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BIBLIOGRAPHY OF THE AIR CUSHION
VEHICLE TECHNOLOGY

with a

Guide for Design and Analytic Engineers

by

T. Bratanow

November 1, 1967

Prepared for the
Office of Naval Research
Department of Navy
Washington, D.C.

under
Contract Non--4201(00)
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PREFACE

The field of air cushion vehicle technology has potential for growth. It is hoped that this bibliography will be an aid to theoretical and experimental efforts which are aimed at solving the outstanding problems.

The collection contains approximately 1250 references of a wide range of theoretical and experimental investigations. Because of the present lack of suitable textbooks in the field, it can serve as a guide for design and analytic engineers. The list of entries is extensive, but there is no claim that it is complete. Included is a small amount of related work on hydrofoil and submarine research for supplemental information. An effort has been made to present accurate information and to keep the presentation uniform whenever possible.

The author would like to express his sincere thanks to Mr. Charles Cassil for supervising the research and preparation of the bibliography. The author is also grateful for the assistance of Messrs. Jacob Abogye and Gemuh Akuchu, who contributed significantly in presenting accurate information.

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LIST OF ARTICLES

ALPHABETICALLY BY AUTHORS

1. Abkowitz, M. A., Lectures on Ship Hydrodynamics, Steering and Manoeuverability, Hydro- and Aerodynamics Lab., Denmark, Report No. Hy-5, May 1964.
2. Acosta, A. J., Hydrodynamics of Turbo Machines, California Institute of Technology, Report 79.9, Nov. 1965.
3. Adams, M. C., Sears, W. R., Slender Body Theory, J. Aero. Sci. 20, No. 2, Feb. 1953.
4. Aframeyev, E. A., The Small Hydrofoil Prototype to the Stryela, Hovering Craft and Hydrofoil, August 1966.
5. Alekseyenko, A., Practical Experience with the Power Unit of the Hydrofoil Motorboat Vikhr, Hovering Craft and Hydrofoil, Oct. 1964.
6. Alexander, A. J., The Effect of Forward Speed on Hovercraft with Particular Reference to Cushion Breakdown, Hovering Craft and Hydrofoil, Vol. 2, No. 6, 1963.
7. Alexander, A. J., The Effect of Forward Speed on Hovercraft with Particular Reference to Cushion Breakdown, Hovering Craft and Hydrofoil, Vol. 3, No. 19, 1964.
8. Alexander, A. J., The Effect of Forward Speed on Hovercraft with Particular Reference to Cushion Breakdown, Proc. of Res. Symposium on ACVs held at University College, Swansea, July 21-23, 1964, pp. 10-12.
9. Alexander, A. J., Incidence Effects on a Static Hovercraft, NPL Ship Div. Ship Report 62, Jan. 1965.
10. Alexander, A. J., The Momentum Equation for a Static Hovercraft at Zero Incidence, R. Aero. Soc. Journal, Vol. 10, No. 662, p. 363, Feb. 1966.
11. Allen, H. J., General Theory of Airfoil Sections Having Arbitrary Shape or Pressure Distribution, NACA, Report No. 833, 1945.
12. Altmann, R., Model Tests of a Twenty-Ton Hydrofoil Sled, Hydronautics, Incorporated Technical Report 498-1, Nov. 1966.
13. Altmann, R., High Speed Towed Hydrofoil Sleds, Paper No. 67-354, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, May 22-24, 1967.

14. Anderson, B. W., Second Progress Report of Navy Contract Nonr-3173(CO), GEM Stability and Control Study, AiResearch Manufacturing Company of Arizona, Report AP-5025-R, Nov. 1960.
15. Anderson, B. W. and Boyle, R. V., Progress Report of Contract Nonr-3173 GEM Control Systems Study, AiResearch Report AP 5047-R, April 1962.
16. Anderson, B. W., Boyle, R. V. and Becker, O. A., Progress Report of Contract Nonr-3173, GEM Control Systems Study, AiResearch Manufacturing Company of Arizona, Report AP-5061-R, December 1962.
17. Anderson, S. B., An Examination of Handling Qualities Criteria for V/STOL Aircraft, NASA-TN-D 331.
18. Ando, S. and Miyashita, J., Comments on Aerodynamic Drag of Ground Effect Machines, Aerospace Engineering, Vol. 20, No. 11, November 1961.
19. Ando, S., Note on Peripheral Jet GEM Propelled Through Forward Inclination, Trans. Japan Soc. Aerospace Sci., 1961, Vol. 4, No. 6, pp. 96-98.
20. Ando, S., Preliminary Theory on Trim of GEMs with Peripheral Jet, Trans. Japan Soc. Aerospace Sci., 1962, Vol. 5, No. 7, pp. 20-32.
21. Ando, S., Miyashita, J., and Terai, K., Summary of the Model Tests for Simple Ram Wing, Kag-s. Proc. of Res. Symposium on ACVs held at University College, Swansea, July 21-23, 1964, pp. 53-65.
22. Anscombe, A. and Williams, J., Some Comments on High-Lift Testing in Wind Tunnels with Particular Reference to Jet-Blowing Models, J. Aero. Soc., August 1967.
23. Aoyagi, K. et al., Aerodynamic Characteristics of a Large-Scale Model with a High Disk-Loading Lifting Fan Mounted in the Fuselage, NASA-TN-D 775.
24. Arcand, L., Evaluation Study of Waterjets for SES, Destroyers, and Hydrofoils, Pratt-Whitney GP-64-126, January 1965.
25. Arcand, L., Waterjet Propulsion for Small Craft, Paper presented to SNAME, Southwest Section Meeting, Miami, Florida, May 26-28, 1966.
26. Arcand, L., Water Jet Propulsion of Small Craft, Pratt-Whitney Report FR-1813, April 1966.
27. Arcand, L., Parametric Study of Seajet 12-1 Pump Design, Pratt-Whitney Report FR-1950, July 1966.

28. Arcand, L., and Comolli, C. R., Water Jet Propulsion for High Speed Ships, Paper No. 67-350, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, 22-24 May 1967.
29. Archbold, F. G., A Submarine Design for Work and Research, Beaver Mark IV, Paper No. 67-371, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, 22-24 May 1967.
30. Arentzen, E. S., and Mandel, P., Naval Architectural Aspects of Submarine Design, SNAME, No. 29, Nov. 1960.
31. Ashill, P.R., Kawasaki KAG-3, Air Cushion Vehicles, Flight Int., 27 Feb. 1964, p. 29.
32. Ashmead, F. A. H., Practical Experience with Ground Effect Machines, AIAA/CASI/RAeS Ninth Anglo-American Conference, 16-18 Oct. 1963.
33. Auslaender, J., The Linearized Theory for Supercavitating Hydrofoils Operating at High Speed Near a Free Surface, Hydronautics Incorporated Technical Report 001-5, June 1961.
34. Bachman, W. C., Gibbs and Cox, Inc., Comments on Proposed Development of Surface Effect Ships for Ocean Commerce. Letter to J. W. Sawyer, Chairman, Propulsion Panel (SESOC 94), 10 Dec 1965.
35. Bailey, A. B., Data Report for the 1/5th Scale Avrocar Model Tests, (Part I), Avro Aircraft Ltd., Report No. AVRO/SPG/TR 265.
36. Bailey, W. S., Nilson, E. N., Serra, R. A., and Zupnik, J. F., Gas-Particle Flow in an Axisymmetric Nozzle, ARS Journal No. 31, June 1961, pp. 793-798.
37. Balje, O. E., A Study on Design Criteria and Matching Turbo-Machines, T.ASME, Vol. 84, Series A, 1962, p. 107.
38. Barandiaran, M., Contributions to Nonlinear Differential Equations, Ph.D. Thesis, Nucl. Eng., Mass. Inst. of Technology, Cambridge, Massachusetts, 1963.
39. Barber, G. R., Preliminary Study of Hover Performance of a Ram Wing GEM, DTMB Aero Lab--1015, Oct. 1962, p. 43.
40. Barkley, R. L., Is the Hydro Being Foiled? Hovering Craft and Hydrofoil, August - September 1964.

41. Barnes, A. G., The Application of Simulation Techniques to Ground Effect Machines, Hovering Craft and Hydrofoils, July 1964.
42. Barratt, M. J., The Wave Drag of Hovercraft, J. of Fluid Mechanics, Vol. 22, Part 1, 1965.
43. Baumann, H., & Murac, R., Wind Tunnel Measurements on a Model of an Air Cushion Vehicle, Schweiz, Bautz. 81, No. 11, pp. 167-173.
44. Beason, C. and Buckle, A. K., Hydrofoil Vessels, Lloyd's Register of Shipping, Paper No. 1, Session 1965-66.
45. Beason, C. and Buckle, A. K., Hydrofoil Vessels, Hovering Craft and Hydrofoil, March 1966.
46. Ben Chie Yen, Patterns of Flow Under a Two-Dimensional GEM, State University of Iowa, 1962.
47. Benford, H., SESOC Manning Problems, Letter Report to Operation Panel, SESOC Committee (SESOC 28), Nov. 24, 1965 .
48. Benford, H., Potential Economics of the Surface Effect Ship in Ocean Transport, A Brief Approximation, Department of Commerce, SESOC Committee (SESOC 64), Dec. 18, 1965.
49. Benford, H., The Practical Application of Economics to Merchant Ship Design, Marine Technology, January 1967.
50. Bennison, M. J., Hovercraft Fans, Air Cushion Vehicles Flight Int., 25 August 1966, p. 31.
51. Bentley, J., Full of Air, Air Cushion Vehicles, Flight Int., May 1966, p. 61.
52. Bentley, J., How the Electricity Board Embraced Air Cushions, Added Lightness to a Heavy Transporter, and Thereby Eased the Load, Air Cushion Vehicles, Flight Int., 23 February 1967, pp. 20-21.
53. Bentley, J., Bell on the Eve of Production, And Skating on Thick Ice, Air Cushion Vehicles, Flight Int., 20 April 1967, p. 54.
54. Bentley, J., Rally at Ryde, Air Cushion Vehicles, Flight Int., 20 July 1967, p. 10.
55. Bentley, J., The First Two Years - Hovertravel's Enterprise on the Solent, Air Cushion Vehicles, Flight Int., 24 August 1967, p. 19.
56. Bergen, A. R., Stability of Stochastic System, Trans. I.E.E., Industry and Application, 1960. Also Trans. IRE, Vol. AC-5, Sept. 1960.

57. Bernicker, R. P., Hydrofoil Motions in Irregular Seas, Davidson Laboratory, Report 909, Nov. 1962.
58. Bernicker, R. P., Heaving and Pitching Motions of Superventilated Hydrofoil Craft in Irregular Seas, Davidson Laboratory, Report 958, June 1963.
59. Bertelsen, W. R., Experience with Several Man-Carrying Ground Effect Machines, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
60. Bertelsen, W. R., The Ultimate Vehicle, Hovering Craft and Hydrofoil, July 1964.
61. Bertelsen, W. R., Ground Effect Vehicles, Hovering Craft and Hydrofoil, Nov. 1964.
62. Bertin, B. C. G., Air Cushion Vehicles, Flight Int., 27 June 1963, p. 90.
63. Bertin et Cie, Design Philosophy of an Air-Supported Train, Design and Components in Engineering, June 9, 1966, pp. 6-9.
64. Bingham, A. E., Hovercraft Ferry-Part One, Air Cushion Vehicles, Flight Int., 23 April 1964, p. 56.
65. Bingham, A. E., The Hovercraft Ferry, Hovering Craft and Hydrofoil, April 1964.
66. Blaiklock, W. C. and Ferris, E. W., Development and Testing of Motion Measuring Instrumentation for the XCH-6 Hydrofoil Craft, Grumman Report MPD 47-135(R), Jan. 1963.
67. Bland, C., Hovercraft Development 1959-1966, Hovershow, Britten--Norman Ltd., Hovering Craft and Hydrofoil, 1966.
68. Bland, C. D. J. and Stratton, R. B., In the World's Showcase, Air Cushion Vehicles, Flight Int., 20 April 1967, p. 47.
69. Bligh, T. P., Potential Flow Solution of the Peripheral Jet of an ACV, M.S. Thesis in Engineering, U. of the Witwaterstrand, Johannesburg, South Africa.
70. Bliss, D.S., The HDL Tracked Hovercraft Project, Hovershow, Hovering Craft and Hydrofoil, 1966.
71. Bliss, D. S., Application of Air Cushions to High Speed Guided Land Transport, Hovering Craft and Hydrofoil, Nov. 1966.

72. Bluston, H. S., The Lateral Stability of a Ground Effect Machine, Study conducted under the Sponsorship of U.S. Bureau of Ships, Contract Nobs-4433.
73. Boddington, L., Air Cushion Vehicle Development and Improvement, Hovering Craft and Hydrofoil, October 1963.
74. Boddington, L., ACV Development and Improvement, Air Cushion Vehicles, Flight Int., 21 November 1963, p. 75.
75. Bode, H. W., and Shannon, C. E., A Simplified Derivation of Linear Least-Squares Smoothing and Prediction Theory, Proc. IRE, Vol. 38, 1950.
76. Boehler, G. D., and Spindler, R. J., Aerodynamic Theory of the Annular Jet, Part I, Aerophysics Co., Report No. AR581-R, Dec. 1958.
77. Boehler, G. D., Forward Flight Characteristics of Annular Jets, Symposium on Ground Effects Phenomena, Princeton Univ., Oct. 1959, pp. 161-176.
78. Boehler, G. D., Basic Principles of Ground Cushion Devices, SAE Preprint 133A, Jan. 11-15, 1960.
79. Boehler, G. D., Summary of O.N.R. - Sponsored Work in the GEM Field by the Aerophysics Company 1957-1960, Aerophysics Co., Report No. AR-60-11, 23 June 1960.
80. Boehler, G. D., Foshag, W., and Steffens, J., Design, Aerodynamic, Structural and Weight Analysis of the Marine Corps GEM-2, Request for this report must be submitted through the Office of Naval Research, Attn: Code 461, Aerophysics Co., Report No. AR60-12-R, Oct. 1960.
81. Boehler, G. D., A Solution of the Two-Dimensional Turbulent Viscous Curved Jet Using the IBM 7090 Computer. Aerophysics Co. Report AR 61-03, Trecom Tech. Report 63-14, Mar. 1963, p. 44, Contract Nonr-2747(00).
82. Boehler, G. D., A Study of the Radial Flow Fans for GEM Propulsion System Applications (Final Report), For U.S. Army Transportation Research Command by the Aerophysics Company, Washington, D.C., July 1964.
83. Boehler, G. D., Remarks on the Ground Effect Machines, Aerophysics Co., Catholic University of America.

84. Boehler, G. D., Aerodynamic Theory of the Annular Jet, IAS Report No. 59-77.
85. Bordovitsyn, Y. A., A New Type of Engine for Hydrofoil Vessels, Hovering Craft and Hydrofoil, October 1964.
86. Borgenstam, C., Air Cushion Vehicles for Winter Operations, Hovering Craft and Hydrofoil, May 1965.
87. Bowers, N. K., Gas Turbine in the Royal Navy, Paper presented at the Gas Turbine Conference and Products Show, Zurich, Switzerland, ASME Paper 66-6T/M-25, 13-17 March 1966.
88. Boyd, C. W. Jr., Lt. Col., Trends in the Development of Amphibious Vehicles, Presented to the Mobility Forum, 6-7 October 1965.
89. Brandau, J. H., Aspects of Performance Evaluation of Water Jet Propulsion Systems and a Critical Review of the State-of-the-Art, Paper No. 67-360, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, 22-24 May 1967
90. Brandmaier, H. E., & Moretti, F. J., A Note on Havelock's Shallow-Water Wave-Resistance Curves, J. Aerospace Sci., March 1962, Vol. 29, p. 357, 358.
91. Bratanow, T., An Evaluation of the Performance Characteristics of the GEM III Vehicle, Nonr-4201(00), Technical Report 11, 31 July 1967.
92. Braunss, G. and Lincke, W., Die Auftriebsverteilung einer Ebenen Platte in Bodennaeh, Zeitschrift fuer Flugwissenschaften, No. 10, 1962.
93. Bray, J., Hoverlloyd, Hovershow, Hovering Craft and Hydrofoil, 1966.
94. Briggs, E. M., Jones, J. J., LeHart, R. C., Fabrication Inspection and Experimental Stress Analysis for the Deep Ocean Work Boat, Southwest Research Institute, January 1967.
95. Britten, J., The Light Hovercraft, Air-Cushion Vehicle, Flight Int., 26 December 1963, p. 81.
96. Brocket, R. W., Frequency Domain Stability Criteria, Joint Automatic Control Conference, 1965.
97. Brockett, W. A., Graves, G. L., Jr., Hauschild, M. R., Sawyer, J. W., U. S. Navy's Marine Gas Turbines, Paper presented at the Gas Turbine Conference and Products Show, Zurich, Switzerland, 13-17 March 1966, ASME Paper 66-GT/M-28.

98. Broniwitz, L. E., Amplitude-Limited Controllers for Systems with Random Disturbances, M.S. Thesis, E.E. Dept., Mass. Inst. of Tech. Cambridge, Mass., June 1961.
99. Brown, J. and Traksel, J., Waterjet Propulsion Study, Lockheed, Report LR-17885 (Parts 1 through 5), 1963.
100. Bryans, A. C., The Effect of the Incorrect Loss Assumptions in Avrocar Static Thrust and Turborotor Running Condition, Avro Aircraft Ltd., Report No. AVRO/SPG/TR 263.
101. Bundy, F. P., Problems Involved in SESOC, Letter to Project Manager, General Electric Co., SESOC Committee (SESOC 74), Jan. 4, 1966.
102. Bunting, D. C., Wave Hindcast Project North Atlantic Ocean, U.S. Naval Oceanographic Office, Washington, D.C., Jan. 1966.
103. Burgan, E. T., Wind Tunnel Investigation of DTMB Rectangular Planform GEM Model 472, DTMB Aero Lab--1026, May 1962, p. 39.
104. Burgess, A. J., Hovercraft Stability Research at Southampton Univ., Hovering Craft and Hydrofoil, April 1963.
105. Burgess, A. J., An Investigation of the Influence of Duct Convergence on the Flow Exhausting From the Edge Jet on an Air Cushion Vehicle, AASU Tech. Note No. 258, Southampton Univ., 1964.
106. Burgess, A. J., A Note On the Application of Euler's Momentum Theorem to the Hovercraft, Hovering Craft and Hydrofoil, July 1964.
107. Burgess, A. J., A Two-Dimensional Static Stability Theory for an Air Cushion Vehicle with a Central Stability Jet, M.S. Thesis, Southampton Univ., 1964.
108. Burgess, A. J., The Performance of Fans in Hovercraft--A Method of Reducing Experimental Results, Royal Aircraft Establishment, Technical Report 65240, Nov. 1965.
109. Burnsall, W. J. and Loftin, L. K., Experimental Investigation of the Pressure Distribution About a Yawed Circular in the Critical Reynold's Number Range, NACA 2463, 1951.
110. Butler, S. F. J. & Williams, J.. Further Comments on High-Lift Testing in Wind Tunnels with Particular Reference to Jet Blowing Models, AGARD Report No. 304.

111. Caisley, W. B., The London Hoverbus, Air Cushion Vehicles, Flight Int., 24 October 1963, p. 51.
112. Caisley, W. B., A Model-Mixing Multi-Port, Air Cushion Vehicles, Flight Int., May 1966, p. 64.
113. Carmichael, B. H. and Southcote, M. F., Air Cushion Feasibility Investigation: Performance and Stability Experiments. Configuration and System Evaluation Studies, Aeronutronic Publication No. U-1066, Nov. 1960.
114. Carmichael, B. H., Hovering Static Stability and Performance Experiments on Three-Dimensional Annular Jet Models, Aeronutronic Technical Report No. U-1443, 10 Nov. 1961.
115. Carmichael, B. H., & McNay, D. E., Stability and Control Experiments on Annular Jet Models of Rectangular Planform over a Large Range of Height and Speed, Inst. Aerospace Soc. Prep. (62-139); p. 28, USA, 1962.
116. Carmichael, B. H., Overland Air Cushion Vehicle Stability and Control-Wind Tunnel Experiments, Aeronutronic Division of Ford Motor Co., Newport Beach, California.
117. Carstens, J. P., Preliminary Evaluation of Gas Turbine-Powered High-Speed Planing Boats, UA Research Laboratories Report, B-110052-21, November 1963.
118. Carter, A. W., Effect of Ground (Actually Water) Proximity on the Aerodynamic Characteristics of Aspect Ratio 1 Airfoils With and Without End Plates, NASA TND-170, Oct. 1961.
119. Carter, A. W., and Person, L. H. Jr., Investigation of the Free-Flight Characteristics and Handling Qualities of a Ground Effect Machine, NASA TN-D-3885.
120. Cathers, L. D. et al, Air Pressure Levitation, Society of Naval Architects and Marine Engineers (Chesapeake Section), Feb. 1960.
121. Chan Jen-Wei, Synthesis of Relay Systems from the Minimum Integral Quadratic Deviation, Automatika i Telemekhanika, Vol. 22, No. 12, Dec. 1961.
122. Chang, P. K., An Approximate Solution of the Two-Dimensional Incompressible Turbulent Curved Jet, Aerophysics, Co., Report No. AR60-01, June 1960.

