization trials of, full-scale and model, 750
- SS PENNSYLVANIA, standardization trials of, full-scale and model, 748
- 22,100-ton single-screw, model tests of, 650
- 26,000-ton single-screw, model tests of, 653
- 28,000-ton single-screw, model tests of, 646
- 30,000-ton single-screw, model tests of, 696, 696A, 696B
- See also Oiler.
- TAMMENBERG, propeller tests on, T-91
- Target, floating, response to underwater explosions, 749
- high-speed towing, 252
- effect of skegs on resistance of, 641
- maneuverability of, 666
- model of, 125
- revised, towing characteristics of, model, 630
- Series G-40 high-speed sled, forces in tow-line of, full-scale, 584
- Series G-60 high-speed sled, forces in tow-line of, full-scale, 589
- Series G-60 modified, service tests, 707
- towing characteristics of models of, 588, 595
- X-3, service tests, 707
- X-4, service tests, 707
- Taylor Standard Series, new analysis of, 686
- revision of, 686
- Technical-information index, author, 597
- miscellaneous, R-211
- Model Basin reports and translations, 597
- subject, 597
- Technical Mission in Europe. See U.S. Naval Technical Mission in Europe.
- Technical reports, documentation of, T-181
- preparation of, 616; R-225
- Tee stiffeners, compressive strength of, 445
- elastic stability of, 457
- Telemeter, operation of, 122
- Temperature, effect of, on condenser-type gage, 625
- effect of, on frictional resistance, model, 267
- transition, of ship plates, in notch-tensile tests, 709
- Templates, photographic method of printing, R-313
- Tensile specimens, slotted, study of, 622; R-243, R-271
- Tensile strength, of clad and unclad butt welds, 642
- of flat plates, 446
- of liquids, 712
- of ship members, T-92
- Tensile tests, notch, transition temperature of ship plate in, 709

SUBJECT INDEX

Tensile tests [Continued]

on lightweight anchor, R-188, R-349
 on longitudinals of CL51-54, model, R-9
 on rigging insulators, fiberglass micarta, 593
 porcelain, 587
 on welded joints, R-347
 on welded members, 642; R-123, R-249
 Tension, in cable for towing, 422, 533, 595, 666, 717
 in cable for towing, tables for, 687
 in loop of cable towed through fluid, 422
 in wire, change in resistance by, T-183
 Test station, aboard NJASSA, T-63
 Testing frame, for multidirectional loading of models, development of, 599
 Tetaryl, in underwater explosions, R-254
 Thrust, effect of direction and position on steering, R-216
 Thrust deduction of propellers, methods of determining, 428; T-62
 Thrustmeter, calibration of, 370
 development of, 265
 Thyatron, 483; R-51, R-62
 Tide, correction for, in standardization trial data, full-scale, 317
 Time-delay circuit, 525
 Time-saving method of tabulating, R-277
 Time strength, of materials, T-104, T-122
 Timing device, for high-speed camera, R-318
 TIRPITZ, model tests for launching of, T-100
 TMB chronograph, operating manual for, 763
 Toepler's shimmer method of high-speed photography, T-121, T-156
 Toroidal shell, elastic theory of, T-238
 Torpedo, aerial, Guidonia model basin tests, T-196
 Mark 13, wake survey of, 583
 techniques for, T-215
 tests of, against submarines, model, 250
 Torpedo attack, protection against, R-49
 Torpedo boats. See Motor torpedo boats and Patrol vessels.
 Torpedo forms, pressure about, 271
 resistance of, 29
 Torpex, in underwater explosions, R-252, R-304
 Torque, in a-c meter disk, T-130
 on nonrotating propeller, model, 513