123. Chang, P. K., Analytical Study of Forward Moving Annular Jet, J. Franklin Inst., Vol. 274, No. 1, July 1962, pp. 20-33.
124. Chaplin, H. R., Theory of the Annular Nozzle in Proximity to the Ground, David Taylor Model Basin, Report 1373, July 1957.
125. Chaplin, H. R. and Stephenson, B. A., A Preliminary Study of the Hovering Performance of the Annular Jet Vehicles in Proximity to the Ground, David Taylor Model Basin, Aero Report 947, Aug. 1958.
126. Chaplin, H. R., Effect of Jet Mixing on the Annular Jet, David Taylor Model Basin, Aero Report 953, Feb. 1959.
127. Chaplin, H. R., A Preliminary Design Technique for Annular Jet Ground Effect Machines (GEM's), David Taylor Model Basin, Aero Report 966, Sept. 1959.
128. Chaplin, H.R., Ground Cushion Research at the David Taylor Model Basin - A Brief Summary of Progress to Date, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959, pp. 57-76.
129. Chaplin, H. R., Preliminary Correlation with Theory of Data from Wind Tunnel Tests of David Taylor Model Basin, GEM Model 448, June 1960.
130. Chaplin, H. R., Ground Effect Machine Research and Development in the United States, Third Symposium on Naval Hydrodynamics, Sept. 1960.
131. Chaplin, H. R., Ground Effect Machine Research and Development in the United States, David Taylor Model Basin, Aero Report 994, Dec. 1960.
132. Chaplin, H. R., Design Study of a 29 Foot GEM, David Taylor Model Basin, Aero Report 949, April 1961.
133. Chaplin, H. R., Aerodynamic Design Problems Unique to Ground Effect Machines, Proceedings of the Ground Effect Machines Forum, IAS 30th Annual Meeting, Jan. 22-24, 1962.
134. Chaplin, H. R. and Ford, A., Design Principles of Ground Effect Machines, Section D, Drag, May 1965.
135. Chaplin, H. R., The New Trend in GEM's, Astronautics and Aeronautics, Vol. 3, No. 10, Oct. 1965, pp. 46-51.
136. Chaplin, H. R., Key Stability and Control Problems, Letter Report to Aero-Hydro Dynamics and Control Panel, SESOC Committee (SESOC 34), Nov. 2, 1965.

137. Chaplin, H. R., ACV Technology, Presentation to SESOC Committee (SESOC 33), Nov. 3, 1965.
138. Chaplin, H. R., and Ford, A. G., Some Design Principles of Ground Effect Machines David Taylor Model Basin Report 2121, April 1966.
139. Chaplin, H. R., and Ford, A. G., Some Design Principles of Ground Effect Machines, Section D-Drag, David Taylor Model Basin Report 2121D, June 1966.
140. Chaplin, J. B., The Control of Ground Effect Machines, Proceedings of the Ground Effect Machines Forum, IAS 30th Annual Meeting, 22-24 Jan. 1962.
141. Chaplin, J. B., and Egginton, W. J., New York City and the Air Cushion Vehicle--The Challenge to the Engineer, Hovering Craft and Hydrofoil, April 1965.
142. Chaplin, J. B., The Development of a Multicell Plenum Chamber Concept, Bell Aerosystems Co., AIAA 64-188.
143. Charles, A., and Plan, M., Experimental Study of the Structure of Flows Producing a Lift by Ground Effect. In French, Academie des Sciences (Paris), 8 Feb. 1965, CR 260, No. 6, pp. 1563-1565.
144. Chase, K., A Selected Bibliography on Air Cushion Vehicles and Ground Effect Machines, Institute of Transportation and Traffic Engineering, University of California (SESOC 77), April 1965.
145. Chen, C. F., Auslaender, J., Leopold, R., Mathematical Generation of a Realistic Sea, Hydronautics Inc., Tech. Report 001.13, Oct. 1963.
146. Chey, Y. H., Motions and Accelerations of a GEM When Hove-To in Extreme Sea States, Stevens Institute of Technology, Davidson Laboratory Report 977, Aug. 1963.
147. Chey, Y. H., Hull Wave Impact Load on High Speed Marine Craft, David Taylor Model Basin Report 1072, AD469862, May 1965.
148. Choliasmenos, C., Past, Present, and Future Technology of Air Cushion Vehicles, Aviation and Astronautics (Greece), Vol. 17, No. 203, April 1964, pp. 22-26.
149. Choliasmenos, C., Sundararajan, V., Teague, W. F., and Tiedemann, J. B., GEM Research at the University of Kansas, Technical Report I, Nonr-4201(00), Dec. 1965.

150. Christopher, K. W., and Johnson, V. E., Experimental Investigation of Aspect Ratio, Supercavitating Hydrofoils at Speeds up to 185 Feet per Second, NASA Technical Note D-187, Jan. 1960.
151. Clancy, T. M., Simplified Momentum Theory Solutions for the Augmentation Factor of Hovering Annular Jet Vehicles, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
152. Clarkson, J., A New Approach to the Design of Plates to Withstand Lateral Pressure, Quarterly Transactions INA, Oct. 1956.
153. Clarkson, J., The Strength of Approximately Flat Long Rectangular Plates Under Lateral Pressure, Transactions, N.E. Coast Inst. of Eng. and Shipbuilders, Vol. 74, Nov. 1957.
154. Clarkson, J., Small Scale Grillage Tests, Naval Construction Research Establishment, AD 634227, Feb. 1966.
155. Clinton, A. C., BP's Role in the Hovercraft Picture, Hovershow, Hovering Craft and Hydrofoil, 1966.
156. Clinton, A. C., Hovercraft Servicing and Maintenance, Hovering Craft and Hydrofoil, Nov. 1966.
157. Clinton, A. C., Seaspeed Doubles Its Service, Hovering Craft and Hydrofoil, April 1967.
158. Cobb, B., Jr., River Patrol Boat for Vietnam, Yachting, Dec. 1966.
159. Cockerell, C. S., Improvements in or Relating to Vehicles for Travelling over Land and/or Water, British Patent No. 854,211, Dec. 12, 1955.
160. Cockerell, C. S., Some Remarks on the English Channel Crossing of the Hovercraft--Annular Jets with Deflectors, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
161. Cockerell, C. S., The Hovercraft and Its Place in the Transport System, Royal Aeronautical Society, Sept. 1960.
162. Cockerell, C. S., Some Possible Future Developments in Hovercraft Technique, Hovering Craft and Hydrofoil, Vol. 2, No. 6, 1963.
163. Cockerell, C. S., The Classification of Hovercraft, Air Cushion Vehicles, Flight Int., 27 Feb. 1964, p. 19.

164. Cockerell, C. S., An Introduction to the General Principles of Hovercraft, Hovering Craft and Hydrofoil, Vol. 3, No. 4, 1964.
165. Cockerell, C. S., The Ferry Market--An Estimate, Air Cushion Vehicles, Flight Int., 16 June 1966, p. 79.
166. Cockerell, C. S., The Siting of Hovercraft Car-Ferry Routes, Hovershow, Hovering Craft and Hydrofoil, 1966.
167. Cockerell, C. S., Notes on the Design of High Speed Surface Craft, Hovercraft Limited, Report No. 1/57.
168. Cockerell, D. J., Markland, E., A Review of Incompressible Diffuser Flow, Aircraft Engineering, Oct. 1963.
169. Cockerell, D. J., Pressure Coefficient and Diffuser Efficiency, Journal of the Royal Aeronautical Society, Dec. 1964.
170. Cole, R., Space Effect Ships for Ocean Commerce, Hovering Craft and Hydrofoil, Sept. 1966.
171. Cole, R., A Theory Concerning the Dynamics of Hovercraft Lift, Hovering Craft and Hydrofoil, Feb. 1967.
172. Colin, P. E., Power Lift Model Testing for Ground Proximity Effects, Training Center for Experimental Aerodynamics, TN 14, 1963, Rhode-St-Genese, Belgique.
173. Colquhoun, L. R., VA-2 On the Oresund, Air Cushion Vehicles, Flight Int., Nov. 21, 1963, p. 72a.
174. Colquhoun, L. R., Across the Channel by Hovercraft, Hovering Craft and Hydrofoil, Aug. 1966.
175. Condit, P. M., and Harrington, J. E., An Investigation of a Dynamic Instability of a Winged GEM, Princeton Univ., Report 692, USA TRECOM-TR-64-54, AD-610040, Dec. 1964, p. 47.
176. Connor, G. G., Gas Turbines for ACVs--Past, Present and Future. Air Cushion Vehicles, Vol. 5, Nov. 1964, pp. 64a-68a.
177. Contractor, D. N., Design Study of Water Jet Propulsion Systems for Shallow Draft Boats, Hydronautics Incorporated, Technical Report 516-1, April 1965.
178. Contractor, D. N., Experimental Investigation of a Water Jet Propulsion System for Shallow Craft Boats, Hydronautics Incorporated, Technical Report 516-2, May 1966.

179. Contractor, D.N., CAB Inlet Layout Study, Hydronautics Incorporated, Technical Report 656-1, Sept. 1966.
180. Contractor, D.N., Conceptual Design Studies of Water Jet Propulsion Systems for CAB Vehicles, Hydronautics Incorporated, Technical Report 656-1, Sept. 1966.
181. Contractor, D.N. and Johnson, V.E., Jr., Water Jet Propulsion, Paper No. 67-361, AIAA/SNAME Advance Marine Vehicles meeting, Norfolk, Virginia, May 22-24, 1967.
182. Cooper, B., The Hovercraft Pioneers, Hovering Craft and Hydrofoil, April 1967.
183. Cornish, A.F., The Hovercraft and Problems of Port Development, Hovering Craft and Hydrofoil, Aug. 1966.
184. Cossairt, K.R., A Recirculation Concept. Proceedings of the National Meeting on Hydrofoils and Air Cushion Vehicles, Washington, D.C., Sept. 17-18, 1962.
185. Cossairt, K.R., Recirculation Principles for Ground Effect Machines: Investigation of Improvements by Major Modifications to MCTV, Martin Company Report OR 3149, July 1963, (TCRECT 63-27), U.S. Army Transportation Research Command, Fort Eustis, Virginia.
186. Cox, R.J. and Tattersall, E.G., An Assessment of the Recent Claims Associated with the Captive Air Bubble Concept, Hovering Craft and Hydrofoil, Vol. 3, No. 5, Feb. 1964 .
187. Crandall, S.H., A Unified Approach to Dynamics via Hamilton's Principle, Mass. Inst. of Technology, School of Engineering, 1962.
188. Crane, V., Final Report on the Experimental Test of Curtiss-Wright Air Car-ACM 6-1, Wright Aeronautical Division, Report No. 8, May 31, 1961.
189. Crewe, P.R. & Eggington, W.J., The Hovercraft--a New Concept in Maritime Transport. For a Meeting of the Royal Institution of Naval Architects, Nov. 19, 1959.
190. Crewe, P.R. and Eggington, W.J., The Hovercraft - A New Concept in Maritime Transport, Trans. Roy. Inst, Nav. Arch, Vol. 102, 1960, pp. 315-356.
191. Crewe, P.R., The Hydrofoil Boat, Its History and Future Prospects, Quarterly Transactions, the Institution of Naval Architects, Vol. 100, No. 4, Oct. 1958.

192. Cumming, J. D., and Sigurdsson, G., Research on Annular Nozzle Type GEM Operating over Water. Preliminary Study of Air Flow Patterns, Appendix: Dimensional Analysis, California Univ., Berkeley Inst. of Eng. Res., May 1964, p. 48, Serial 187, Issue 6 (Contract Nonr-222(71)) (AD-605170).
193. Cummins, W. E., The Force and Moment on a Body in a Time Varying Potential Flow, Journal of Ship Research, April 1957.
194. Cummins, W. E., The Impulse Function and Ship Motions, Schiff Technik, Heft 47, June 1962.
195. Curtis, E. S., and Pfisterer, V. R., Experimental Investigation of the Viscous Effects on Balanced Jets in Ground Proximity, Hydronautics Incorporated, Oct. 1963, p. 32.
196. Curtis, M. S., and Chodoff, M. W., The Static Performance of GEMs with Aspect Ratios of $1/3$, $2/3$, $1\ 1/2$ and 3, Hydronautics Incorporated, Technical Report O11-6 AD-610219, Dec. 1964, p. 56.
197. Cuthbert, J. W., and Kerr, K. P., The Effect of Waves on the Ideal Fluid Forces Acting on a Slender Axisymmetric Body Having Three Degrees of Freedom, Lockheed Missiles and Space Div., TM 81-73-15, March 1962.
198. Cutler, M. M., Ground Effect Machine Applications in Mixed Terrains, SAE Preprint 270-C.
199. Dallenbach, F., The Aerodynamic Design and Performance of Centrifugal and Mixed-Flow Compressors, 1961 SAE International Congress and Exposition of Automobile Engineering, Preprint 268A, Jan. 1961.
200. Danahy, P. J., Adequate Strength for Small High Speed Vessels, AIAA/SNAME, Paper No. 67-355, May 1967.
201. Danek, G. J., Jr., State of the Art Survey on Hot Corrosion in Marine Gas Turbine Engines, Naval Engineers Journal, Dec. 1965.
202. Darbyshire, M., Forecasting of Wind Generated Waves, Engineering, April 5, 1963.
203. Datwyler, G., Untersuchungen über das Verhalten von Tragflügelprofilen sehr nahe am Boden, Mitteilungen aus dem Inst. für Aerodynamik ETH, Zurich, 1934.
204. Dau, K., Characteristics of a Rectangular Wing with a Peripheral Jet in Ground Effect, Part I, UTIA Tech. Note No. 56, Sept. 1961, 23 pp., 56 figs.

205. Dau, K., Etkin, B., and Surry, D., Aerodynamics of a Rectangular Wing with Peripheral Jet for Air Cushion Takeoff and Landing, AIAA Paper 64-795, 20 pp., 11 refs.
206. Daubin, S. C., The Deep Ocean Work Boat (DOWB), An Advanced Deep Submergence Vehicle, Paper No. 67-370, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, 22-24 May 1967.
207. Davenport, E. E., Effects of Geometric Variations on Lift Augmentation of Simple Plenum Chamber Ground Effect Models, NASA Tech. Note No. D-756, April 1961, 20 pp.
208. Davenport, E. E., et al., Static Force Tests of Several Annular Jet Configurations in Proximity to Smooth and Irregular Ground, NASA Report No. TN-D-168.
209. Davidson, I. M., The Jet Flap, Journal of the Royal Aeronautical Society, Oct. 1955.
210. Davidson, W. R., Thrust Augmentation of Turbojet and Turbofan Engines by Water Injection into the Exhaust, UA Research Laboratories, Report D-110278-6, 27 July 1965.
211. Davidson, W. R., and Sadowski, T. J., The Water-Augmented Turbofan Engine - A New Concept in Marine Propulsion, Paper No. 67-362, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, 22-24 May 1967.
212. Davies, H. J., Preliminary Report on the Theoretical Treatment of the 2-D GEM in Forward Motion, Princeton Univ., Department Aero. Eng., Report No. 533, Jan. 1961, 18 pp.
213. Davis, J. M., Characteristics of a Rectangular Wing with a Peripheral Jet in Ground Effect, Part II, UTIA Tech. Note No. 59, May 1962, 30 pp., 110 figs.
214. Davis, H. J., General Principles of the Hovercraft, Hovering Craft and Hydrofoil, April 1963.
215. Davis, M. C., Optimum Systems in Multidimensional Random Processes, Sc.D. Thesis, E.E. Dept., Mass. Inst. of Technology, Cambridge, Mass., June 1961.
216. Dean, R. C., and Senoo, Y., Rotating Wakes in Vaneless Diffusers, T. ASME, Series D, Vol. 83, 1961, pp. 371-378.
217. DeHaller, P., La Portance et la Trainee Induite Minimum d'une Aile au Voisinage du Sol., Publications de l'Institute d'Aerodynamique de l'Ecole Polytechnique Federal, Zurich, No. 5.

218. Delao, M. M., Practical Consideration of Water Jet Propulsion, Buehler Corporation, SAE Vancouver No. 650630, Aug. 1965.
219. Delao, M. M., Experimental Results on Low Speed Water Jet Propulsion Systems, Buehler Corporation, AIAA Paper No. 66-718, Los Angeles, California, Aug. 1966.
220. DeLaura, E. D., Some Performance and Dynamic Stability Characteristics of the SKIP-1 Air Cushion Vehicle, General Dynamics, Electric Boat Report No. P413-66-159, Dec. 1966.
221. St. Denis, Manley and Pierson, W. J., Jr., On the Motion of Ships in Confused Seas, Transactions, SNAME, Vol. 61, 1953.
222. DeVault, R. T., Introduction to the Hughes Hydrostreak Concept, Hughes Aircraft Co., Report X-424, Nov. 1959.
223. Dimmock, N. A., Some Early Jet Flap Experiments, The Aeronautical Quarterly, Nov. 1957.
224. Dogan, P., Temps de Reponse et Optimisation Brachystochrone des Systemes de Controles, M.S. Thesis, Universite de Louvain, Belgium, June 1963.
225. Donaldson, C. E., Some Impressions of British Hovercraft Programs, Presentation to SESOC Committee (SESOC 32), Oct. 21, 1965.
226. Donnely, J. P., Propulsion Problems, Booz-Allen Applied Research Inc.(SESOC 90), Oct. 1965.
227. Doragh, R. A., Magnetohydrodynamic Ship Propulsion Using Superconducting Magnets, Society of Naval Architects and Marine Engineers, Annual Meeting, New York, 14-15 Nov. 1963.
228. Dorey, P. L., The Practical Aspects of hydrofoil Operation, Hovering Craft and Hydrofoil, Feb. 1965.
229. Doyle, J. P., Study of Propulsion Transmission System for 500-Ton, 60-Knot Hydrofoil, Gibbs & Cox, Report M-62-19, Nov. 1962.
230. Doyle and Hynes, Procedure for Preliminary Design of Water Jet Propulsion System for Hydrofoil Ship, Gibbs & Cox, M-66-2, March 1966.
231. DuCane, P., The Plan Performance, Pressures and Stresses in a High-Speed Launch, I.N.A. Trans., Vol. 98, 1956.

232. Dudley, S. A., Flow Characteristics of Main Condenser Injection System Based on Ship Board Tests, New England Section SNAME Paper, May 1958.
233. Dugundji, J., Dowell, E., and Perkin, B., Subsonic Flutter of Panels on Continuous Elastic Foundations - Experiment and Theory, AFOSR Contract No. AF 49(638) - 219, April 1962.
234. Dukes, T. A., and Hargraves, C. R., Stability Augmentation of Ground Effect Machines, Princeton Univ. Dept. Aero Eng. Report No. 601, April 1962.
235. Dumov, A., Calculation of Pressure Head Characteristics of Axial Helical Impellers, Foreign Tech. WPAFB, FTD-TT 63-497, June 1963.
236. Dunavant, J. C., Cascade Investigation of 6 Per Cent Thick Guide Vane Profiles, NACA TN-3959, May 1957.
237. Dunham, W. H., Preliminary Results of Wind Tunnel Tests on the HS-2 Hydroskimmer, DTMB Report No. 1571, Oct. 1961.
238. Dunham, W. H., Preliminary Results of Wind Tunnel Tests on the HS-2 Hydroskimmer--Improved Design for the Hydroskimmer Hull Section, U. S. Navy Dept. DTMB Hydromech Lab. Res. and Devel., Report No. 1571, Oct. 1961.
239. Dunne, J., Hydrofoil Propulsion System and Design, Hydrofoil Symposium No. 2G, SNAME, Seattle, May 1965.
240. Duvivier, J. F., and McCallum, R. B., Investigation of Tilting Duct and Fan-Wing in Transition Flight, MIT Report No. 901-1, Dec. 1960.
241. Duvvuri, Tirumalesa, Nozzle Flows with Coupled Vibrational and Dissociational Nonequilibrium, Institute For Aerospace Studies, University of Toronto, UTIAS Report No. 123, August 1967.
242. Eames, M. C., Fundamentals of the Stability of Peripheral Jet Vehicles, Pneumodynamics Corp., Bethesda, Maryland, 1960.
243. Eames, M. C., Basic Principles of the Stability of Peripheral Jet GEMs, Inst. Aero. Sci. Prop. (61-71), 1961.
244. Earl, T., Thrust Recovery of a High Aspect Ratio Jet Issuing from a Flared Nozzle in a Surface Normal to a Supersonic Stream, AVRO Aircraft Ltd., Report No. VIO/TEST/4, Jan. 1954.
245. Earl, T. D., Ground Effect Machines, AGARDograph No. 67, 1962.

246. Eastman, N. J., Ward, K. E., and Pinkerton, R. M., The Characteristics of 78 Related Airfoil Sections in the Variable Density Wind Tunnel, NACA Report 824.
247. Ebert, J. W., Flexible Understructures for GEM Vehicles, SAE Paper No. 697A, for Meeting April 8-11, 1963.
248. Eggestad, I., A Note Concerning Cavitation on Hydrofoil Profellers, Hovering Craft and Hydrofoil, October 1964.
249. Ehrich, R. R., Curtain Jet, J. Aerospace Sci., Vol. 28, No. 11, Nov. 1961, pp. 855-860, 871.
250. Elliott, D. G., Analysis of the Acceleration of Lithium in a Two-Phase Nozzle, Proceedings of 1963 High-Temperature Liquid Metal Heat Transfer Technology Meeting, Oak Ridge, Tennessee, Dec. 1964.
251. Ellsworth, W. M., The U. S. Navy Hydrofoil Development Program--A Status Report, AIAA/SNAME, Paper No. 7-351, May 1967.
252. Engel, W. N., Cochran, R. L., and Delao, M. M., Use of Axial Flow Pumps for Marine Propulsion, Paper 442A, presented to SAE, Detroit Michigan, 8-12 Jan. 1962.
253. Eringen, A. C., Naghdi, A. K., and Thiel, C. C., State of Stress in a Circular Cylindrical Shell with a Circular Hole, Welding Research Council Bulletin No. 102, Jan. 1965.
254. Eringen, A. C., and Suhubi, E. S., Stress Distribution at Two Normally Intersecting Cylindrical Shells, Nuclear Structural Engineering 2, 253-270, Sept. 1965.
255. Eveleth, E. L., Sea Flite, Hovering Craft and Hydrofoil, Nov. 1962.
256. Everest, J. T., Factors Affecting Hovercraft Performance at Low Speeds over Water, Proc. of Res. Symposium on ACVs held at University College, Swansea, 21-23 July 1964, pp. 28-32.
257. Everest, J. T., Factors Affecting Hovercraft Performance at Low Speeds over Water, Hovering Craft and Hydrofoil, Aug.-Sept. 1964.
258. Everest, J. T., The Calm Water Performance of a Rectangular Hovercraft, NPL Ship Division, Report No. 72, Jan. 1966.
259. Everest, J. T., Shallow Water Wave Drag of a Rectangular Hovercraft, NPL Ship Division, Report No. 79, Mar. 1966.

260. Fabula, A. G., Application of Thin Airfoil Theory to Hydrofoil with Cut-off Ventilated Trailing Edge, Naval Ordnance Test Station, IP-2547, Sept. 1960.
261. Faye, A., Jr., Attitude Control Requirements for Hovering Determined Through the Use of a Piloted Simulator, NASA Conference on V/STOL Aircraft, Langley Research Center.
262. Feiler, A. M., Problem Areas Affecting SESOC Design and Systems Criteria, Letter to Project Manager, SESOC Committee (SESOC 72), Nov. 18, 1965.
263. Fielding, P. G., Marine Air Cushion Vehicles-Operation, Limitations and Future Developments, SAE Preprint 207B.
264. Fielding, P. G., The GEM in the Transportation Spectrum, Proceedings of the Ground Effect Machines Forum, IAS 30th Annual Meeting, 22-24 Jan. 1962.
265. Fielding, P. G., The Role of the GEM in Amphibious Support Operations, SAE Paper, April 1963.
266. Fielding, P. G., Technological Problems, Booz-Allen Applied Research Inc. (SESOC 89), Oct. 1965.
267. Fielding, P. G., Twentieth Century Yankee Clippers, Hovering Craft and Hydrofoil, Nov. 1965.
268. Fielding, P. G., An Approach to Operational Features Desirable in a Military Acceptable GEM, IAS Report No. 61-70.
269. Fink, M. D., Experimental Investigation of the Effects of Stabilizing Nozzle Width on the Hovering Stability and Performance of a Circular GEM Model, DTMB Aero. Lab--1047, Feb. 1963.
270. Fink, M. D., Feasibility of Six-Degree-of-Freedom GEM Model Testing in the David Taylor Model Basin Maneuvering and Seakeeping Facility, DTMB-Aero-1084, May 1965.
271. Fink, M. P., and Lastinger, J. L., Aerodynamic Characteristics of Low Aspect Ratio Wings in Close Proximity to the Ground, NASA TND-926, July 1961.
272. Fitch, K. R., and Munz, R. J., Manned Submersible Development, Paper No. 67-372, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, 22-24 May 1967.

273. Flügge-Lotz, I., and Maltz, M. D., Attitude Stabilization Using a Contractor Control System with a Linear Switching Criterion, Automatica, Vol. 2, No. 4, July 1965.
274. Foltz, C. A., Ground Effect Machine Investigations at the University of Wichita, U.W.ER 352-1 thru 352-7, 1960-62.
275. Ford, A. G., Captured Air Bubble (CAB)--a New Class of Overwater Vehicle, Inst. Aerospace Sci. Paper (FF-35), Jan. 1963, pp. 65-66.
276. Ford, A. G., The Captured Air Bubble Concept, National Aeronautical Meeting, Washington, D. C., 8-11 Apr. 1963.
277. Ford, A. G., Progress in Air Cushion Vehicles, David Taylor Model Basin, Report 2280, Oct. 1966.
278. Ford, A. G., Captured Air Bubble (CAB) Vehicle Progress Report, AIAA/SNAME, Paper No. 67-348, May 1967.
279. Ford, A. G., CAB High-Speed Over-Water Vehicle Report, AIAA Paper 64-302, p. 9.
280. Ford, T., The World's Largest Hovercraft, The SR.N4 at Cowes, Hovering Craft and Hydrofoil, Mar. 1967.
281. Forthmann, E., Turbulent Jet Expansion (Über Turbulente Strahl-
ausbreitung), Wash., Mar. 1936. (National Advisory Committee
for Aeronautics, TM 789), Translated from Ingenieur-Archiv.,
Vol. 5, 1934, p. 42.
282. Foster, D. N., A Study of a Recirculation System, Presented at
the Hovercraft Symposium held at Southampton University, Mar.
23, 1963.
283. Fowler, H. S., Low-Speed Tests on the Flow in a Centrifugal
Impeller, ASME Small Turbomachinery Symposium, Houston, Mar.
1-5, 1964.
284. Fradenberg, E., The Helicopter as a Ground Effect Machine,
Symposium on Ground Effect Phenomena, Princeton Univ.,
Oct. 1959.
285. Frank, J. L., Pressure Distribution and Ram Recovery of NACA
Submerged Inlets at High Subsonic Speeds, NACA RM A - 50E03,
July 1950.

286. Franklin, D. B., and Hill, A. B., The Effect of Jet Configurations on the Critical Velocity of GEMS, AIAA Student J. Vol. I, Dec. 1963, pp. 8-12.
287. Fresh, J. N., Some Tests of a 7-Foot GEM Dynamic Model Over Uneven Surfaces, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
288. Friauf, J. B., Electromagnetic Ship Propulsion, Journal of American Society of Naval Engineers, Feb. 1961, pp. 139-142.
289. Frost, J. C. M., and Earl, T. D., Flow Phenomena of the Focused Annular Jet, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
290. Frost, J. C. M., The Canadian Contribution to the Ground Cushion Story, Paper to the Canadian Aeronautical Institute, May 1961.
291. Fry, H., Let's Not Miss the (Hover) Bus, Air Cushion Vehicles, Flight Inc., 30 Jan. 1964, p. 9.
292. Fujita, T., Bettes, W., and Wiederkehr, G., Vortex Recirculation Lift for Ground Effect Machines, Vehicle Research Corp., Report No. 17, Nonr 3802(00), Dec. 31, 1963.
293. Fuller, F. L., An Approximate Theory for the Ground Effect Vehicle Employing a Thin Sheet Jet, Grumman, GAEC Report No. R. N. - 109.
294. Fuller, F. L., Gravity Wave Drag Theory for Water-Borne Ground Effect Vehicles, Grumman, GAEC Report No. R. N. - 111.
295. Fuller, I. W., Comments on SESOC Operations Committee, Letter to F. L. Weldon, Chairman, Operations Panel (SESOC 29), Dec. 3, 1965.
296. Gabrielli, G., and Von Karman, T., What Price Speed? Mechanical Engineering, Oct. 1950.
297. Gall, D. A., Minimizing Ship Motions, Sc. D. Thesis, M. E. Dept., Mass. Inst. of Technology, Cambridge, Mass., Aug. 1964.
298. Gallagher, G. N., An Investigation into the Flow Field in the Vicinity of a Ground Effect Machine in Forward Motion, Term Paper - Dept. of Aeronautics, University of Virginia, Apr. 1961.

299. Gardner, G., Theoretical Analysis of the Static Stability Characteristics in Pitch of a Hovering ACV, Grumman Res.Dept. RM-219.
300. Gardner, S., Safety Requirements for Amateur Hovercraft, Hovering Craft and Hydrofoil, Dec. - Jan. 1966-7.
301. Garg, S. P., Studies of an Annular Jet in Proximity to the Ground with Ambient Velocity, Master's Thesis, Dept. of Mechanics and Hydraulics, State University of Iowa, Aug. 1959.
302. Garland, D. B., Data Report for 1/20th Scale Avrocar Model Focusing Ring Control, Avro Aircraft Ltd., Report No. AVRO/SPG/TR 308, Jan. 1960.
303. Garland, D. B., Data Report for 1/20th Scale Avrocar Model Focusing Ring Control Forward Flight Tests, Avro Aircraft Ltd., Report No. AVRO/SPG/TR 313, June 1960.
304. Garland, D. B., Report on Phase 2 Tests of an Avrocar in a 40 X 80 Foot Wind Tunnel at NASA Ames Research Center, Avro Aircraft Ltd, Report No. 500/AERO TEST/408.
305. Garland, D. B., Studies of Ground Effect on an Inwardly Inclined Annular Jet, University of Toronto Report No. TN 37.
306. Garland, D. B., McGee, P. J., Canadian Government Program for the Avrocar - Phase I, 1/20th Scale Avrocar Model Comparison Tests at U.T.I.A. and Avro Aircraft Limited. Avro Aircraft Ltd. Report No. 500/AERO TEST 418.
307. Gasiunas and Lewis, Waterjet Propulsion: A Theoretical and Experimental Investigation into Propulsion of Seacraft by Waterjets, British Institute of Mechanical Engineers, Vol. 178, Part I, 1963-64.
308. Gates, M. F. and Sargent, E. R., Development of a Unique GEM Concept with Potential for Achieving Efficient Forward Flight, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
309. Gates, M. F., Investigation of Special Ground Effect Machine Configurations, Hiller Aircraft Corporation, Advanced Research Division, Report No. ARD-266, June 1960.

310. Gates, M. F. and Cochran, C. L., Investigation of Special Ground Effect Machine Configuration, Advanced Division of Hiller Aircraft Corporation, Report No. ARD 284, Nov. 1960.
311. Gates, M. F., and Cochran, C. L., Investigation of Special Ground Effect Machine Configuration, Advanced Research Division of Hiller Aircraft Corporation, Report No. ARD 284, Dec. 1960.
312. Gates, S. B., A Crude Theory of Hovercraft Performance at Zero Tilt. Aero Res. Council CP No. 608, Nov. 1961.
313. Gearhart, W. S. and Henderson, R. E., Selection of a Propulsor for a Submersible System, AIAA Paper 65-232.
314. Gersten, K., Über die Berechnung des induzierten Geschwindigkeitsfeldes von Tragflügeln, Jahrbuch 1957 der W.G.L., pp. 172-190.
315. Gertler, M., The DTMB Planar-Motion-Mechanism System, DTMB, Symposium on the Towing Tank Facilities, Zagreb, 1959.
316. Gibson, A. H., On the Flow of Water Through Pipes and Passages Having Converging or Diverging Boundaries, NACA RM L56F05, p. 46.
317. Gibson, A. H., On the Resistance to Through Pipes of Passages Having Divergent Boundaries, NACA RM L56F05, p. 46.
318. Gibson, A. H., Present and Future Uses of Hovercraft in Canada, Hovering Craft and Hydrofoil, April 1967.
319. Giesekeing, D., An Optimum Bistable Controller for Increased Missile Autopilot Performance, Trans. IEEE, (PTG), 1964.
320. Gifford, E. W. D., Berthing and Handling of Hoverferries, Flight International, Air Cushion Vehicle Supplement, Mar. 28, 1963.
321. Gilbert, E. G., Controllability and Observability of Multivariable Control System, Journal of S.I.A.M. on Control, Vol. 2, No. 1, 1963.
322. Gilbert L., On An Air Cushion, Hovering Craft and Hydrofoil, May 1965.

323. Gilbertson, F. L., Mobile Ground Effect Machine. Preliminary Report, Avro Aircraft Ltd., Report No. P450/PERF. 1.
324. Gilchrist, A., Operating Economics of VTOL and STOL Transport Aircraft, Defense Research Board, Canada, D. ENG. Report No. AE-3.
325. Gill, J. D., The Hydrofoil Commuter, Boat Construction and Maintenance, Feb. 1965.
326. Gill, W. J., Wind Tunnel Tests of Several Ducted Propellers in Non-Axial Flow, Hiller Aircraft Aerophysics Dept. Report No. ARD-224.
327. Giuffrida, G., Improvement in Foilborne Navigation, Hovering Craft and Hydrofoil, Aug. 1967.
328. Gongwer, C.A., Influence of Duct Losses on Jet Propulsion Devices, Aerojet-General, Vol. 24, No. 6, Nov.-Dec. 1954.
329. Goodman, T. R., Forces on a Hovering Slender Body of Revolution Submerged Under Waves, Proc. Eight, Midwestern Mechanics Conference, April 1963.
330. Goodson, K. W., & Otis, J. H., Effect of Ratio of Jet Area to Total Area and of Pressure Ratio on Lift Augmentation of Annular Jets in Ground Effect Under Static Conditions, NASA Tech. Note No. D-720, Mar. 1961.
331. Gowans, B. W., Experimental Study of the Aerodynamic Characteristics of a Model of an Air Cushion Vehicle in Hovering Flight. UTIAS Tech. Note No. 74, Feb. 1964.
332. Grandin, G., Military Applications of Hovercraft, Air Cushion Vehicles, Flight Int., 30 Jan. 1964, p. 5.
333. Graves, G. L. and Carleton, R. S., Gas Turbines for Unconventional Craft, Hovering Craft and Hydrofoil, Oct. 1963.
334. Gray, K., A New Sidewall Concept, Hovering Craft and Hydrofoil, Aug. and Sept. 1962.
335. Grayson, L. P., Two Theorems on the Second Method, Trans. IEEE, Automatic Control, Oct. 1964.
336. Green, J., Antarctica and the ACV, Air Cushion Vehicles, Flight Int., 18 Nov. 1965, p. 65.

337. Greenspon, J. E., Sea Tests of the USCGC UNIMAK - Slamming Pressures, Strains, Etc., DTMB Report 978, March 1956.
338. Gregg, A. W., Westland Hovercraft Development, Hovershow, Hovering Craft and Hydrofoil, 1966.
339. Greif, R. K., Kelly, M. W., and Tolhurst, W. H., Jr., Wind Tunnel Tests of a Circular Wing with an Annular Nozzle in Proximity to the Ground, NASA TN D - 317, May 1960.
340. Greif, R. K., & Tolhurst, W. H., Large-Scale Wind Tunnel Tests of a Circular Planform Aircraft with a Peripheral Jet for Lift, Thrust and Control, NASA Tech. Note No. D-1432, Feb. 1963.
341. Grimshaw, J. E., Canada's Deep Sea Hydrofoil Ship, Hovering Craft and Hydrofoil, Nov. 1964.
342. Grimstone, B., Points of View, Hovering Craft and Hydrofoil, Feb. 1964.
343. Grose, R. M., Wind Tunnel Tests of Shrouded Propellers at Mach Numbers from 0 to .6, USAF Tech. Report 58-604, ASTIA No. AD 205 464, Dec. 1958.
344. Gross, D., and Powers, J., Experimental Studies of the Aerodynamics of Ground Effect Machines, Wind Tunnel Operations Dept., University of Maryland.
345. Guienne, P., French Air Cushion Vehicles, Hovering Craft and Hydrofoil, July 1964.
346. Guienne, P., Stability of the Terraplane on the Ground, Hovering Craft and Hydrofoil, Oct. 1964.
347. Guienne, P., Possible Uses for Air Cushion Vehicles, In French, Technique et Science Aeronautique et Spatiales, May - June 1965, pp. 187-191.
348. Guinard, F., and Acosta, A., Experimental Study of Axial Flow Pump Cavitation, California Institute of Technology, Report E-19.3, Aug. 1953.
349. Hackworth, J. F., A Study of Two-Dimensional Hovercraft Cross-flow Phenomena, Honours Report of Dept. of Aeronautics and Astronautics, Southampton University, May 1964.

350. Haggard, J. V. A., Hovercraft Lubrication, Hovering Craft and Hydrofoil, Mar. 1964.
351. Hale, M., and Norrie, D. H., Hydrojet Propulsion Reduces Vibration, Engineering, July 1964.
352. Hale, M. R., Design of Ducted Impellers Using Vortex Line Analysis and Optimizing Computer Techniques, University of Adelaide, M. E. Report R 65/2, Mar. 1965. Hydrojet Ducted Propulsion System-Impeller Induced Vibratory Pressures and Performance Characteristics, Thesis, University of Adelaide, 1967.
353. Halkin, H., and Flügge-Lotz, I., Pontriagyn's Maximum Principle and Optimal Control, Technical Report, No. 130, Stanford University, 1961.
354. Hall, A. M., An Experimental Investigation of Internal Flow Effectiveness for Several Air Cushion Vehicle Arrangements, General Dynamics Corporation, Electric Boat Division, Research and Development Department, GEM Section, Nonr 4576(00), July 1965.
355. Hammond, G. E., Hovermanship, Hovering Craft and Hydrofoil, Sept. 1966.
356. Hancock, G. J., The Ground Effect on a Two-Dimensional Jet Flapped Airfoil, Aeronautical Research Council, A.R.C. 20, 251, June 1958.
357. Handler, E., The Helicopter-Towed Hydrofoil Sea Pallet, Journal of the American Helicopter Society, Vol. 6, No. 3, July 1961.
358. Hanley, Capt. M. J., Jr., U.S. Navy, Surface Effect Ships, Proceedings U.S. Naval Institute, Nov. 1966.
359. Hanley, Capt. M. J., Jr., A 60-Knot Landing Force, Proceedings of the U.S. Naval Institute, Mar. 1967, p. 45.
360. Hanley, Capt. M. J., Jr., Surface Effect Ships, Hovering Craft and Hydrofoil, Apr. 1967.
361. Hannigan, F. J., The Design of ACV Automatic and Semi-automatic Controls Final Report, General Dynamics Corp., Groton, Conn., U.S.A., Electric Boat Div. U411-65-032, AD 620144, July 1965.
362. Harbaugh, K. H., and Fitzgerald, W. G. H., Hydrofoil Operations and Development Experience 1952-1964, Hovering Craft and Hydrofoil, June 1965.

363. Harding, G. G., Hovervehicles, Hovering Craft and Hydrofoil, Dec. 1964.
364. harding, G. G., Carrying the Customers, Air Cushion Vehicles, Flight Int., 20 Jan. 1966, p. 5.
365. Hardy, D. J., Lessons from Five Years of Hovercraft Operations, AIAA/CASI/AReS Ninth Anglo-American Conference, Massachusetts Institute of Technology, Preprint 63-479.
366. Hargraves, C. R., and Dukes, T. A., Design of GEM Stability Augmentation Systems, Astronautics and Aerospace Eng., Vol. 1, No. 6, July 1963, pp. 88-95.
367. Harris, D. R., A Review of Vickers Hovercraft, Hovershow, Hovering Craft and Hydrofoil, 1966.
368. Harris, T. M., et al, Some Tests on a Circular GEM with Forward Speed, CoA Note 133, May 1962.
369. Harrison, N., Mass Transit Assessment, Air Cushion Vehicles Flight Int., 30 Dec. 1965, p. 80.
370. Hassall, A. F. A., Hovercraft in the United Kingdom--A Review of Significant Events in 1964 and Some Likely Developments in the Near Future, SAE Paper 650220.
371. Hatte, R., and Davis, H., Selection of Hydrofoil Waterjet Propulsion Systems, AIAA Paper No. 66-732, Los Angeles, California, 8-10 Aug. 1966.
372. Havelock, Sir T. H., The Effect of Shallow Water on Wave Resistance, Proc. Roy. Soc. Series A, Vol. 100, No. A706, 1921-1922.
373. Havelock, Sir T. H., The Forces on a Submerged Body Moving under Waves, Trans-TINA, Vol. 96, 1954.
374. Hawker, A. E., and Cook, J. E., Design Philosophy, Hovering Craft and Hydrofoil, June - July 1966.
375. Haworth, F. M., An Aeronautical Look at Hydrofoils, Hovering Craft and Hydrofoil, Sept. 1965.
376. Hayward, D., Canadian Government Contract Phase 2 Design Summary Report, Avro Aircraft Ltd.