Torque converter, for cellulose hydrolyzers, 591
 type "Foettinger," 590
 Torsionograph, 563
 belt-driven, theory of, 581
 photoelectric, T-174
 suitable for high speeds, T-96
 Tourmaline-crystal gage, R-282
 for measuring underwater explosion pressures, 523; R-157
 Towable target, high-speed. See Target, high-speed towing.
 Towboat, river, model tests of, 167, 194, 656
 Towed body, at high speed, theoretical requirements for, 661
 optimum length of cable for, 717
 Towed cylinders. See Cylinders, towed.
 Towed housing, for deep-towed body at high speed, theoretical requirements for, 661
 Towing, cable for. See Cable, for towing.
 high-speed, method for, 666
 theoretical requirements for, 661
 of subsurface camera, 688
 of vessels at sea, full-scale, 71
 Towing carriage, accelerations of, 259
 of Hannover Model Basin, T-216
 Towing carriage (dynamometer) No. 5, wind-drag tests, model, R-344
 Towing characteristics, of targets, model, 588, 595, 630
 Towing Tank Conference, American, 1942 annual meeting, R-72
 American, 1950, reports for, 726, 728-732
 towing tests of liberty-ship series, model, 615
 Towing target, high-speed. See Target, high-speed towing.
 Towing trials, of minesweeper, German EMS-1, full-scale, 649
 Towline. See Cable, for towing.
 Tractor, amphibian (LVT), fatigue test of grousers of, 664
 Trailership. See Passenger-trailer ship.
 Transducers, electrical, 559
 electromechanical, 521
 Transient detector, R-51
 Translation, wave of, in shallow water, 408
 Translations, list of, 597

SUBJECT INDEX

Translations [Continued]

quality of, T-126
 typing and layout of, R-225
 Transmission lines, piezoelectric gages with,
 R-244
 Transmitters, electronic, for underwater sound,
 659
 quartz plates in, T-148
 Transom sterns on destroyers, model, 339
 Transport, attack, NIAGARA (APA87), vibration
 data for, full-scale, 699
 Transverse curvature, effect on frictional
 resistance, computation of, 689
 Trials, ship, analysis of data from, 282, 293
 ship, effect of wind on, full-scale, 264
 technique of, 275 [T-3]
 Trim, effect of, on propulsive efficiency,
 147
 Trochoidal Propeller Corp., tests of TMB
 propeller 3078, 718
 Tubes, reinforced, under external pressure,
 262
 thin-walled, elastic stresses in, T-33,
 T-226
 TUCKER (DD374), service strain on, full-scale,
 467
 Turbine. See Gas turbines.
 Turbine design, analysis of, 621
 Turbulence, in boundary layer, method of
 detecting, 662
 in model basin, hot-wire measurements of,
 726
 Turbulence in water, dye diffusion method for
 measuring, 700
 hot-wire methods for measuring, 592, 670,
 726
 Kolin meter for measuring, 743
 Turbulence stimulators, development of, 726
 effect on boundary layer and resistance of
 ship models, 724
 for model tests, 662, 692, 724, 726
 Turbulent boundary layer, in pressure gradient,
 calculation of, 752
 Turbulent flow, about ship models, 299
 Turning basin, Paris, T-222
 Turning tests, at Paris Turning Basin, T-222
 cruisers CL51-54, model, R-25
 FARRAGUT (DD348), model, 336

Turning tests [Continued]

ice breaker, AGE1-2, model, 745
 passenger-trailer ship, twin-screw, model,
 698
 torpedo boats, model, R-36, R-41
 Turret foundations, design, model, 206, 207
 tests of, full-scale, 261
 Turret stools. See Turret foundations.
 TURTLE, tests for, model, 145
 Twin-screw ship, steering of, model, 331
 Twin-skeg, four-screw battleship, thrust de-
 duction of propellers for, model, 428
 Two-way traffic in a restricted channel, 579,
 601
 Typing and layout of reports and translations,
 instructions for, R-225

UNDERBOTTOM explosion tests, on floating
targets, 749

Underwater explosion tests, of Everdur joints
 in models, R-348
 on floating targets, 749
 Underwater explosions, 480, 489, 511; T-157,
 T-169

bibliography on, 480

damage by, 509

mathematical treatment of, T-209

measurement of pressure from, 479, 523, 527;

R-157

oscillation of gas globes in, T-209

photographic study of, R-39, R-65

protection against, 490, 491; R-177, R-202

research on, R-244, R-248, R-254, R-265,

R-279, R-296

resistance to, 491, 492

resistance of plates to, 610, 611

Shekleton's report on, 479

shock waves from, measurements of, T-213

surface effects caused by, R-252, R-304

under reduced atmospheric pressure, 520

Underwater path, exploration of, with depth
recorder, R-251Underwater photography, lighting equipment for,
688