377. Hayward, L. H., The History of Air Cushion Vehicles, Hovering Craft and Hydrofoil, Vol. 2, No. 3, Dec. 1962.
378. Hayward, L. H., Air Supported Load Pallets and Conveyors, Hovering Craft and Hydrofoil, Dec. 1964.
379. Hayward, L. H., The History of Hydrofoils, Series of Articles published in Hovering Craft and Hydrofoils, Kalerghi Publications, London, England, Vol. 5, 1966.
380. Hedrick, I. G., and Wennagel, G., Structural Design Loading Conditions and Preliminary Structural Weight Estimate, Grumman Aircraft Engineering Co., Hull Committee (SESOC 30), Nov. 1965.
381. Helgesen, J. O., and Rosenberg, M. H., An Experimental Investigation of the Static Stability Characteristics of a Hovering ACV, Grumman Res. Dept. RM-217, Oct. 1962.
382. Helgesen, J. O., Some Effects of Forward Speed on the Performance of ACVs, Grumman Res. Dept. RM-218, Nov. 1962.
383. Heller, S. R., Jr., and Jasper, N. H., On the Structural Design of Planing Craft, R.I.N.A. Trans., Apr. 1960.
384. Henry, J. R., Design of Power-Plant Installations Pressure-Loss Characteristics Duct Components, NACA Wartime Report L4F26.
385. Hepworth, D. B., The Problems of Insuring Hovercraft, Hovering Craft and Hydrofoil, Vol. 4, No. 12, Sept. 1965.
386. Hess, J. L., and Smith, A. M. O., Douglas Aircraft Engineering Report 1528, 17th Meeting of ARS, Nov. 1962.
387. Hewins, E. F., and Reilly, J. R., Condenser Scoop Design, Trans. SNAME, 1940, p. 277.
388. Hewins, E. F., Condenser Scoop Design, SNAME Transactions, Vol. 48, 1948.
389. Higgins, H. C., and Martin, L. W., Effects of Surface Geometry and Vehicle Motion on Forces Produced by a Ground Pressure Element, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.

390. Higgins, J. A., Surface Effect Ships, A New Era in Commercial Ocean Transportation, Maritime Administration, U.S. Department of Commerce (SESOC 1), April 14, 1965.
391. Higgins, J. A., MARAD SES Program Technical Development Plan, Maritime Administration Planning Document (SESOC 36), Nov. 1965.
392. Hill, P. G., Schaub, U. W., and Senoo, Y., Turbulent Wakes in Pressure Gradient, T. ASME, Series E., Vol. 30, 1963, pp. 518-524.
393. Hirsch, I. A., The Hovering Performance of a Two-Dimensional Ground Effect Machine over Water, Symposium on Ground Effect Phenomena, Princeton University, Oct. 1959.
394. Hirsch, I. A., On the Prediction of the Seakeeping Characteristics of Hydrofoil Ships, AIAA/SNAME, Paper No. 67-352, May 1967.
395. Hoerner, S. F., Aerodynamic Drag, Published by the Author, 1951.
396. Hoerner, S. F., Fluid-Dynamic Drag, Published by the author, Midland Park, New Jersey, 1958, pp. 9-13.
397. Hogben, N., Study of Hovercraft Wavemaking, Hovering Craft and Hydrofoil, Vol. 2, No. 6, Mar. 1963, pp. 20-23.
398. Hogben, N., An Investigation of Hovercraft Wavemaking, R. Aero. Soc. Journal, Vol. 70, No. 662, Feb. 1966, pp. 32-329.
399. Hohman, A. E., and Kernedy, W. L., Coatings to Protect High Speed Hydrofoils, Hovering Craft and Hydrofoil, Feb. 1966.
400. Holcombe, B. F., Materials and Fabrication Techniques in Air Cushion Vehicles, Proceedings of the National Meeting on Hydrofoils and Air Cushion Vehicles, Washington, D. C., Sept. 17-18, 1962.
401. Hook, C., Wake Up, England!, We can repeat what our grandfathers did with the steam engine if only we stop trying to make one formula fit every requirement, Hovering Craft and Hydrofoil, Feb. 1965.
402. Hopkins, R. M., Analog Computer Study of Automatic Elevator Control of Operations of the P5M-1 in Newman Spectrum Waves, Convair Report No. ZH-142, May 1960.

403. Hopkins, R. M., and Ramsey, J. C., Study of Impact Loads and Motions on Ground Effect Machines, Bureau of Naval Weapons Contract NOW, 60-0332-c, Nov. 1960.
404. Hopkins, S. E., and Amundrud, G. L., Gas Turbine Engines in the Royal Canadian Navy Prototype Hydrofoil Vessel, Hovering Craft and Hydrofoil, April, 1966.
405. Hoyt, E. D., and Imlay, F. H., The Influence of Metacentric Stability on the Dynamic Longitudinal Stability of a Submarine, DTMB Report C-158, Oct. 1948.
406. Hsu, C. C., Viscous and Forward Speed Effects on Unbalanced Jets in Ground Proximity, Hydronautics Inc., Oct. 1963, p. 42.
407. Hsu, C. C., Viscous Effects on Balanced Jets in Ground Proximity, Hydronautics Inc., Tech. Report 63-59, Oct. 1963, p. 48.
408. Hsu, C. C., Non-steady Hydrodynamic Characteristics of a Supercavitating Hydrofoil Under a Free-Surface, Hydronautics Inc., Technical Report 463-2, April 1964.
409. Hsu, C. C., On the Flexible-Flap Damper for Air Cushion Vehicles, Hydronautics Inc., Report 347-1, May 1964.
410. Hsu, C. C., On Separated Flows of Air Jet Flow Fields in Ground Proximity, In ASME Fluids Engineering Div. Conference Symposium on Fully Separated Flows, Philadelphia, Pa., May 18-20, 1964, pp. 119-123.
411. Hsu, C. C., Experimental Investigation of the Viscous Effects on Balanced Jets in Ground Proximity, Hydronautics Inc., Tech. Report 63-61.
412. Huggett, D. J., The Ground Effect on the Jet Flap in Two Dimensions, The Aeronautical Quarterly, Feb. 1959, 19-713.
413. Hughes, A., ACVs for the Army, Flight International Air Cushion Vehicle Supplement, March 28, 1963.
414. Hughes, D. L., Air Cushion Craft Research at the University College of Swansea, Proc. of Res. Symposium on ACVs held at University College, Swansea, July 21st-23rd, 1964, pp. 24-27.

415. Hughes, D. L., Air Cushion Craft Research at The University of Swansea, Hovering Craft and Hydrofoil, Aug. - Sept. 1964.
416. Hughes, S. R., The Engineering Design of a Commercial Hovercraft, Proceedings of the Ground Effect Machines Forum, IAS 30th Annual Meeting, Jan. 22-24, 1962.
417. Hughes, S. R., The Engineering Design of a Commercial Hovercraft, Hovering Craft and Hydrofoil, News Supplement, May and June, 1962.
418. Hughes, S. R., The V. A. Series of ACV's, Hovering Craft and Hydrofoil, Vol. 2, No. 3, Dec. 1962.
419. Hughes, S. R., Flexible Skirts for Air Cushion Vehicles, Hovering Craft and Hydrofoil, Sept. 1963.
420. Hughes, S. R., The Development of Vickers Flexible Skirts, Air Cushion Vehicles, Flight Int., 24 Oct. 1963, p. 58.
421. Hughes, S. R., Improving Hovercraft Economics by Increasing Cushion Pressures, Hovering Craft and Hydrofoil, Mar. 1964.
422. Hunsiker, G., and Kamber, H., Some Experiments on Labyrinth-sealing of a Ground Effect Machine, Eidgenossisches Flugzeugwerk Emmen, Report No. 498, Oct. 6, 1959.
423. Ishii, T., Aeroelastic Instabilities of Simply Supported Panels in Subsonic Flow, AIAA Paper No. 65-772, Nov. 1965.
424. Jackes, A. M., Performance and Force Coupling Effects Due to Turning Vanes in an Annular Jet, J. Aerospace Sci., Vol. 29, No. 12, Dec. 1962, p. 1483.
425. Jackson, S. B., Some Considerations of Jet Propulsion of Ships, Shipbuilder and Marine Engine Builder, May 1960, pp. 324-327.
426. Jamieson, J. J., Controls Technology in Hydrofoil Ship Design, Proceedings, Ship Control Systems Symposium, USN Marine Engineering Laboratory, Nov. 1966.
427. Jaumotte, A., Kiedrzynski, A., and Cozac, D., Machine a Effet de sol. Caracteristiques au Point Fixe, Institut d' Aeronautique, Universite de Bruxelles, 1962.

428. Jaumotte, A., and Kiedrzynski, A., Sur le coefficient d' amplification de la portance des machines a effet de sol au point fixe, C.R. Acad. Sc., Paris, t. 255, 1962, pp. 1697-1699.
429. Jaumotte, A., and Kiedrzynski, A., Sur quelques caracteristiques du fonctionnement au point fixe des machines a effet de sol, C.R. Acad. Sc., Paris, t. 256, 1963, pp. 2108-2111.
430. Jaumotte, A., and Kiedrzynski, A., Theory and Experiments on Air Cushion Vehicles at Zero Speed, Hovering Craft and Hydrofoil, Vol. 4, No. 11, Kalerghi Publications, Aug. 1964.
431. Jaumotte, A., and Kiedrzynski, A., Experimental Analysis of the Pressure Distribution on the Base of an Air Cushion Vehicle in Hovering Flight, In French, Institut de Mecanique Appliquee et Institut de Aeronautique, University of Brussels, NT 2-1965.
432. Jaumotte, A., and Kiedrzynski, A., Optimum Dimensions of Peripheral-Jet Air Cushion Vehicles, In French, Institut de Mecanique Appliquee, Institut de Aeronautique, University of Brussels, NT 3-1965.
433. Jekat, W. K., Worthington Pump, A New Approach to Redesign of Pump Cavitation, the Hubless Inducer, ASME Paper No. 66-FE-8, Denver, Jan. 1966.
434. Jensen, W. R., Hydrofoil Boat Hull - Wave Impact Loads, Grumman Aircraft Engineering Corp. Report GE-173, Also: ASME Paper 60-WA-326.
435. Johnson, A. E., Aerodynamic Characteristics of a 3-Foot Diameter Powered Annular Jet, Symposium on Ground Effect Phenomena, Princeton University, Oct. 1959.
436. Johnson, A. E., Interim Data from Wind Tunnel Tests of DTMB GEM Model 448, June 1960.
437. Johnson, A. E., and Chaplin, H. R., Results of GEM III Tethered Tests, Wash., DTMB Aero. Report 1012, Aug. 1961.
438. Johnson, A. E., and Chaplin, H. R., Wind Tunnel Investigation of the David Taylor Model Basin Ground Effect Machine Model 448, Washington, Nov. 1961 (5); p. 63 incl. illus., 2 refs, Aerodynamics Lab. Aero. Report 1913.

439. Johnson, A. E., Hovering and Wind Tunnel Investigations of the DTMB 3 ft dia Powered Annular Jet Model 430, DTMB Aero Lab--1041, Oct. 1962, p. 22.
440. Johnson, A. E., Phase II Tethered Tests and Low-Speed Free Flight Tests on GEM III, DTMB Aero Report, 1049, Dec. 1962.
441. Johnson, V. E., Jr., Martin, M., and Turpin, F. J., The Hydrodynamic Characteristics of Towed Hydrofoil Sleds, Hydronautics Incorporated, Technical Report 009-1, Mar. 1961.
442. Johnson, V. E., Jr., and Martin, M., The Hydrodynamic Design of a Twenty-Ton Towed Hydrofoil Sled, Hydronautics Incorporated, Technical Report 009-2, July 1961.
443. Johnson, V. E. Jr., Theoretical and Experimental Investigation of Supercavitating Hydrofoils Operating Near the Free Water Surface, NASA Technical Report R-93, 1961.
444. Johnson, V. E., Jr., and Goodmann, A., The Hydronautics Variable-Pressure, Free-Surface, High-Speed Channel, Hydronautics Incorporated, T. R. 229-1, Jan. 1964.
445. Johnson, V. E., Jr., Water Jet Propulsion for High Speed Hydrofoil Craft, AIAA Paper No. 64-306, First AIAA Annual Meeting, Washington, D. C., Jun.29 - July 2, 1964.
446. Johnson, V. E., Jr., and Goodman, A., The Hydronautics Variable-Pressure, Free-Surface, High-Speed Channel, ASME Symposium on Cavitation Research Facilities and Techniques, 1964.
447. Jones, R. S., Some Design Problems of Hovercraft, IAS Paper, 29 Annual Meeting, New York, Jan. 23rd-25th, 1961, No. 61-45.
448. Jones, R. S., Hovercraft--Some Design Problems, Aerospace Eng, Vol. 20, No. 2, Feb. 1961, pp. 16-17, 4^c 51, 53-57.
449. Jones, R. S., Towards a Big Hovercraft, New Scientist, No. 429, Feb. 1965.
450. Kaario, T. J., Air Cushioned Vehicle, J. Finnish Engineers, No. 2, 1942.
451. Kaario, T. J., The Principles of Ground Effect Vehicles, Princeton Symposium on Ground Effect Phenomena, Oct. 1959.

452. Kaario, T. J., A Revolution in Transport, Hovering Craft and Hydrofoil, Aug. 1966.
453. Kalman, R. E., and Bertram, J. E., Control System Analysis and Design via the Second Method of Liapunof, I & II, ASME Trans., Vol. 82, June 1960.
454. Kalman, R. E., Englar, T. S., and Bucy, R. S., Fundamental Study of Adaptive Control Systems, USAF, ASD-TDR-61-27, Vol. 1, 1961.
455. Kalman, R. E., Mathematical Description of Linear Dynamical Systems, Journal of S.I.A.M. on Control, Vol. 2, No. 1, 1963.
456. Kaplan, P. et al., Methods for Estimating the Longitudinal and Lateral Dynamic Stability of Hydrofoil Craft, Stevens Institute of Technology, ETT Report No. 691, 1958.
457. Kaplan, P., Hu, P. N., Virtual Mass and Slender Body Theory for Bodies in Waves, Proc. Sixth Annual Conf. on Fluid Mechanics, Sept. 1959.
458. Kaplan, P., and Sargent, T. P., Theoretical Study of the Motion of an Aircraft Carrier at Sea, Oceanics Inc., Report N 65-22, Jan. 1965.
459. Keil, A. H., The Challenges of Ocean Engineering of the Future, Paper No. 67-369, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, May 22-24, 1967.
460. Keiller, I. L., Some Preliminary Performance Trials on the Westland SR.N2 Hovercraft, Royal Aircraft Establishment Tech. Note No. Naval 65, Mar. 1964.
461. Keiller, I. L., Control and Performance of Britten-Norman CC2-001 Cushioncraft, Proc. of Res. Symposium on ACVs held at University College, Swansea, July 21st-23rd, 1964, pp. 33-37.
462. Keiller, I. L., Control and Performance of Britten-Norman CC2-001 Cushioncraft, Hovering Craft and Hydrofoil, Aug. - Sept. 1964.
463. Keiller, I. L., Performance and Handling Trials of Britten-Norman CC2-001 Cushioncraft, XR 814, Royal Aircraft Establishment, Technical Report No. 65230, Oct. 1965

464. Kennedy, W. P., Lockheed Interdepartmental Communication, Comments on Booz-Allen Report - Surface Effect Ship to M. A. Steinberg, Hull Panel, Oct. 7, 1965, SESOC 67.
465. Kenyon, J. F., The Defense Services Contribution to the Development of Hovercraft, Hovering Craft and Hydrofoil, Hovershow 1966.
466. Keralla, J. A., Annual Power Sources Conference, May 1962.
467. Kilgore, U., The Propulsive Coefficient for Jet Systems, Great Lakes Section of Society of Small Craft Designers, April 1965.
468. Kim, H. C., Hydrodynamic Aspects of Internal Waterjet Propulsion, Marine Technology, Jan. 1966.
469. King, H. F., Swing-Wing Variable-Incidence, Air Cushion Hydrofoil, Air Cushion Vehicles, Flight Int., 18 Nov. 1965, p. 68.
470. King, H. F., Another Lawrence, Air Cushion Vehicles, Flight Int., 24 Feb. 1966, p. 19.
471. King, J. A., Air Cushion Vehicles, Space/Aeronautics, April 1967, p. 105.
472. Kirkpatrick, J. R., The Use of Point Source Projection, Kansas Engineer, Vol. XLIX, No. 1, Nov. 1964, pp. 10-14.
473. Klichko, V. V., Gidrodinamicheskoe Soprotivlenie Sudov na Vozdushoi Podushke, Sudostroenie, No. 5, May 1965.
474. Kline, S. J. et al, Optimum Design of Straight-Walled Diffusers, Transactions of the ASME, Vol. 81D, J. Basic Engineering, Sept. 1959.
475. Knight, M., and Hefner, R. A., Analysis of Ground Effect on the Lifting Airscrew, NACA Report No. TN 835.
476. Knowlton, M. P., and Wojciechowicz, A. R., Jr., Model Studies of the Forward Flight Characteristics of the P-GEM. Princeton Univ. Aero. Eng. Dept. Report No. 581, Dec. 1961, p. 54.
477. Korvin-Kroukovsky, B. V., Theory of Seakeeping, SNAME, New York, 1961.

478. Krasovski, N. N., On the Theory of Optimum Control, Applied Math. and Mech. No. 23, pp.624-639, 1959. Also: On Optimum Control in the Presence of Random Disturbances, No. 24, pp. 64-79, 1960.
479. Kubota, S., Cascade Performance with Accelerated or Decelerated Axial Velocity, Report No. 56, Gas Turbine Laboratory MIT, Sept. 1959.
480. Kuhn, R. E. and Carter, A. W., Research Related to Ground Effect Machines, Presented at Symposium on Ground Effect Vehicles, Princeton University, Oct. 21-23, 1959. NASA, L-59-6087, Oct. 1959.
481. Kuhn, R. E., Static Force Tests of Several Annular Jet Configurations in Proximity to Smooth and Irregular Ground, NASA Tech. Note No. D-168, Nov. 1959.
482. Kuhn, R. E., and Naeseth, R.L., Tunnel Wall Effects Associated with VTOL--STOL Model Testing, NATO Advisory Group for Aero. Res. and Devel., Report No. 303.
483. Kuhn, R. et al, Over-Water Aspects of Ground Effect Vehicles, IAS Report No. 60-14.
484. Kurylowich, G., The Light-Line-Tethering Technique for Determining the Aerodynamic Derivatives of an Air Cushion Vehicle, UTIAS Report 110, Sept. 1965.
485. Kushner, J. J., Optimal Stochastic Control. IRE Trans. on Automatic Control, Vol.Ac-7, No. 5, Oct. 1962.
486. Lacey, E. R., A Progress Report on Hydrofoil Ships, Hovering Craft and Hydrofoil, April 1964.
487. Lacey, R. E., A Progress Report on Hydrofoil Ships, Quarterly Transactions, The Institution of Naval Architects, Vol. 107, No. 1, Jan. 1965.
488. Lamb, P. M., Hovercraft Navigation--The Operational Problem, The Journal of the Institute of Navigation, Oct. 1960.
489. Landerman, A. M., and W. R. Davison, Interim Report on Performance Evaluation of Tip-Driven Helicopter Rotors. UA Research Laboratories Report UAR-A185, Nov. 19, 1962.

490. Langly, M., Ground Effect, Some Thought Inspired by Early Data, Flight International, Air Cushion Vehicle Supplement, Mar. 28, 1963.
491. La Salle, J., and Lefschetz, S., Stability by Liapunov's Direct Method, Academic Press, New York, 1961.
492. Laverne, M. E., New Similarity Parameter for Jet Pump Cavitation, ASME Cavitation in Fluid Machinery, Winter Meeting, Chicago, 7-11 Nov. 1965.
493. Legendre, R., Influence de l'Emission d'un Jet au Bord de Fuite d'un Profil sur l'Ecoulement Autour de ce Profil, Paper presented before the Academy of Sciences, Paris, May 1956.
494. Lekkerkerker, J. G., On the Stress Distribution in Cylindrical Shells Weakened by a Circular Hole, Uitgeverij Waltman, Delft, 1965.
495. Lerbs, H., The Present Status of Theoretical Research on Ship Propellers with Respect to Its Technical Application, David Taylor Model Basin Translation 243, Jan. 1952.
496. Levy, J., The Design of Water Jet Propulsion Systems for Hydrofoil Craft, Presented before Southern California Section SNAME, May 1964.
497. Liapunov, A. A., Probleme Generale de la Stabiilite du Mouvement, Photoreproduction in Annals of Mathematics Study, No. 17, Princeton University Press, Princeton, New Jersey.
498. Liberatore, E., Morphological Charts - GEM, Bell Aerosystems Company, Report 2025-945001, Feb. 23, 1960.
499. Liberatore, E. K., GEM Activities and Bibliography, Bell Aero-Systems Co., Buffalo, N. Y., Mar. 1960.
500. Liberatore, E. K., ACV Engineering Philosophy, Air Cushion Vehicles, Flight Int., 17 Nov. 1966, p. 76.
501. Licher, R. M., Increase in Lift for Two- and Three-Dimensional Wings Near the Ground, Douglas Aircraft Co., Report SM-22615, Oct. 1956.