Underwater pressure gage, 479, 523; R-157

Underwater shock wave, protection against, R-49

Underwater sound, transmitter for, 659

Uniform speed, of streamlined falling body, R-42

SUBJECT INDEX

- Union Oil Company, tanker, single-screw, model tests of, 650
- U.S. Army Engineers, tests of single-screw vessels for, 640
- United States Experimental Model Basin. See Model Basin, U.S. Experimental.
- United States Maritime Administration, AKA prototype, model tests of, 701, 735, 735A, 735B
 design CI-M-AV8, model tests of, 629
 emergency cargo vessel, model tests of, 682, 683, 684, 775
 liberty ship, model tests of, 703
 passenger-cargo vessel, standardization trials of, full-scale and model, 771
 passenger ship, model tests of, 598, 623
 single-screw vessels of, shallow water effect on performance of, model, 640
- S-X-DY design, model tests of, 701, 735, 735A, 735B
 tanker, single-screw, model tests of, 673, 675
- U.S. Maritime Commission. See U.S. Maritime Administration.
- United States Naval Technical Mission in Europe, diary of a member of, R-365
- VALVE**, for mixing steam and water, 219
- Valves, high-pressure steam, from ex-German destroyers Z-37 and Z-39, hydrostatic tests of, 596
 high-pressure steam, hydrostatic tests of, 638
 low-pressure water, hydrostatic tests of, 637
- Vanes, for stabilizing ships, model, R-130
- Variable-pressure water tunnel, 12-inch, propeller-testing procedure, 505
- V-bottom motor boats, resistance of, model, R-35, R-47
- V-bottom torpedo boats, turning tests of, model, R-36
- Velocity, measurement of, by photoelectric time-interval meter, R-214
- Velocity meters, 563; T-141
 evaluation of, 720
- Velocity meters (bar-magnet type), 723
- Velocity of water, development of hot-wire methods for measurement of, 592, 670
 measurement of, by dye diffusion, 700
 with Kolin meter, 743
- Velocity pickups, 563
- Ventilating apparatus, portable, tests on, 52
 tests on, 96, 119, 149, 198, 200, 210
- Ventilation, through deadlights, 190
- Ventilation ducts, for warships, 55
 obstruction in, 56, 91, 149
- Vibration, axial, of propulsion systems, full-scale and model, 551
 damping of, 449; T-39, T-40, T-109
 hull, calculation of flexural modes, 632, 706
 steady-state, calculated by digital process, 715
 measurement of, T-176
 instruments for, 563
 theory and practice of devices for, T-51, T-141
 of destroyer DD141, full-scale, 372
 of hulls. See Vibration, of ships.
 of mast, on SÃO PAULO, 10
 of propelling machinery, full-scale, 518, 547, 551
 of shaft bossing, on HAMILTON (DD141), full-scale, 305
 of ships, calculation of frequency of, 582
 full-scale, 263, 382 [T-7], 395, 699, 762; T-166, T-176
 model 382 [T-7], 395
 pallographic measurement of, T-176
 theory of, 739
 of skegs, on WASHINGTON (BB56), full-scale, R-22
 recorded by scratch process, T-13
 supersonic, dispersion of in liquids, T-147
- Vibration data, for E.J. KULAS, full-scale, 762
 for HAMILTON (DD141), full-scale, 372
 for NIAGARA (APA87), full-scale, 699
 for NORTH CAROLINA (BB55), full-scale, 518
 for USCGC PONTCHARTRAIN (WPG70), full-scale, R-294
- Vibration gage, R-189, R-246, R-267; T-13
- Vibration generator, TMB, construction and operation of, 524
 Losenhausen, 539, 554