502. Liebermann, C. R. and Tilyou, C. E., The Unity Equation and Growth Factor, Society of Aeronautical Weight Engineers Paper No. 267, May 1960.
503. Lieberman, D. A., et al, Control of GEMs, Aerospace Eng., Dec. 1961, Vol. 20, No. 12, pp. 28-29, 50.
504. Lieblein, S., Loss and Stall Analysis of Compressor Cascades, Transaction ASME, Vol. 81D, pp. 381-400.
505. Liiva, J., A Facility for Dynamic Testing of Models of Airborne Vehicles with Ground Effect, UTIA Tech. Note No. 53, Oct. 1961.
506. Liiva, J., Gyrostabilization of an Elliptic Wing with Peripheral Jet Hovering in Ground Effect, UTIA Tech. Note No. 60, Aug. 1962, p. 8, 11 figs.
507. Lin, J. D., The Static Stability of Ground Effect Machines and Thick Jet Theory, Hydronautics, Technical Report 011-2, June 1961.
508. Lin, J. D., Static Performance Analysis at Zero Pitch Angle of a Ground Effect Machine with Variable Height Nozzles, Hydronautics Inc Report 123-2, Mar. 1962.
509. Lin, J.D., Dynamic Behavior of Ground Effect Machines in Motion over Waves, Hydronautics Report 011-4, Apr. 1962.
510. Lin, J. D., Dynamic Behavior of GEMs in Motion over Waves, J. Ship Research, Vol. 6, No. 4, April 1963, pp. 1-10.
511. Linde, D., Technological Problems, Letter report to Operations Panel, SESOC Committee (SESOC 27), Dec. 3, 1965.
512. Litherland, D. E., Progress Report of Navy Contract Nonr 3173 GEM Control Systems Study, AiResearch Manufacturing Company of Arizona Report Ap-5073-R, May 1964.
513. Litherland, D., Analog Computer Simulation of Ground Effect Machines, Hovering Craft and Hydrofoil, Nov. 1964.
514. Litherland, D. E., and Norgren, W. M., GEM Control System Study, Final Engineering Report, Air Research Mfg. Co., Phoenix, Ariz., Ap-5078-R, AD-62094, Aug. 1965 .

515. Ljungstrom, O., GEM Design Philosophy for an Over-Water, Over-Ice Vehicle, IAS Paper No. 61-47, Jan. 1961.
516. Lockwood, V. E., Effect of Ground Board Height on the Aerodynamic Characteristics of a Lifting Circular Cylinder Using Tangential Blowing from Surface Slots for Lift Generation, NASA Tech. Note No. D-969, Oct. 1961, p. 23.
517. Longuet-Higgins, M. S., The Statistical Distribution on the Heights of Sea Waves, Journal of Marine Research, Vol. 11, 1952.
518. Loos, J. E., Feasibility of Ground Effect Airborne Logistics Vehicles, Convair Report, Presented at the Symposium on Ground Effect Phenomena, Princeton University, Oct. 21-23, 1959.
519. Loos, J. E., and Hopkins, R. M., Ground Rules Report for Study of Impact Loads and Motions of Ground Effect Machines, Convair Report ZP-311, Sept. 6, 1960.
520. Lorenz, E., Comparison between Two Methods of Marine Propulsion, Great Lakes Section, Society of Small Craft Designers, June 1963.
521. Lundgaard, B., and Mathers, H. M., PGM 84 Class Aluminum Gunboat Machinery and Controls, AIAA/SNAME Advance Marine Vehicles Meeting, Paper No. 67-357, Norfolk, Virginia, May 22-24, 1967.
522. Mack, L. R., Theoretical and Experimental Research on Annular Jets over Land and Water, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
523. Mack, L. R., and Ben Chie Yen, Theoretical and Experimental Research on Annular Jets over Land and Water, Princeton Symposium, Oct. 1959.
524. Mack, L. R., and Malsy, J., Experimental Studies on an Annular Jet, State Univ. of Iowa, Iowa Inst. of Hydraulics Res., Contract Nonr-1509 (031), Sept. 1960, p. 16.
525. Magnus, R. J., Use of Vortices in Calculation of Bottom Pressures of Annular Jet GEMs, General Dynamics, Convair Fluid Dynamics ERR-SD-061, Mar. 1961.
526. Mair, M. A., The Physical Principles of Hovercraft, J. RAes Oct. 1964, Vol. 68, pp. 683-691.

527. Mair, W. A., The Physical Principles of Hovercraft, Hovering Craft and Hydrofoil, Vol. 4, No. 3, Dec. 1964.
528. Mantle, P. J., On the Dynamic Heave Motion of Single Peripheral Jet GEMs over an Undulating Surface, Submitted to IAS, now AIAA, July 1962. See also Vehicle Research Corporation Paper No. 9, May 1962.
529. Mantle, P. J., A Parametric Evaluation of the Design and Performance of Surface Effect Ships, General Dynamics/Electric Boat Report P 413-65-211, Dec. 29, 1965.
530. Mantle, P. J., Interface Craft for Future Transportation, ASME/IEEE/ASCE National Transportation Symposium, May 1966.
531. Mantle, P. J., Some Design Aspects of Air Cushion Craft, International Congress of Subsonic Aeronautics, The New York Academy of Sciences, April 1967.
532. Martin, G. W., & Ortell, A. R., Design and Development of GEMs Using Recirculation. SAE Paper No. 588B, for Meeting Oct. 8th-12th, 1962, p. 19.
533. Martin, M., Turpin, F. J., The Effect of Surface Waves on Some Design Parameters of a Hydrofoil Boat, Hydronautics Inc., Tech. Report 001-3, Jan. 1961.
534. Martin, M., Equations of Motion for Hydrofoil Craft, Hydronautics Inc., Techn. Report 001-9, Mar. 1962.
535. Martin, M., The Stability Derivatives of a Hydrofoil Boat- Part I & II, Hydronautics Inc., Techn. Report 001-10, Jan. 1963.
536. Martin, M., Hydraulic Requirements of Hydrofoils, Hovering Craft and Hydrofoil, Feb. 1964.
537. Martin, P. and McGee, P. J., Static Rig and Flight Tests of the Avrocar Fitted with the Focusing Ring Control, Avro Aircraft Ltd. Report No. AVRO/SPG/TR 311, Feb. 1960.
538. Martin, P., The Hovercraft in Law, Air Cushion Vehicles, Flight Int. , 30 Dec. 1965, p. 85.

539. Martin, P., Results of Static and Flight Tests, Avro Aircraft Ltd. Report No. 500/AERO Test/409.
540. Martin, Usab, Intrusion - Versatile New Process for Thermoplastics, Western Plastics Technical Report No. 66, Oct. 1960.
541. Martinelli, R. D., and Nelson, D. B., Prediction of Pressure Drop During Forced-Circulation Boiling of Water, Transactions ASME, 70, Aug. 1948, pp. 695-702.
542. Masak, M., On the Lateral Instabilities of Aircraft Due to Parametric Excitation, Univ. of Toronto, IAS, Tech. Notes, No. 86, Jan. 1965.
543. Mason, H. C., Department of the Navy, Bureau of Ships, Air Cushion Ship (ACV) Development Program, Memo for Assistant Secretary of the Navy (Research and Development), Nov. 1, 1965, SESOC 35.
544. Matthews, A. B., and Wosser, J. L., Ground Proximity: A Critical Review, IAS Report No. 59-121.
545. McCain, D. L., An Automatic System for Lateral Control of GEM III, Kansas Engineer, Vol XLIX, No. 4, May 1965, pp. 10-12.
546. McCain, D. L., Lateral Acceleration Sensor for Ground Effect Machines, U.S. Patent Disclosures, June 7, 1965.
547. McCarthy, E. W., Skirt Material Problems, Report to the Hull Panel, Jan. 5, 1966, SESOC 86.
548. McDaid, J. W. C., The Efficiency of Jet Curtains, Proc. of Res. Symposium on ACVs held at University College, Swansea, July 21-23, 1964, pp. 41-52.
549. McDaid, J. W. C., The Efficiency of Jet Curtains, Hovering Craft and Hydrofoil, Aug. - Sept. 1964.
550. McDaid, J. W. C., The Efficiency of Jet Curtains, MS Thesis, Faculty of Applied Science and Technology, Queen's University, Belfast, June 1965.
551. McGanka, S. W., Lt. USN., Service Evaluation of the Control System Installed Onboard the Hydrofoil Ship HIGH POINT, PCH-1, Proceedings, Ship Control Systems Symposium, USN Marine Engineering Laboratory, Nov. 1966.

552. McGee, P.J., Thrust Augmentation Model Phase III Tests, W.S. 606A, Avro Aircraft Ltd, Report No. 600/AERO TEST/15, July 1960.
553. McGee, P.J., Avrocar Continuation Program Data Report for 1/20th Scale Avrocar Model, Avro Aircraft Ltd. Report No. 500/AERO TEST/410.
554. McKee, R., The Development of the Equations of Motions of the Avrocar, Avro Aircraft Ltd. Report No. AVRO/SPG/TR 244.
555. McKee, R., Air Cushion Effect Tests, Avro Aircraft Ltd. Report No. TR 3.
556. McLeavy, R., Focus on the SR.N3, Hovering Craft and Hydrofoil, Nov. - Dec. 1963.
557. McNeil, R.W. and G. Robertson, Test of Truck, Amphibious, 2-1/2 to 4-Ton, 6x6, XM-147-E2 SUPERDUKW, Aberdeen Proving Ground Development and Proof Services Report No. DPS-TT3-730-4, March 1958.
558. McNeil, R.W., Report on Truck, Amphibious, 2-1/2 Ton, 6x6, XM-143-E3 SUPERDUKW, Aberdeen Proving Ground Development and Proof Services, Report No. IT-5118-1, June 1959.
559. Meier, H.A., Preliminary Design of a Catamaran Submarine Rescue Ship, ASR, Paper No. 67-359, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, May 22-24, 1967.
560. Mensforth, E., The Future of Hovercraft, Hovering Craft and Hydrofoil, Nov. 1966.
561. Merz, K.A., Transverse Flow Fan, Product Engineering, April 1, 1963.
562. Meyers, G.R., Observations and Comments on Hydrofoils, Hydrofoil Symposium No. 2A, SNAME, Seattle, May 1965.
563. Miller, H.J., et al, Determination of Optimised Propellers for GEMs. Kellet Aircraft Corp, Willow Grove, Pa., Tech. Report, May - Nov. 1962.
564. Miller, M.J., Crouse and Sandercook, Summary of Experimental Investigation of Three Axial Flow Pump Rotors Tested in Water, ASME Paper No. 66-WA-FE-24, Winter Meeting, 27 Nov. - Dec. 1966.

565. Mills, R. G., Important Problems in the Propulsion Area, Letter to J. W. Sawyer, Chairman of the Propulsion Panel, Nov. 19, 1965, SESOC 31.
566. Milman, J. W., and Fisher, R. E., The Canadian Hydrofoil Programme, Hovering Craft and Hydrofoil, Apr. 1965.
567. Minassian, B., Analytical Study of Shrouded Propellers, Longren Aircraft Report No. LR-501, May 3, 1956.
568. Miyashita, J., Ando, S., and Terai, K., Summary of the Model Tests for Simple Ram Wing KAG-3, Hovering Craft and Hydrofoil, Aug. - Sept. 1964.
569. Mizen, N. J., A Review of Current and Future Amphibious Surface Vehicles, Vol. I, Vehicle Review, Cornell Aeronautical Laboratory, Oct. 31, 1966.
570. Moffet, R. R., Advanced Concepts in Ocean Transport Capability: The Container/barge Quandary, Paper No. 67-356, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, May 22-24, 1967.
571. Moller, P. S., An Investigation of a Radial Diffuser Icing Using Incompressible Flow Without Swirl, McGill University, Montreal, Canada, July 1963.
572. Monopoli, R. V., Synthesis Techniques Employing the Direct Method, Trans.IEEE, Automatic Control, July 1965.
573. Monopoli, R. V., Discussion on Two Theorems on the Second Method, Trans.IEEE, Automatic Control, Jan. 1966.
574. Moralevich, Y., Soviet Hydrofoils, Hovering Craft and Hydrofoil, News Supplement, May and June 1962.
575. Morris, C. F., Sidewall Hovercraft, Trans. Inst. Engrs., and Shipbldrs. in Scotland, 1962-63, Vol. 106, pt. 2, pp. 57-96, discussion, pt. 3, pp. 97-104.
576. Mossman, E. A., and Randall, L. M., An Experimental Investigation of the Design Variables for NACA Submerged Duct Entrances, NACA RMA 7130, Jan. 1948.
577. Munk, M. M., Aerodynamics Forces on Airship Hulls, NACA, Report 184, 1924.

578. Murthy, T. K. S., The Wave Resistance of a Compartmented Cushion, Hovering Craft and Hydrofoil, Aug. 1966.
579. Nakonechny, B. V., Breitenstein, K. O., Cost Comparison and Trade-offs for Surface Ships, Air Cushion Vehicles, and Aircraft in Naval Transport/Supply Missions (U), Preliminary Study, DTMB Report C-2123, Nov. 1965 (CONFIDENTIAL).
580. Nakonechny, B. V., Survey of Present State of Technology and Practical Experiences with Air Cushion Vehicles, Department of the Navy, DTMB, Report 2203, July 1966.
581. Napolitano, G., On the Laminar Mixing of Annular Jets, J. Aerospace Sci., May 1962, Vol. 29, No. 5, pp. 605-606.
582. Nay, H. O., The Hughes Hydrostreak, For Presentation at Tri-Service GEM Conference, Fort Myer, Va., Nov. 16th-18th, 1960.
583. Neal, M., The Hovercraft Pioneers, Hovering Craft and Hydrofoil, Aug. 1967.
584. Neary, R. J., Radial Diffuser Study, General Dynamics Corporation Electric Boat Divisions, Dec. 30, 1963.
585. Neumann, G., On Ocean Wave Spectra and a New Method of Forecasting Wind-Generated Seas, Technical Memorandum No. 43, Beach Erosion Board, Corps of Engineers, 1953.
586. Newman, B. G., Cushion Drag, Canadair Ltd., Montreal, RAD-212-100, May 1965.
587. Newman, J. and Poole, F. A., The Wave Resistance of a Moving Pressure Distribution in a Canal, Schiffstechnik, Vol. 9, No. 45, Jan. 1962.
588. Newman, J., The Damping of an Oscillating Ellipsoid Near a Free Surface, DTMB, Report 1500, Feb. 1962.
589. Newman, J., The Exciting Forces on a Moving Body in Waves, DTMB, Report 2159, Feb. 1966.
590. Nichols, M. R. and Pierpont, P. K., Preliminary Investigation--Submerged Air Scoop Utilizing Boundary Layer Suction for Increased Pressure Recovery, NACA TN 3437, Apr. 1955.

591. Nixon, W. B., and Sweeney, T. E., Some Qualitative Characteristics of a Two-Dimensional Peripheral Jet., Princeton Univ., Dept. of Aero. Eng. Report No. 484, Sept. 1959.
592. Nixon, W. B., and Sweeney, T. E., A Review of the Princeton Ground Effect Program, Proceedings of Symposium on Ground Effect Phenomena, Princeton University, Oct. 1959, pp. 45-46.
593. Nixon, W. B., and Sweeney, T. E., Preliminary Flight Experiments with the Princeton University 20-ft. Ground Effect Machine, Aero/Space Engineering, Vol. 19, No. 4, pp. 32-36, 58, Apr. 1960.
594. Nixon, W. B., Maneuvering Capability of an Annular Jet Ground Effect Machine, Princeton University, Report No. 515, May 1960.
595. Norgren, W., Perrone, G., and Senoo, Y., GEM Propulsion System Study, Engineering Report, prepared under Contract Nonr 3024, May 5, 1964.
596. Norman, L. W., and Norgren, W. M., Progress Report of U.S. Navy Contract Number Nonr 3173/00/, GEM Stability and Control Study, AiResearch Manufacturing Company of Arizona Report AP-5018-R, July 1960.
597. Norman, L. W., Ground Effect Machine Propulsion System Design Considerations, IAS Report No. 61-48, Jan. 1961.
598. Norstrud, H., Wind Tunnel Tests with a Blowing Channel Flow Model in Ground Effect, Vehicle Research Corp., Working Paper No. 57, Feb. 1963, SESOC 45.
599. Norstrud, H., Wind Tunnel Tests with a Blowing Channel Flow Model in Ground Effect, Vehicle Research Corp., Working Paper No. 70, July 1963, SESOC 44.
600. Oakley, O. H., Hydrofoils - A State of the Art Summary, Institute of Aeronautical Sciences, Proceedings, National Meeting on Hydrofoils and Air Cushion Vehicles, Sept. 17-18, 1962.
601. Ochi, M., and Schwartz, F. M., Two-Dimensional Experiments on the Effect of Hull Form on Hydrodynamic Impact, DTMB Report 1994, May 1966.
602. Oehman, W. I., and Suddath, J. H., State-Vector Control Applied to Lateral Stability of High Performance Aircraft, NASA TND-2894, July 1965.

603. Ogilvie, T. F., Recent Progress Toward the Understanding and Prediction of Ship Motions, Fifth Symposium on Naval Hydrodynamics, Norway, Sept. 1964.
604. Ortell, A., Recirculation Principle for Ground Effect Machine Two-Dimensional Tests, Martin Marietta Corporation, Orlando Aerospace Division Report OR 2073, Jan. 1962, TECREC 62-74, U. S. Army Transportation Research Command, Fort Eustis, Virginia.
605. Otis, J. H., and Goodson, K.W., Low Speed Wind Tunnel Investigation of an Annular Jet Configuration in Ground Proximity, NASA Tech. Note No. D-1779, Apr. 1965, p. 47, 6 refs.
606. Owen, K., VA-2 Visits Amsterdam, Air Cushion Vehicles, Flight Int., 23 May 1963, p. 76-77.
607. Palmer, I., Hydrofoil Ships, International Science and Technology, Mar. 1962.
608. Palmer, I. Hydrofoil Seacraft with Gas Turbines, Mechanical Engineering, July 1962, pp. 36-40.
609. Papir, A. N., Axial Pumps of Waterjet Propulsion Systems, Shipbuilding Publishing House, translation, Leningrad, 1965.
610. Park, F., Near-Surface Vehicles, International Science and Technology, Feb. 1962, SESOC 37.
611. Park, F., Hydrofoil Ships, International Science and Technology, Mar. 1962.
612. Pascoe, N. P., Some Applications of Fiberglass Reinforced Plastics to the Design of Hydrofoil Boats and Hovering Craft, Hovering Craft and Hydrofoil, News Supplement, May and June 1962.
613. Pashin, V. M., Area for the Effective Use of Hydrofoil Vessels and Hovercraft, Hovering Craft and Hydrofoil, Oct. 1964.
614. Pashin, V. M., The Economic Indices of Passenger-Carrying Air Cushion Vehicles, Hovering Craft and Hydrofoil, Sept. 1965.
615. Patruleag, N. N., Andrei, St. and Rado, C., Aerodynamic Calculation of Ground Effect Vehicles, In French, Rev. Mecan Appl., Apr. 1961, Vol. 6, No. 1, pp. 91-105.

- 616. Patterson, G.N., Note on the Design of Corners in Duct Systems, A.R.C., R. and M. No. 1773, Oct. 1936.
- 617. Patterson, G.N., Modern Diffuser Design, Aircraft Engineering, Sept. 1938.
- 618. Paulling, J.R., and Rosenberg, R.M., On Unstable Ship Motions from Nonlinear Coupling, J. of Ship Research, Vol. 3, No. 1.
- 619. Payne, P.R., An Introduction to Ground Effect Machine Recirculation Theory, Frost Engineering Report No. 142-2, Jan. 1963.
- 620. Payne, P.R., An Introduction to Ground Effect Machine Recirculation Theory, Frost Engineering Report No. 142-6, Feb. 1963.
- 621. Payne, P.R., A Note on the Optimum Thickness and Angle of an Annular Jet with Zero Translational Velocity, Frost Report No. 142-5, Feb. 1963.
- 622. Payne, P.R., Viscous Mixing of Two Dimensional Jets with Particular Reference to Jets in Ground Proximity, Frost Engineering Report No. 197-4, April 1964.
- 623. Payne, P.R., A Contribution to the Theory of Thrust Augmentors, Frost Engineering Report 197-2, Aug. 1963.
- 624. Payne, P.R., The Influence of Leakage on the Performance of an Annular Jet, GEM. Frost Report No. 197-3, Sept. 1963.
- 625. Payne, P.R., Preliminary Studies of the Application of Peripheral Fans in Ground Effect Machines, Frost Engineering Report 142-18, Oct. 1963.
- 626. Payne, P.R., Peripheral Fans for GEMs, AIAA Preprint 64-171, 1964.
- 627. Entry deleted.
- 628. Pegg, R.J., and Connor, A.B., Effects of Control Response Characteristics on the Capability of a Helicopter as a Gun Platform, NASA Technical Note D-464, Sept. 1960.
- 629. Perrone, G.L., Senoo, Y., and Dussourd, J., Design and Test of Fan Diffuser Bend System Suitable for GEM, SAE Paper No. 588c, for Meeting Oct. 8-12, 1962.

630. Entry deleted.
631. Peters, H., Conversion of Energy in Cross-Sectional Divergences Under Different Conditions of Inflow, NACA RM L56F05, p. 46.
632. Petrie, D.M., Operational and Developmental Experience on the U.S. Navy Hydrofoil, HIGH POINT, Paper presented to AIAA/USN Marine Systems and ASW Conference, Mar. 10, 1965.
633. Pfisterer, V.R., The Static Performance of an Aspect Ratio 2/3 GEM, Hydronautics Inc., Tech. Report O11-5, Jan. 1964.
634. Phillips, B., Southampton Symposium Part I, Air Cushion Vehicles, Flight Int., April 25, 1963, p. 54.
635. Phillips, B., Southampton Symposium Part II, Air Cushion Vehicles, Flight Int., May 23, 1963, p. 78.
636. Phillips, B., D.2-002, A Sidewall Craft of Great Promise, Air Cushion Vehicles, Flight Int., June 27, 1963, p. 92.
637. Phillips, O.M., The Prospects for Magnetohydrodynamic Ship Propulsion, J. of Ship Research, Mar. 1962, pp. 43-51.
638. Pierson, J.D., The Penetration of Fluid Surface by a Wedge, Stevens Experimental Towing Tank, S.M.F. Fund Paper No. FF-3, July 1950.
639. Pierson, W.J., Jr., and St. Denis, M., On the Motions of Ships in Confused Seas, Transactions, The Society of Naval Architects and Marine Engineers, Vol. 61, New York, 1953.
640. Pierson, W., Jr., Newman, G., and James, R.W., Practical Methods for Observing and Forecasting Ocean Waves, U.S. Navy Hydrographic Office Publication H.O. 603, 1955.
641. Pierson, W.J., Jr., and Tick, L.J., The Accuracy and Potential Uses of Computer-Based Wave Forecasts and Hindcasts for the North Atlantic, Proceedings of the Second Symposium on Military Oceanography with Willard J. Pierson Letter of Oct. 19, 1965, to SESOC, SESOC 40.
642. Pinnes, R.W., A Powerplant Man's Look at the Ground Effect Machine, R.D.R., 1958.
643. Pinnes, R.W., The Propulsion Aspect of Ground Effect Machines, IAS Report No. 60-13.

644. Pistolesi, E., Ground Effect - Theory and Practice, NACA TM 828.
645. Poisson-Quinton, P., Two Dimensional Studies of a Ground Effect Planform, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959, pp. 1-22.
646. Poisson-Quinton, P., Influence of Ground Proximity on the Aerodynamic Characteristics of Jet V/STOL Aircraft, AGARDograph No. 46, June 1960.
647. Poisson-Quinton, P., Etude en Courant Plane d'une Plate-forme Volante a Effet de Sol, Onera, Note Techn. 57, 1960.
648. Poisson-Quinton, P. and Bevert, A., Principe et Applications des Plate-formes Volantes a Effet de Sol, Bulletin Assoc. Tech. Maritime Aeronaut No. 60, 1960, pp. 61-89.
649. Poisson-Quinton, P. and Bevert, A., Les Plate-formes Volantes a Effet de Sol, I - Principe et Performances, Docaero, 65, 1960; II - Applications Maritimes, Docaero, 67, 1961.
650. Poisson-Quinton, P., and Bevert, A., Some Aerodynamic Aspects of Ground Effect, SAE Paper No. 508A, for Meeting April 3-6, 1962.
651. Postle, R.S., and Mankuta, H., Performance Comparisons of Propulsion Systems for a Peripheral-Jet GEM, Supplement to Proceedings of the National Meeting on Hydrofoils and Air Cushion Vehicles, Washington, D.C., Sept. 17-18, 1962.
652. Potter, W.T., The Surface Effect Craft in Maritime Commerce, Proceedings on the Ground Effect Machines Forum, IAS 30th Annual Meeting, Jan. 22-24, 1962.
653. Potter, W.T., Air-Riders in the United States, Hovering Craft and Hydrofoil, Aug. and Sept. 1962.
654. Preston, C., Marine Gas Turbines, Air Cushion Vehicles, Flight Int., June 16, 1966, p. 109.
655. Presyn, R.R., On the Aerodynamic Design of Propellers and Duct Systems for GEMs, Kellet Aircraft Corp. Report 208A90-1, Appendix -- The Test Programme, Jan. 15, 1962.
656. Price, H., Development Testing of M-185 Aquajet in the Penn-Yan Boat, Curtiss-Wright Corporation, WAD, Report No. 2 of Project XE-726, Jan. 17, 1963.

657. Prosnak, W.J., and Kucharcey, K.P., The Influence of the Ground on the Aerodynamic Properties of an Airfoil with Jet Flap, *Archiwum Mechanik, Stosowanej*, Vol. XI, No. 4, 1959.
658. Radford, R.C., Development of a Propulsion System for Powering a Self-Propelled GETOL Model Aircraft, UTIA Tech. Note No. 64.
659. Ranzenhofer, H., Hydrofoil Research Ship AG, EH, Autopilot Development Program-- Five-Degree-of-Freedom Analog Computer Simulation, Grumman Report DA M23-335.1, July, 1962.
660. Ranzenhofer, H., Hydrofoil Research Ship AG, EH, Autopilot Development Program--Preliminary Computer Study Part 2, Grumman Report DA M23-335.2, Mar. 1963. Confidential.
661. Ranzenhofer, H., Hydrofoil Ship FRESH-1, Stability and Control Study, Grumman Report DA M51-200.1, April 1963.
662. Ranzenhofer, H., Hydrofoil Ship FRESH-1, Analog Computer Study, Grumman Report DA M51-200.2, May 1963.
663. Ranzenhofer, H., An On-Board Autopilot Simulator for Hydrofoil Craft-- Five-Degree-of-Freedom Analog Computer Study, Grumman Report ADR 06-11-64.1, Dec. 1964.
664. Ranzenhofer, H., Development of an Autopilot for the Dolphin Hydrofoil, AIAA/SNAME, Paper No. 67-353, May 1967.
665. Rapson, J.E., HDL'S Technical Group, Hovershow, Hovering Craft and Hydrofoil, 1966.
666. Rasmussen and Chisholm, Calculation of Pressure Distribution of Inlets for Hydrofoil Craft Waterjet Propulsion Systems, TM 55-21-17, LMSC/805078, April 1965.
667. Lord Rayleigh, John William Strutt, On the Instability of Jets, *Proceedings of the London Mathematical Society*, Vol. 10, No. 1, 1878.
668. Reissner, H., and Morduchow, M., Reinforced Circular Cutouts in Plane Sheets, NACA Technical Note TN-1852, April 1949.
669. Rethorst, S., and Royce, W.W., Lifting Systems for VTOL Vehicles, IAS Report No. 59-123.

670. Rethorst, S., VRC Surface Effect Ship COLUMBIA, Proceedings of National Meeting on Hydrofoils and Air Cushion Vehicles, Washington, D.C., Sept. 1962.
671. Rethorst, S., and Royce, W.W., The Annular Jet and Thrust Augmentation, Vehicle Research Corp.
672. Richards, E.J., and Sharland, I.J., Hovercraft Noise and its Suppression, J. RAES, Vol. 69, No. 654, June 1965, pp. 387-398.
673. Richter, H., Empirical Equations of Bend Losses, Forschung Geb. Ing. - Wesen 338, 1930.
674. Rijken, H., and Vossen, G., Structural Tests with Ground Effect Machinery While Ditching Into Still Water and Into Waves, Netherlands Ship Model Basin Publication No. 207, April 1961.
675. Robertson, J.M., and Ross, D., Effects of Entrance Conditions on Diffuser Flow, Transaction of American Society of Mechanical Engineers.
676. Rodwell, R.R., Air-road to the Isles, Air Cushion Vehicles, Flight Int., Sept. 23, 1965, p. 34.
677. Rodwell, R.R., The American Scene, Air Cushion Vehicles, Flight Int., Dec. 30, 1965, p. 78.
678. Rodwell, R.R., The First Internationals, Air Cushion Vehicles, Flight Int., April 21, 1966, p. 47.
679. Rodwell, R.R., How Big Is Britain's Lead? Air Cushion Vehicles, Flight Int., June 16, 1966, p. 74.
680. Rodwell, R.R., New Ferries - To Match New Trains, Air Cushion Vehicles, Flight Int., Oct. 20, 1966, p. 57.
681. Rodwell, R.R., In Action In Anger, Air Cushion Vehicles, Flight Int., Jan. 19, 1967, p. 5.
682. Rodwell, R.R., The Military Scene-1: The Army's Early Plans, Air Cushion Vehicles, Flight Int., Feb. 23, 1967, p. 24.
683. Rodwell, R.R., Aerotrains Advancing on Two Fronts, Air Cushion Vehicles, Flight Int., May 18, 1967, p. 66.

684. Rodwell, R.R., Apethorpe Rally Review, Air Cushion Vehicles, Flight Int., June 22, 1967, p. 75.
685. Rohlik, H.E., Kofskey, M.F., Allen, H.W., and Herzig, H.Z., Secondary Flows and Boundary Layer Accumulations in Turbine Nozzles, NACA Report 1168, 1954.
686. Rosenbaum, J.D., and Jensen, W.R., Water Impact of the Mercury Capsule, Correlation of Analysis with NASA Tests, Grumman Aircraft Eng. Corp. Report ADN-02-08-62.1.
687. Rosenhead, L., The Lift of a Flat Plate Between Parallel Walls, Proc. of the Royal Society, Series A, 1931.
688. Roshko, A., On the Drag and Shedding Frequency of Two Dimensional Blunt Bodies, NACA TN-3169, July 1954.
689. Roshko, A., On the Development of Turbulent Wakes From Vortex Sheets, NACA Report 1191, 1954.
690. Rossell, H.E., and Chapman, L.B., Principles of Naval Architecture, SNAME Publications, Vol. II, 1955.
691. Entry deleted.
692. Royce, W.W., and Rethorst, S., Translational Characteristics of GEMs, Inst. Aero Sci. Paper 61-79, USA, 1961.
693. Rozonauer, L.I., L.S. Pontriagyn's Maximum Principle in the Theory of Optimum Systems, I, II, III, Automatika i Telemekanika, Vol. 20, Oct., Nov., and Dec. 1959.
694. Russel, H.E., First Coast Guard High Endurance Cutter in Twenty Years - The Coast Guard Cutter Hamilton Powered by CODAG Plant, USNE Journal, Oct. 1965.
695. Russo, V.L., Turner, H., and Wood, F.W., Submarine Tankers, Transactions of the Society of Naval Architects and Marine Engineers, Vol. 68, 1960, p. 693.
696. Rustom, G., The ACV, a Legal Enigma, Hovering Craft and Hydrofoil, Mar. 1966.
697. Sachs, D.G., Ground Cushion Flow Visualization Studies, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.

698. Sandover, J.A., Future Air Cushion Craft Studies, Hovering Craft and Hydrofoil, Aug.-Sept. 1964.
699. Sandover, J.A., The Jet-Pump as an Alternative Means of Providing Lift in Air Cushion Vehicles, Part I - Incompressible Flow Theory for Optimum Mass Flow Augmentors and Comparison with Experiments, Aug. 1965, Prepared by Norman K. Walker Associates Inc., Aug. 1965.
700. Sargent, E.R., Static Performance of Zero Ground Pressure Machines, Hiller, Report No. ARD-TN-15.
701. Sargent, J.F., United States Army Shallow Draft Boat Program, AIAA/SNAME Advance Marine Vehicles Meeting, Paper No. 67-358, Norfolk, Virginia, May 22-24, 1967.
702. Sarony, P., Hoverports - a Planner's Notes, Hovering Craft and Hydrofoil, June-July 1966.
703. Sarony, P., Not Quite Hovering, Air Cushion Vehicles, Flight Int., June 22, 1967, p. 80.
704. Saunders, H.E., Hydrodynamics in Ship Design, Vol. I and II, The Society of Naval Architects and Marine Engineers, 1957.
705. Savitsky, D., and Lueders, D., Motions of Submerged Bodies in Regular and Irregular Waves, Schifftechnik, Hamburg, June 1962.
706. Savitsky, D., Hydrodynamic Design of Planing Hulls, Davidson Laboratory Report - No. 1000, Stevens Institute of Technology.
707. Schade, R., Ground Interference Effects, NASA Conference on V/STOL Aircraft, Langley Research Center.
708. Scherer, J., and Webster, W., Preliminary Investigations of 3,000-Ton CAB Ship, Hydronautics Inc., Prepared for SESOC Committee (SESOC 82), Feb. 1966.
709. Schertel, H., Design and Operating Problems of Commercial Hydrofoil Boats, Hovering Craft and Hydrofoil, Vol. I, No. I, Oct. 1961.
710. Schertel, H., Hydrofoils - The Changing Scene, Hovering Craft and Hydrofoil, Sept. 1963.
711. Schertel, H., The First Air-Stabilized Supramar Hydrofoil Craft Built by Westermoen Shipyard, Hovering Craft and Hydrofoil, Mar. 1967.

712. Schiebe, F.R., and Wetzel, J.M., Further Studies of Ventilated Cavities on Submerged Bodies, University of Minnesota, St. Anthony Falls Hydraulic Laboratory Project Report No. 72, Oct. 1964.
713. Schmidt, H.F., Theoretical and Experimental Study of Condenser Scoops, Journal ASNE, Vol. 42, 1930, pp. 1-38.
714. Schuster, S., et al., On Certain Problems of Waterjet Propulsion, DTMB Translation 306, Aug. 1962.
715. Scott, W.J., Asymmetry of Annular-Jet Flow in Ground Proximity, UTIA Tech. Note No. 61, May 1962.
716. Selwood, J.L.B., Miscellaneous Notes on Surface Effect Ships, Letter to Project Manager, Selwood Research Inc., SESOC Committee (SESOC 76), Jan. 14, 1966.
717. Senoo, Y., GEM Propulsion System Study, AiResearch Report APP-5051-R, Dec. 1961.
718. Senoo, Y., Considerations on the Lifting Fan-Duct Systems of Ground Effect Machines, Proceedings of the National Meeting on Hydrofoils and Air Cushion Vehicles, Washington, D.C., Sept. 1962, pp. 58-64.
719. Senoo, Y., Progress Report of Navy Contract Nonr 3024 GEM Propulsion System Study, AiResearch Division, Garrett Corp., Dec. 7, 1962.
720. Senoo, Y., GEM Propulsion System Study, AiResearch Mfg. Co., Phoenix, Ariz., AP-5062-R, Dec. 1962.
721. Shan-Fu Shen, Effect of Jet Mixing on Peripheral Jet Vehicles and Fundamentals of Stability of Peripheral Jet Vehicles, Syst. Eng. Div. Pneumodynamics Co., Bethesda, Maryland, Vol. 3, Nov. 1960.
722. Shang-Lun-Chuang, Experimental Investigation of Rigid Flat Bottom Body Slamming, DTMB Structural Mechanics Lab, R and D Report 2041, Sept. 1965.
723. Shaw, R.A., The Application of Hovercraft, Hovering Craft and Hydrofoil, Mar. 1967.
724. Shearer, J.L., and Brickman, A.D., Pure Fluid Control for Hydrofoil Boat, Hovering Craft and Hydrofoil, Feb. 1965.

725. Sheets, H.E., The Engineering of Submarines, Mechanical Engineering, Jan. 1962, p. 37.
726. Sheets, H., and Mantle, P., Air Cushion Craft Propulsion, AIAA Paper No. 66-731, Los Angeles, California, Aug. 1966.
727. Sheets, H.E., and Mantle, P.J., Air Cushion Craft Propulsion Part I, Air Cushion Vehicles, Flight Int., Sept. 22, 1966, p. 43.
728. Sheets, H.E., and Mantle, P.J., Air Cushion Craft Propulsion Part II, Air Cushion Vehicles, Flight Int., Oct. 20, 1966, p. 64.
729. Shields, C.E., Open-Water Performance Characteristics of Several Semi-Submerged Supercavitating Propellers, DTMB Hydro-mechanics Laboratory Test Report 193-H-01, Dec. 1966.
730. Shipley, E., Hydrofoil Transmission, G.E. Gear Department, Lynn, Mass., Sept. 18, 1962.
731. Sigurdsson, G., Research on Annular Nozzle Type GEM Operating over Water: Non-Uniformity of Jet Momentum, California Univ., Berkeley Hydraulic and Eng. Lab., Mar. 1962.
732. Silverman, S., Test Results of an Annular Jet Ground Effect Vehicle. Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
733. Singleton, W.T., Ride and Handling - The Ergonomics Approach, Automotive Design Engineering, July 1963.
734. Smiley, R.F., A Semi-Empirical Procedure for Computing the Water-Pressure Distribution on Flat and V-Bottom Prismatic Surfaces During Impact on Planning, NACA TN 2583, Dec. 1951.
735. Smith, M.S., Tomorrow's Water Craft Will Use Water Jets - How and Why, Great Lakes Section of Society of Small Craft Designers, April 1965.
736. Smith, R.E., Studies of Ground Effect on a 60° Inwardly Inclined Annular Jet, Part II, UTIA Tech. Note No. 47, May 1961, p. 29, 24 figs.
737. Smith-Cox, S.C., Across the Solent 1964, Hovering Craft and Hydrofoil, Cot. 1964.

738. Snyder, C.M., Wiegel, R.L., and Bermel, K.J., Laboratory Facilities for Studying Water Gravity Wave Phenomena, Proc. Sixth Conf. on Coastal Engineering Instruments, Council on Wave Research, The Engineering Foundation, 1958, pp. 231-251.
739. Song, C.S., Supercavitating Flat-Plate with an Oscillating Flap at Zero Cavitation Number, University of Minnesota, St. Anthony Falls Hydraulic Laboratory, Technical Paper No. 52, Series B, Nov. 1965.
740. Southcote, M.F., State of the Art Summary, Air Cushion Vehicles, Aeronutronic Report No. U-926, June 1960.
741. Southcote, M.F., Status of GEM Developments, S.A.E. International Congress, Jan. 1961.
742. Southcote, M.F., and DeVault, R.T., Requirements for Research Test GEM's, Proceedings of the Ground Effect Machines Forum, IAS 30th Annual Meeting, Jan. 22-24, 1962.
743. Spangler, S.B., Theoretical Prediction of Vortex Interference Effects on the Static Stability of a High Speed Submarine, Report 157, Vidya Project, Palo Alto, Cal., Feb. 1965.
744. Spreeman, K.P., and Sherman, I.R., Effects of Ground Proximity on the Thrust of a Simple Downward Directed Jet Beneath a Flat Surface, NACA Report No. TN 4407.
745. Sprenger, H., Experimental Investigations of Straight and Curved Diffusers, Translated and Issued by Technical Information and Library Service, Ministry of Aviation, Switzerland, Original, 1959.
746. Sridhar, K., An Experimental Investigation of the Flow in the Behing Two Dimensional Jet Sheets Bounding a Cavity, UTIA Tech., Note No. 94, Aug. 1963.
747. See entry following 766.
748. Stanton-Jones, R., Design Problems of Ground Effect Machines, IAS Report No. 61-27.
749. Stanton-Jones, R., Some Design Problems of Hovercraft, IAS Paper No. 61-45, Jan. 1961.
750. Stanton-Jones, R., Hovercraft - Some Design Problems, Aerospace Engineering, Feb. 1961.