SUBJECT INDEX

- Vibration manual, for engineers, R-189
- Vibration neutralizers, for ships, T-12
- Vibration pickups, 563
- Vibration problems, solution of by impedance method, R-226
- Vibration tests, on dynamically loaded ring, 704
- Vibrograph, 563; T-141
- Mare Island, calibration and performance of, 612
- Puget Sound, calibration and performance of, 693
- Vibrometer, 563; T-141
- Victory ship, model tests of, 640
- Virtual mass, for oscillations of ships, method for determining, T-225
- in higher modes of vibration of ships, method for determining, 762
- Visitors, to David Taylor Model Basin, manual for, 569
- Voith-Schneider cycloidal propellers, trials conducted, full-scale, 649
- Voltage regulator, electronic, 502; R-51
- Vortices, separation of, T-184
- WAKE**, control of, T-35
- experimental definition of, T-60
- measurement of, with ship models, T-57, T-72
- of submarine periscope models, R-152
- Wake survey, for separation of viscous and wave resistance, 772
- of torpedo, Mark 13, 583
- War vessels, remodeling of, T-82
- WARE. See CHARLES R. WARE.
- WASHINGTON (BB56), launching of, model, R-24
- propeller machinery of, vibration of, full-scale, 518
- skag frequency of, full-scale, R-22
- Water, effect of air content on cavitation in, 575, 770
- heating of, by mixing with steam or hot water, 219
- projectiles fired through, T-107
- velocity of currents, in basins of Experimental Model Basin, 304
- Water brake, type "Roettinger," 711
- Water samplers, calibration of, 655
- Water-spout scoop, for planing float, 768
- Water tunnel, 12-inch variable-pressure, propeller-testing procedure, 505
- variable-pressure, at Netherlands Model Basin, T-98
- Waterproofing, neoprene, method of applying to strain gages, 627
- Wave, ocean, instrument for measuring and recording, T-153
- ocean, loading of a ship in, T-11
- production of, in model tests, T-136
- Wave destruction, at reflecting wall, 296
- Wave effect, in noise-isolation mounts, 766
- Wave generator, R-201
- Wave measurement, in high seas, T-26, T-204
- Wave of translation, in shallow water, 408
- Wave profiles, delineation of, 535
- Wave research, by stereophotogrammetry, T-204
- Wave resistance, analysis of, 710
- on immersed bodies of revolution, 758; T-234
- Wavemaker, at Hamburg Model Basin, T-136
- Wax models, manufacture of at TMB, 728
- Weather, reference scales for, R-221
- Weber's law, in relation to model ship tests, T-194
- Wedge gage, for measuring bending, T-211
- Welded joints, deformation in, T-47
- tensile tests of, R-347
- Welding, electric arc, in shipbuilding, T-16
- of small-scale models, R-347
- use of Everdur brazing in, R-348
- of thin metal sheets, method of, T-178, T-187
- toughening process, T-150
- Welding tests, 642; R-123, R-249
- Welds, off-center, effect on girders, T-93
- WEST VIRGINIA (BB48), standardization trials of, full-scale, 140
- White-line printing, process of, T-43
- WICHITA (CA45), noise survey of, full-scale, R-15
- Wilhelmshaven Navy Yard, launching of large ships at, T-182
- Wind, correction for, in standardization trial data, full-scale, 317
- effect of, on CLAIRTON, model, 334
- on cruisers, model, 276
- on HAMILTON (DD141), model, 312
- on SALINAS (AO19), model, 345

SUBJECT INDEX

Wind [Continued]

- effect of, on SANTA ROSA, model, 362
 - on ship trials, full-scale, 264
 - inclining moment of, on patrol boats, model, 15
 - reference scales for, R-221
- Wind deflector, for pilot-house windows, 199
- Wind gage, for ship speed trials, 282
- Wind rotors, propulsion by, 108
- Wind tunnel, construction of, 166
 - high-velocity, jet drive for, T-219
- Wind-tunnel tests, on towing dynamometer No. 5, model, R-344
- Wire, change of resistance in, R-212; T-183
 - cut by projectiles, T-107
 - hot, for velocity measurements in water, 592
- Wire-resistance strain gage. See Strain gage, wire-resistance.
- WOLF, elasticity measurements on, full-scale, T-45
- Wood planking, for flight deck, strength tests on, 736
- Woods Hole Oceanographic Institution, current-indicator buoy, resistance and stability tests, model, 667
- WORDEN (DD352), standardization trials of, full-scale and model, 403
- YANGTZE River vessels, model tests of, 586
- YP vessels. See Patrol vessels.
- ZINC chromate paint, effect on frictional resistance, 789