751. Stanton-Jones, R., The Development of the Saunders-Roe Hovercraft SRN-1, Saunders-Roe Ltd., Report No. TP-414.
752. Stark, R.E., and Winter, D.H., Structural Load Criteria for Navy Hydroskimmer and Cushion Vehicles, Proceedings of the National Meeting on Hydrofoils and Air Cushion Vehicles, Washington, D.C., Sept. 1962.
753. Stark, R.E., and Gauthey, J.R., The SKMR-1 Research Hydro-skimmer Programme, SAE Paper No. 697E, April 1963.
754. St. Denis, M., Some Suggestions on Criteria for the Design of Surface Effect Ships for Ocean Commerce, Report to Hull Panel (SESOC 84), Jan. 5, 1966.
755. Steinberg, M.A., Materials for GEM Hulls, Memorandum to Hull Panel (SESOC 46), Nov. 22, 1965.
756. Stephens, P.R., Asymmetry of Annular Jet Flow in Ground Proximity, UTIA Tech. Note No. 63, Oct. 1962.
757. Stepniowski, W.Z., Performance Possibilities of Subsonic Airplane Taking Off and Landing on the Ground Cushion, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
758. Stevens, D.L., Jr., Banks, J.P., and Aronne, E.L., Structural Load Criteria for Hydrofoil Ships, Hydrofoil and Air Cushion Vehicle, IAS, Sept. 1962.
759. Stevens, D.L., Jr., Air Cushion Grand Prix, Air Cushion Vehicles, Flight Int., Sept. 26, 1963, p. 45.
760. Stevens, D.L., A Racing ACV., Air Cushion Vehicles, Flight Int., Jan. 30, 1964, p. 11.
761. Stevens, D.L., Jr., The Bureau of Ships Hydrofoil Craft, FRESH-1, Paper presented to the Chesapeake Section, Society of Naval Architects and Marine Engineers, Washington, D.C., Feb. 26, 1964.
762. Stevens, D.L., Jr., Design and Procurement of the Hydrofoil Gunboat, PGH, Naval Engineers Journal, Dec. 1966.
763. Stillwell, J.J., Statement on the Navy Air Cushion Vehicles Research Programme, Hovering Craft and Hydrofoil News Supplement, Aug. and Sept. 1962.

764. Stoessel, R.F., Lockheed Interdepartmental Communication, Additional Comments on Booz-Allen Report - Surface Effect Ship, to M.A. Steinberg, Hull Panel (SESOC 65), Nov. 26, 1965.
765. Stoessel, R.F., Lockheed Interdepartmental Communication, Additional Comments on Booz-Allen Report - Surface Effect Ship, to M.A. Steinberg, Hull Panel (SESOC 66), Dec. 7, 1965.
766. Stoller, H.M., Static Performance Analysis and Experimental Investigation of Hydroskimmer Air Cushion Vehicle, J. Ship Research, Vol. 7, No. 1, June 1963, pp. 39-57.
- Strafford, J., The Use of Analogue Computers as a Control Aid in the Development of Air Cushion Vehicles, Trans. of the Soc. of Instrument Technology, June 1963, pp. 140-154.
767. Strand, T., Inviscid-Incompressible Flow Theory of Static Peripheral Jets in Proximity to the Ground, Convair Engineering Research, Report ERR-SD-002, Nov. 1959.
768. Strand, T., and Fujita, T., Internal Flow for Ground Effect Machines, Vehicle Research Corp., Report, No. 6, Oct. 15, 1960.
769. Strand, T., Interim Report on VRC Channel GEM Concept, Vehicle Research Corp., Contract Nonr 3207 00, Nov. 16-18, 1960.
770. Strand, T., Inviscid-Incompressible Flow Theory of Static Peripheral Jets on Proximity to Ground, J. Aerospace Sci., Vol. 28, No. 1, Jan. 1961, pp. 27-33.
771. Strand, T., Royce, W.W., and Fujita, T., Performance Theory for High Speed Ground Effect Machines, Vehicles Research Corporation, Report No. 11, June 1, 1961.
772. Entry deleted.
773. Strand, T., A Vortex Recirculation Theory for Ground Effect Machines, Vehicle Research Corporation Interim Report, Aug. 1961.
774. Strand, T., 150 Knot GEM Cruise, Proceedings of the Ground Effect Machines Forum, Presented at the 30th Annual Meeting, New York, Jan. 22-24, 1962.
775. Strand, T., Inviscid-Incompressible Flow Theory of Static Two Dimensional Jets in Proximity to Ground, J. Aerospace Sci., Vol. 29, No. 2, Feb. 1962, pp. 170-173, 184.

776. Strand, T., 150 Knot GEM Cruise, *Aero. Space Eng.*, Vol. 21, No. 4, April 1962.
777. Strand, T., Royce, W.W., and Fujita, T., Cruise Performance of Channel Flow Ground Effect Machines, *J. Aero. Sci.*, Vol. 29, No. 6, June 1962.
778. Strand, T., On the Theory of Normal Ground Impingement of Axisymmetric Jets in Inviscid Incompressible Flow, 1st AIAA Annual Meeting, Washington, D.C., June 29-July 2, 1964, pp. 64-424.
779. Strand, T., Exact Inviscid Incompressible Flow Theory of Static Peripheral Jets in Proximity to the Ground, Convair Report No. ERR-SD-002.
780. Strand, T., and Fujita, T., Internal Flow for Ground Effect Machines, Vehicle Research Corp., Report No. Nonr 3058 (00).
781. Entry deleted.
782. Stratton, R.B., *Hovercraft/Hoverwork, Hovershow, Hovering Craft and Hydrofoil*, 1966.
783. Stratton, R.B., ACV on Public Service at Expo '67, *Air Cushion Vehicles, Flight Int.*, June 22, 1967, p. 74.
784. Stripling, L., and Acosta, A.J., Cavitation in Turbo Pumps, *Transactions ASME*, Sept. 1962.
785. Le Sueur, M., Ground Effect on the Take-off and Landing of Airplanes, NACA Report No. TN 771.
786. Sullivan, E.K., and Higgins, J.A., Test and Trials of the HS Denison, *Hovering Craft and Hydrofoil*, Nov.-Dec. 1963.
787. Sundararjan, V., *Stability of Flexible Nozzle Structures*, Ph.D. Thesis, University of Kansas, 1966.
788. Surry, D., Characteristics of a Rectangular Wing with a Peripheral Jet in Ground Effect, Part III, UTIAS Tech. Note 77, Aug. 1964, 82 pp.
789. Surry, D., Experimental Investigation of the Characteristics of Flow about Curved Circular Cylinders, UTIAS Tech. Note 89, April 1965.

790. Sutton, J.E., Propulsion System Experiments, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
791. Swaan, W.A., and Wahab, R., The Behaviour of a Ground Effect Machine over Smooth Water and over Waves, Hovering Craft and Hydrofoil, May 1965.
792. Swatman, I.M., Development of the Ford 704 Gas Turbine Engine, SAE Paper 291A, 1961.
793. Sweeney, T.E., and Nixon, W.B., Some Notes on the P-GEM, Princeton Univ., Dept. of Aero Eng., Report No. 537, Jan. 1961.
794. Taggart, R., A Development Program for an Improved Hydraulic-Jet Propulsion Device, Trelor Contract, ASNE Journal, Vol. 71, Aug. 1959.
795. Tapscott, R.J., Criteria for Preliminary Handling Qualities Characteristics of VTOL Aircraft in Hovering and Low Speed Flights, NASA Conference on V/STOL Aircraft, Langley Research Center.
796. Tattersall, E.G., How Big, Fast, Much, Hovering Craft and Hydrofoil, April 1966.
797. Tattersall, E.G., and Lt. Cdr. Sproule, J.S., RN Retd., Air Cushion Carriers for Helicopters, Air Cushion Vehicles, Flight Int., June 16, 1966. Sidewall Craft for Sea-Air Operations, p. 81.
798. Teague, W.F., Analysis of Ninety Degree Turning Maneuvers of Air Cushion Vehicles, M.S. Thesis, University of Kansas, 1966.
799. Templin, R.J., A Single Theory of the Ground Effect on Thrust of Annular Nozzles, NAE Report No. AE-850.
800. Thunholm, C.H.G., Effects of Moving Ground Surface on the Characteristics of Annular Jets as Found in Wind Tunnel Tests, Hovering Craft and Hydrofoil, July 1964.
801. Thunholm, C.H.G., Effects of Moving Ground Surface on the Characteristics of Annular Jets as Found in Wind Tunnel Tests, Proc. of Res. Symposium on ACVs held at University College, Swansea, July 21-23, 1964, pp. 13-15.
802. Thunholm, C.H.G., An Experimental Investigation of Eight Axisymmetric Annular Nozzles in Proximity to Ground, Part I: Apparatus and Method of Testing Results from Tests with Wind Off, Hovering, KTH Aero TH-54.

803. Thurston, S., and Amsler, R., A Review of Marine Propulsion Devices, AIAA Paper 65-482, San Francisco, Calif., Meeting, July 1965.
804. Thurston, S., and Evanvar, M.S., Efficiency of a Propulsor on a Body of Revolution Inducting Boundary-Layer Fluid, J. of Aircraft, Vol. 3, No. 3, May 1966.
805. Thwaites, B., Aerodynamic Theory of Sails, Royal Society of London Proceedings, Series A, 260-261, 1961.
806. Tick, L.J., Differential Equations With Frequency-Dependent Coefficients, J. of Ship Research, Vol. 3, No. 2, Oct. 1959.
807. Tiedemann, J.B., Drift Stabilizer for Ground Effect Machines, U.S. Patent Disclosures, Jan. 31, 1964.
808. Tiedemann, J.B., Servo Drive Amplifier, U.S. Patent Disclosures, April 21, 1964.
809. Tiedemann, J.B., Pressure-Stabilized Structure for Recirculating Ground Effect Machines, U.S. Patent Disclosures, April 1964.
810. Tiedemann, J.B., Speed Sensor for Pulsed-Current Permanent Magnet Motors, U.S. Patent Disclosures, Nov. 27, 1964.
811. Tinajero, A.A., Experimental Results for Forward Flight at Zero Angle of Attack for a 6" Diameter GEM Model, DTMB Aero Report 954, DTMB Report 1376, May 1959.
812. Entry deleted.
813. Tinajero, A.A., Effect of Vehicle Planform on Augmentation, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
814. Tinajero, A.A., Preliminary Investigation of Planform Effect on Augmentation Parameter for Peripheral Jet Ground Effect Machines, DTMB Aero Report 972, Feb. 1960.
815. Tinajero, A.A., and Fresh, J.N., Aerodynamics Response of a Seven-Foot GEM Flying over Uneven Surfaces, DTMB Aero Report 892, June 1960.

816. Tinajero, A.A., Static Behavior of a Rectangular Planform GEM Model Utilizing an Integrated System for Lift and Propulsive Thrust, Washington, Aero Lab., Aero Report No. 984, Aero Problem 630-445 TED TMB RAAD-3258, DTMB, 1960, 4, 22 pp. incl. illus.
817. Tinajero, A.A., A Preliminary Design Technique for Plenum Chamber GEMs, DTMB Report No. 1621, Feb. 1962, 24 pp.
818. Tinajero, A.A., Test Results of a Two Dimensional Plenum Chamber GEM over a Liquid Surface, DTMB Aero Lab - 1052, June 1963, 80 pp.
819. Todd, F.H., Submarine Cargo Ships and Tankers, 3rd Symposium on Naval Hydrodynamics, Scheveningen, Holland, Sept. 1960.
820. Todd, F.H., Chaplin, H.R., Ellsworth, W.M., Jr., Hadler, J.B., and Makonechny, B.V., A Study of the Technical Feasibility of Future High Speed Navy Vehicles, DTMB Report C-2050, July 1965, Confidential.
821. Tollmien, W., Calculation of Turbulent Expansion Processes, Berechnung Turbulenter Ausbreitungsvorgänge, Wash., Sept. 1945, 17 pp. illus. National Advisory Committee for Aeronautics, TM 1085, Translated from Zeitschrift für angewandte Mathematik und Mechanik, Vol. 6, 1926, pp. 1-12.
822. Tomotika, S., The Lift on a Plate Placed Near a Plane Wall, Rep. of the Aeronautical Res. Inst., Tokyo Imperial University, No. 97, 1933.
823. Tomotika, S., Further Studies on the Effect of the Ground Upon the Lift of a Monoplane Airfoil, Rep. of the Aeron. Res. Inst., Tokyo Imperial University, No. 120, 1935.
824. Townsend, A.A., The Structure of Turbulent Shear Flow, Cambridge Univ. Press, 1956.
825. Traksel, J., and Beck, W., Waterjet Propulsion Marine Vehicles, AIAA Paper No. 65-245, San Diego, Calif., Mar. 1965.
826. Trewby, G.F.A., Recent Operating Experience with British Naval Gas Turbines, Transactions of ASME, J. Engineering for Power, Vol. 85, Series A, No. 1, 1963.
827. Trillo, R.L., What-Price Hovercraft? Part I, Air Cushion Vehicles, Flight Int., Aug. 22, 1963, p. 21.

828. Trillo, R.L., What-Price Hovercraft? Part II, Air Cushion Vehicles, Flight Int., Sept. 26, 1963, p. 41.
829. Trillo, R.L., An Empirical Study of Hovercraft Propeller Noise, Hovering Craft and Hydrofoil, Dec.-Jan. 1965-66.
830. Trillo, R.L., Plain Man's Guide to Hovercraft Noise, Hovering Craft and Hydrofoil, April 1966.
831. Trillo, R.L., From Ferry Boats to Hovercraft - Some Aspects of Economics and Operation, Hovering Craft and Hydrofoil, Feb. 1967.
832. Tucker, J., Two Dimensional Study of a Low Pressure Annular Jet GEM at Forward Speed, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
833. Tucker, J., Preliminary Two Dimensional Tests of the Annular Jet Ground Effect Principle, Grumman, GAEC Report R.M.-158.
834. Tucker, J., Comments on the Performance Prediction of the Annular Jet Ground Effect Machines, Grumman, GAEC Report No. R.N.-116.
835. Tucker, J., Experimental Verification of the Theory for Two Dimensional Hovering Annular Jet Ground Effect Machines, Grumman, GAEC Report No. R.N.-120.
836. Tulin, M.P., Steady Two Dimensional Cavity Flows About Slender Bodies, DTMB Report 834, May 1953.
837. Tulin, M.P., and Burkart, M.P., Linearized Theory for Flows about Lifting Foils at Zero Cavitation Number, DTMB Report C-638, Feb. 1955.
838. Tulin, M.P., Supercavitating Foils and Struts, Paper Number 16, Symposium on Cavitation in Hydrodynamics, National Physical Laboratory, Teddington, Eng., Sept. 1955.
839. Tulin, M.P., On the Vertical Motions of Edge-Jet Vehicles, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
840. Tulin, M.P., Problems Relating to Propulsors, Letter report to SESOC Committee (SESOC 78), Jan. 28, 1966.
841. Uyeda, S.T., Study of Loads and Motions of Two Types of Ground Effect Machines, General Dynamics/Convair Report No. ZH-150, 1961.

842. Van Manen, J.D., Propellers in Nozzles, International Shipbuilding Progress, Vol. I, No. 1, 1954.
843. Vance, W.H., and Moulton, R.W., A Study of Slip Ratios for the Flow of Steam-Water Mixture at High Void Fractions, A.I.C.E., Journal II, Nov. 1965, pp. 1114-1124.
844. Van Niekerk, C.G., Ducted Fan Design Theory, ASME Paper 5844.
845. Vassilopoulos, L., The Analytical Prediction of Ship Performance in Random Seas, Dept. of Naval Arch., Mass. Inst. of Technology, Cambridge, Mass., Feb. 1964.
846. Vasta, J., Problem Areas Needing Investigation, Report to the Hull Panel (SESOC 85), Jan. 5, 1966.
847. Vesque, R., Analog Computer Study - Dolphin Hydrofoil Control System, AiResearch Manufacturing Division Report 66-0440, June 1966.
848. Vesque, R., Digital Computer Study - Dolphin Hydrofoil Takeoff Program, AiResearch Manufacturing Division Report 66-0591, July 1966.
849. Vinson, P., and Cossairt, K., Recirculation Principle for Ground Effect Machines; Three Dimensional Wind Tunnel Test, Martin Co., Orlando Aerospace Division, Report OR 2497, May 1962.
850. Vinson, P., Recirculation Principle for Ground Effect Machines: Three Dimensional Tests, TCREC 62-74, U.S. Army Transportation Research Command, Fort Eustis, Virginia, July 1962.
851. Vinson, P., Recirculation Principle for Ground Effect Machines, Man-Carrying Test Vehicle: Preliminary Flight Test Results, Martin Company, Report OR 2830, Dec. 1962.
852. Viola, H.E., The Application of Inflatable Structures to Ground Effect Machines GEM, TCREC Technical Report 62-40, June 1962.
853. Viola, H.E., Elastomer-Coated Fabrics for Diaphragms, Machine Design, Aug. 1962.
854. Vogler, R.D., Effects of Various Arrangements of Slotted and Round Jet Exits on Lift and Pitching Moment Characteristics of Rectangular-Base Model at Zero Forward Speed, NASA Tech. Note No. D-658, Feb. 1961, 18 pp.

855. von Doenhoff, A.E., et al., Turbulent Boundary Layer Calculation, NACA Report 772.
856. von Glahn, U.H., Exploratory Study of Ground Proximity Effects on Thrust of Annular and Circular Nozzles, Wash., April 1957, 48 pp., incl. illus., National Advisory Committee for Aeronautics, TN 3982.
857. von Glahn, U.H., Use of the Coanda Effect for Jet Deflection and Vertical Lift with Multiple Flat-Plate and Curved-Plate Deflection Surfaces, NACA Report No. TN 4377.
858. Vossers, G., Behavior of Ships in Waves De Technische Uitgeverij H. Stam N.V., Haarlem, The Netherlands, 1962.
859. Wald, Q., A Theory of Peripheral Jets in Proximity to the Ground with Application to Ground Effect Machines, J. of Ship Research, Vol. 7, No. 4, April 1964, pp. 16-20.
860. Wald, Q., Ground Effect for Helicopter, Internal Memorandum, General Dynamics, Electric Boat Division, July 1965.
861. Waldo, R.D., Some Special Problems in Surface Effect Ships, AIAA/SNAME, Paper No. 67-346, May 1967.
862. Walker, N.K., Practical Considerations of the Stability of Peripheral Jet Vehicles, Pneumodynamics Corp., Dec. 1960.
863. Walker, N.K., Preliminary Stability Control and Handling Criteria for Ground Effect Machines, GEMs, IAS 29th Annual Meeting, Jan. 1961, No. 61-69.
864. Walker, N.K., The Use of Tracking Tasks as Indicators of Stress, N.K. Walker Associates, Inc., Report No. 4.
865. Walker, N.K., An Analysis of the University of Wichita Wind Tunnel Tests on Circular GEM Models, Part I - Zero Incidence Results, N.K. Walker Associates, Inc., Report No. 61-5.
866. Walker, N.K., An Analysis of the University of Wichita Wind Tunnel Tests on Circular GEM Models, Part II - Effect of Incidence, N.K. Walker Associates, Inc., Report 61-5.
867. Walker, N.K., A Reexamination of the DTMB, Wind Tunnel Results of Tests on a 6" Diameter Annular Jet Model Described in DTMB Aero Report No. 954, N.K. Walker Associates, Inc., Report No. 61-6.

868. Walker, N.K., Report No. 61/10, Progress Report No. 4, Contract Nonr-3412 (00), Dec. 31, 1961.
869. Walker, N.K., Stability, Control, and Handling Criteria for Ground Effect Machines, I.A.S. Paper 61-49.
870. Walker, N.K., 4th Progress Report to the Office of Naval Research.
871. Walker, N.K., 5th Progress Report to the Office of Naval Research.
872. Walker, N.K., A Hypothesis Describing the Flow around an Annular Jet GEM at All Speeds and a Comparison with Test Results, N.K. Walker Associates, Inc., Report No. 62-1.
873. Walker, N.K., A Summary Report on the Effects of Forward Speed on GEMs, N.K. Walker Associates, Inc., Report No. 62/2.
874. Walker, N.K., GEM Navigation and Control Problems, Navigation USA, Vol. 9, No. 2, Summer 1962, pp. 105-113.
875. Walker, N.K., Some Notes on the Lift and Drag of a Ground Effect Machine, Proceedings of the National Meeting on Hydrofoils and Air Cushion Vehicles, Washington, D.C., I.A.S., Sept. 1962.
876. Walker, N.K., The Effect of the Vertical Position of the Center of Gravity on the Stability of an Annular Jet GEM, N.K. Walker Inc., Dec. 1962, 62 pp.
877. Walker, N.K., An Analysis of the Results of Wind Tunnel Tests made at the University of Wichita on Circular Annular Jet GEMs, N.K. Walker Associates, Inc., Report No. 5, July 1963, 96 pp.
878. Walker, N.K., and Anthony, A., The Effect of the Vertical Position of the Center of Gravity on the Stability of an Annular Jet GEM, N.K. Walker Associates, Inc., April 1964.
879. Walker, N.K., Stability Control and Maneuver Characteristics of the Martin Research Vehicles (SESOC 47).
880. Walker, N.K., Roll Stability of Ground Effect Machines - Thick Annular Jet-Plenum Types, U.S. Army Aviation, Material Laboratories, Fort Eustis, Va. (SESOC 51), June 1965.
881. Walker, N.K., and Shaffer, D.A., Heave Stability and Heave Damping of GEMs - Thick Annular Jet and Plenum Types - Final Report, USAAVLABS-TR-65-26, July 1965, 121 pp.

882. Walker, N.K., Some Preliminary Tests on the Effect of Spray Generated by Ground Effect Machines, Bureau of Ships, Department of the Navy (SESOC 50), Sept. 1965.
883. Walker, N.K., The Influence of Fan and Ducting Characteristics on the Stability and Performance of GEMs, AIAA Paper No. 64-185, 15 pp.
884. Wassenaar, J., Presentation and Discussion of 1/6th Scale Model Subsonic Wind Tunnel Test Results, Avro Aircraft Ltd., Report No. AVRO/SPG/TR 12.
885. Watson, E.C., Some Low-Speed Characteristics of an Air Induction System Having Scoop-Type Inlets with Provisions for Boundary-Layer Control, NACA RM A51F15, Aug. 28, 1951.
886. Watson, F.B., Protective Coatings--Foil System, PCH-1 HIGH POINT, Boeing Co., Report No. D2-133600-1, July 1966.
887. Watson, M.B.P., Tests of the Avrocar in the Static Rig, Avro Aircraft Ltd., Report No. AVRO/SPG/TR 305, Dec. 1959.
888. Watson, M.B.P., Tests of the Avrocar in the Static Rig, Avro Aircraft Ltd., Report No. AVRO/SPG/TR 311, Feb. 1960.
889. Watson, M.B.P., Analysis Report for the 1/20th Scale Avrocar Development Model, Avro Aircraft Ltd., Report No. 500/AERO TEST 420.
890. Way, S., Examination of Bipolar Electric and Magnetic Fields for Submarine Propulsions, Preliminary Memorandum, Communication to U.S. Navy Bureau of Ships, Oct. 15, 1958.
891. Way, S., Propulsion of Submarines by Lorentz Forces in the Surrounding Sea, American Society of Mechanical Engineers, Paper 64WA/ENER7, Nov. 1964.
892. Way, S., Electromagnetic Propulsion for Cargo Submarines, Paper No. 67-363, AIAA/SNAME Advance Marine Vehicles Meeting, Norfolk, Virginia, May 22-24, 1967.
893. Way, S., and Devlin, C., Prospects for the Electromagnetic Submarine, Paper submitted to AIAA Propulsion Specialists Conference, July 17, 1967.

894. Weakley, C.A., Navy Research and Development, USN Naval Engineers Journal, Vol. 74, No. 2, May 1962.
895. Webb, W.B., Annular Jet Stability; Analyses in Hovering, Bell Helicopter Co., Report No. 8034-099-001, Sept. 1960.
896. Webster, W.C., The Static Stability of GEM--Thin Jet Theory, Hydronautics Inc., Tech. Report O11-1, Dec. 1, 1960, 69 pp.
897. Webster, W.C., and Lin, J.D., Dynamic Heaving Motion of GEMs, Hydronautics Inc., Tech. Report O11-3, Mar. 1962, 29 pp.
898. Wechsler, L.A., The Navy's Technical Progress Through 1961 and Prospects for the Future Marine Gas Turbine Developments, Naval Engineers Journal, May 1962.
899. Wechsler, L.A., Department of the Navy, Bureau of Ships, State-of-the-Art in Propulsion Systems and Propulsors, Presentation to Propulsion Panel (SESOC 43), Nov. 22, 1965.
900. Wechsler, L.A., Where Are Marine Power Plants Headed? SNAME Paper No. 20, Spring Meeting, May 1966.
901. Weiland, C., Labyrinth Seals, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
902. Weiland, C., Philosophy of GEM Construction Utilizing Non-Aircraft Techniques, Proceedings of the Ground Effect Machines Forum, IAS 30th Annual Meeting, Jan. 1962.
903. Weinberger, M.R., Multi-Stage Random Search and Automatic Network Synthesis, Sc.D. Thesis, M.E. Dept., Mass. Inst. of Technology, Cambridge, Mass., Feb. 1966.
904. Wernicke, K.G., Performance Testing of a Five-Foot Air Cushion Model, Symposium on Ground Effect Phenomena, Princeton Univ., Oct. 1959.
905. Wernicke, K.G., et al., Investigation of Controlled Flow Phenomena for ACVs, Bell Helicopter Co., Fort Worth, Texas; Fort Eustis, Va., Army Transportation Res. Council, Report 532-099-001, TCREC-TR-62-46, Nov. 1962, 136 pp.
906. Weske, J.R., Investigation of Suction Condenser Scoops, Based on Model Tests, Journal ASNE, Vol. 5, 1939, pp. 191-213.

907. Weske, J.R., Theory of Wave Drag as Applied to Ground Effect Vehicle Hovering or Travelling over Water, Pneumodynamics Corp., Systems Eng. Div., Feb. 1963.
908. West, A.A., Effect of Forward Speed on a Two Dimensional Ground Effect Machine, Proc. of Res. Symposium on ACVs held at University College, Swansea, July 21-23, 1964, pp. 38-40.
909. West, A.A., Effect of Forward Speed on a Two Dimensional Ground Effect Machine, Hovering Craft and Hydrofoil, Aug.-Sept. 1964.
910. West, A.A., Air Cushion Vehicles, A Selective Bibliography, Hovering Craft and Hydrofoil, Vol. 5, No. 5, Feb. 1966, pp. 14-19.
911. West, A.A., Air Cushion Vehicles, A Selective Bibliography, Hovering Craft and Hydrofoil, Dec.-Jan. 1966-67.
912. West, A.A., The Flow of Air around Short Circular Cylinders, University College, Swansea, Civil Eng. Report C/R/22/65.
913. West, A.A., Tracked Hovercraft Tunnel Performance, University College of Swansea, Dept. of Civil Engineering Research, Report C/R/38/66.
914. West, A.A., The Effect of Simulated High Forward Speed on a Two Dimensional GEM, Rensselaer Poly. Inst., Dept. of Aero. Eng. Tech., Report No. AE-6304.
915. Westmoreland, J.C., et al., A Conceptual Nuclear Propulsion System for Ground Effect Machines, IAS Report No. 61-64.
916. Wetzel, J.M., and Maxwell, W.H.C., Force Characteristics of Flapped, Ventilated Foils in Smooth and Rough Water, University of Minn., St. Anthony Falls Hydraulic Laboratory, Project Report No. 66, Jan. 1963.
917. Wetzel, J.M., and Foerster, K.E., Force Characteristics of Restrained Naturally Ventilated Hydrofoils in Regular Waves, University of Minnesota, St. Anthony Falls Hydraulic Laboratory, Project Report No. 68, Mar. 1965.
918. Wheeler, G.P.M.C., Hovercraft in Land War, Air Cushion Vehicles, Flight Int., July 20, 1967, p. 5.
919. Wheeler, G.P.M.C., Hovercraft in Land War, Part 2, Air Cushion Vehicles, Flight Int., Aug. 24, 1967, p. 27.

920. Wheeler, R.L., and Donno, G.F., The Hovercraft Noise Problem, Hovering Craft and Hydrofoil, Oct. 1965.
921. White, H.E., Wind Tunnel Test of a Low AR Wing in Close Proximity to the Ground, DTMB Aero. Lab.--1056, June 1965.
922. Whitford, M., A Case for Miniaturisation, Hovering Craft and Hydrofoil, Dec.-Jan. 1966-67.
923. Whittley, D.C., Simplified Mechanics of the Lifting Fan, Aircraft Engineering, April 1962.
924. Whittley, D.C., and Garland, D.B., Analysis of the Avrocar in the NASA 40 x 80 Foot Wind Tunnel, Ames Research Center, Avro Aircraft Ltd., Report No. 500/AERO TEST/407.
925. Whittley, D.C., Intake Moment, Avro Aircraft Ltd.
926. Widnall, S.E., Unsteady Loads on Supercavitating Hydrofoils of Finite Span, J. of Ship Research, Vol. 10, No. 2, June 1966, pp. 107-118.
927. Wiegel, R.L., Parallel Wire Resistance Wave Meter, Proc. First Conf. on Coastal Engineering Instruments Council on Wave Research, The Engineering Foundation, 1956, pp. 39-43.
928. Wiegel, R.L., Horning, D.O., Linder, W.M., and Reichert, G., Progress Report on Model Studies of an Annular Nozzle Type GEM, University of California, Field Report No. 55, June 15, 1960.
929. Wiegel, R.L., Horning, D.O., Cumming, J., and Price, M., Second Status of Model Studies of an Annular Nozzle Type GEM, University of California, Hydraulic Engineering Laboratory, Field Report No. 56, Nov. 15, 1960.
930. Wiener, N., Non-Linear Problem in Random Theory, The University Press of Mass. Inst. of Tech., Cambridge, Mass., 1958.
931. Wieselberger, C., Ueber den Flugwiderstand in der Naehе des Bodens, ZFM No. 10, 1921, pp. 145-147.
932. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Nov. 18, 1965, p. 71.
933. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Jan. 20, 1966, p. 12.

934. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Feb. 24, 1966, p. 26.
935. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Mar. 24, 1966, p. 40.
936. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., April 21, 1966, p. 54.
937. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Part 14, May 19, 1966, p. 68.
938. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Aug. 25, 1966, p. 35.
939. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Sept. 22, 1966, p. 48.
940. Williams, G.H., Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Oct. 20, 1966, p. 61.
941. Williams, G.H., Fans for Homebuilt Hovercraft, Air Cushion Vehicles, Flight Int., Mar. 23, 1967, p. 39.
942. Williams, G.H., Fans for Homebuilt Hovercraft, Part II, Air Cushion Vehicles, Flight Int., April 20, 1967, p. 51.
943. Williams, G.H., Fans for Homebuilt Hovercraft, Part III, Air Cushion Vehicles, Flight Int., May 18, 1967, p. 69.
944. Williams, G.H., Fans for Homebuilt Hovercraft, Part IV, Air Cushion Vehicles, Flight Int., July 20, 1967, p. 12.
945. Williams, R.M., Performance Estimates of Captured Air Bubble Vehicles with Water Jet Propulsion, Department of the Navy, Report 2334, Feb. 1967.
946. Wilson, R.A., Captured Air Bubble Vehicle Stability Tests, AIAA/SNAME, Paper No. 67-349, May 1967.
947. Winslow, L., Report on Performance of PBI Pump, Curtiss-Wright, Report 700-14, Oct. 1961.
948. Wirt, L., New Data for the Design of Elbows in Duct Systems, General Electric Review, Vol. 3C, No. 6, 1927, p. 286.

949. Wislicenus, G.F., Hydrodynamics and Propulsion of Submerged Bodies, ARS Journal, Vol. 30, No. 12, Dec. 1960.
950. Witmore, J.W., and Turner, L.I., Jr., Determination of Ground Effect From Tests of a Glider in Towed Flight, NACA Report No. 695.
951. Wojciechowicz, A.R., Jr., Nixon, J.B., and Sweeney, T.E., The Dominant Aerodynamic Characteristics of a Shaped GEM, Princeton Univ., Dept. of Aerospace, Report No. 684, Sept. 1964, 45 pp., Contract DA-44-177-TC-850, Usatrecom Task 1D02170 AC4803, Report 64-45.
952. Wong, G., et al., Suppression of Cavitation and Unstable Flow in Throttled Turbo Pumps, Journal of Spacecraft, Vol. 2, No. 1, Jan.-Feb. 1965.
953. Woolley, D., Sidewall Progress at Southampton, Air Cushion Vehicles, Flight Int., July 20, 1967, pp. 8-9.
954. Wosser, J.L., and van Tuyl, A.J., A GEM for Amphibious Support, SAE International Congress, 270D, Jan. 1961.
955. Wosser, J.L., and van Tuyl, A.J., A GEM for Amphibious Support, Hovering Craft and Hydrofoil, Vol. I, No. 1, Oct. 1961.
956. Wright, D.E., The Effect of Configuration on the Lift Augmentation Ratio of a Two Dimensional Open-Plenum GEM, Princeton Univ., Dept. of Aero. Eng., Report No. 516, May 1960, 129 pp.
957. Wright, K.D., and Condie, A.P., The Hydrofoil and Shipbuilding Industry, Hovering Craft and Hydrofoil, June 1964.
958. Wright, R.H., Estimation of Pressures on Cockpit Canopies, Gun Turrets, Blisters, and Similar Protuberances, NACA ACR L4E 10, May 1944.
959. Wu, T. Yao-Tsu, A Free Streamline Theory for Two Dimensional Fully Cavitated Hydrofoil, Report No. 21-17, Contract Nonr-24420, C.I.T., Hydrodynamics Laboratory, July 1955.
960. Yen, B.C., Patterns of Flow Under a Two Dimensional GEM, Iowa Inst. of Hydraulic Res., State Univ. of Iowa, Iowa City, Office of Naval Res., Nonr-1509 (03), Jan. 1962.
961. Yohner, P.L., and Hansen, A.G., Some Numerical Solutions of Similarity Equations for Three Dimensional Laminar Incompressible Boundary-Layer Flows, NACA TN 4370, Sept. 1958.

962. Young, E.P., Developments in Soviet Hovercraft, Hovering Craft and Hydrofoil, Oct. 1964.
963. Young, E.P., Hovercraft in the USSR, Hovering Craft and Hydrofoil, Feb. 1967.
964. Zadeh, L.A., and Ragazinni, J.R., An Extension of Wiener's Theory of Prediction, J. App. Phys., Vol. 21, 1950.
965. Zames, G., Realizability Conditions for Nonlinear Systems, IEEE, Transactions on Circuit Theory, June 1964.
966. Zimmerman, C., Aerodynamic Characteristics of Several Aerofoils of Circular Planform, NACA Report No. TN 539.

COMPANY REPORTS

LISTED ALPHABETICALLY

967. Aerojet-General Corp., SES Technological Problems, letter to Project Manager, Nov. 29, 1965, SESOC Committee (SESOC 68).
968. Aerophysics Company, Progress Report, July 1 - Nov. 1, 1960, Contract Nonr-2747(00), Nov. 15, 1960.
969. Aerophysics Co., A Study of Radial-Flow Fans for GEM Propulsion System Applications, U. S. Army Transportation Research Command, Fort Eustis, Va., July 1964, AD 610-522 (SESOC 49).
970. Aschauer, Co. (Twin Disc Clutch Co.), Waterjet Propulsion Tests, (Three reports: October 1962 - April 1963).
971. Avro-Aircraft Ltd. Research Program Leading to the Design of a U. S. Army GETOL Aircraft, Avro Aircraft Ltd. Report No. 000/PROP/1.

ASTM Tentative Methods, Standard Methods, and Recommended Practices.
972. Standard Methods of Test for Tear Resistance of Vulcanized Rubber, ASTM Designation: D624-54.
973. Tentative Method of Test for Propagation Tear Resistance of Plastic Film and Thin Sheetting, ASTM Designation: D1922-61T.
974. Standard Methods of Test for Tear Resistance of Rubber Compounds, ASTM Designation: D1004-61.
975. Standard Methods of Test for Abrasion Resistance of Rubber Compounds, ASTM Designation: D392-61T.
976. Standard Methods of Test for Resistance to Abrasion of Plastic Materials, ASTM Designation: D1242-56.
977. Standard Methods of Test for Resistance of Vulcanized Rubber or Synthetic Elastomers to Cut Growth by the Use of the Ross Flexing Machine, ASTM Designation: D1052-55.
978. Standard Methods of Measuring Low Temperature Stiffening of Rubber and Rubber-like Materials by Means of a Torsional Wire Apparatus, ASTM Designation: D1053-61.

- 979. Recommended Practice for Conditioning of Elastomeric Materials for Low-Temperature Testing, ASTM Designation: D832-59.
- 980. Standard Method of Test for Resistance of Vulcanized Rubber Synthetic Elastomers to Crack Growth, ASTM Designation: D813-59.
- 981. Standard Methods of Test for Compression Fatigue of Vulcanized Rubber, ASTM Designation: D632-58.
- 982. Standard Methods of Test for Deformation of Plastics under Load, ASTM Designation: D621-59.
- 983. Tentative Recommended Practice for Accelerated Weathering of Plastics Using S-1 Bulb and Fog Chamber, ASTM Designation: D795-57T.
- 984. Tentative Method of Test for Stiffness Properties of Nonrigid Plastics as a Function of Temperature by Means of a Torsional Test, ASTM Designation: D1043-61T.
- 985. BAARING/ONR Report, Domain of the GEM, Contract No. Nonr 3375(00).
- 986. Bell Aerosystems Co., Progress Report, GEM Morphology Study, Nonr-3074, Report 2017-933001, Nov. 14, 1960.
- 987. Bell Aerosystems Co., Report No. 2131-920001. Study of Flexible Jet Extensions for Ground Effect Machines - Phase I, Nov. 1962.
- 988. Bell Aerosystems Co., Report No. 2131-920002, Study of Flexible Jet Extensions for Ground Effect Machines - Phase II, Nov. 1963.
- 989. Bell Aerosystems Co., Report No. 2131-920003, Study of Flexible Jet Extensions for Air Cushion Vehicles - Phase III, Oct. 1964.
- 990. Bell Aerosystems Co., Overall Requirements for the Surface Effect Ship and Industry Participation, letter to Project Manager, SESOC Committee, Dec. 2, 1965, (SESOC 70).
- 991. Boeing Co., A Parametric Study of Hydrofoil Ships, U. S. Navy Bureau of Ships Report D2-20671-3, December 1963.
- 992. Boeing Co., Technological Problems, letter to Project Manager, SESOC Committee, Jan. 4, 1965 (SESOC 75).
- 993. Boeing Co., FRESH-1-Phase II Summary Report, Confidential Report No. D2-82512-1, June 1965.
- 994. Boeing Co., PCH-1 Mod I Design Study, Phase A Technical Report, Confidential Report No. D2-133601-1, Aug. 1966.

995. Boeing Magazine, Here Comes the Hydros, July 1960, pp. 8-9.
996. Booz-Allen Applied Research, Inc., The Domain of Ground Effect Machines, Vols. I and II prepared for Office of Naval Research by Booz-Allen Applied Research, Inc.
997. Booz-Allen Applied Research, Inc., The Application of Modular and Sectional Structures to Ground Effect Machines, TCREC Tech. Report 62-41 prepared by Booz-Allen Applied Research, Inc., Bethesda, Maryland, for U. S. Army Transportation Research Command.
998. Booz-Allen Applied Research, Inc., The Surface Effect Ship in the American Merchant Marine, Final Report for the United States Department of Commerce, Maritime Administration.
999. Booz-Allen Applied Research Inc., Summary of State-of-the-Art in SES. Distributed to SESOC Committee, Oct. 1, 1965 (SESOC 38).
1000. Borg Warner Corp., Research Investigation and Experimentation in the Field of Amphibian Vehicles, Final Report, Ungersoll-Kalamazoo Division, Borg-Warner Corporation, Dec. 1957.
1001. Buehler Corporation, Buehler Turbopower Marine Jet Propulsion, Specifications and Performance Data.
1002. Experimental Towboats, Document No. 857, 63rd Congress, 2nd Session, 1914.
1003. Convair Aircraft, Large Ground Effect Airborne Logistics Vehicle Study, Convair Aircraft Contract No. 59-6167-C, U. S. Navy Dept., Bureau of Aeronautics.
1004. Convair Report No. ERR-SD-028, Research Study of Airframe Cost Factors.
1005. Convair Report ZH-114, Convair Hydrodynamics Laboratory.
1006. Davidson Laboratory, Research on the Longitudinal Seakeeping Characteristics of Ground Effect Machines, Status Report, Contract Nobs 84330, Oct. 1961.
1007. Department of Defense Directive: Initiation of Engineering and Operational Systems Development No. 3200.9, July 1, 1965 (SESOC 9).
1008. DTMB Report No. 1053, A Rotating Arm and Maneuvering Basin, July 1956.

1009. EDO Corp., The Design and Model Testing of a Small Single Hydrofoil Installation for the HU-16 Airplane, Report 7016, 7 Feb. 1966, AD-468997.
1010. Ford Motor Co., The Role of the Ground Effect Vehicle in Transportation, Aeronutronic Division of Ford Motor Co. at Symposium on Ground Effect Phenomena, Princeton University, Oct. 1959.
1011. Garrett Corp., AiResearch Manufacturing Co., Progress Report, Contract Nonr-3024/00/AP-5011-MR, 22 Feb. 1960.
1012. Garrett Corp., AiResearch Manufacturing Co. of Arizona, New Products Staff of AiResearch, Progress Report 1 of U.S. Navy Contract Nonr-3024/00/GEM Propulsion System Study, AiResearch Report AP-5017-R, 21 June 1960.
1013. Garrett Corp., AiResearch Manufacturing Division, Third Progress Report Navy Contract Nonr 3024 GEM Propulsion Systems Study, Report AP-5024-R, 11 Nov. 1960.
1014. Garrett Corp., AiResearch Manufacturing Division, Progress Report of Navy Contract Nonr 3232 Design and Fabrication of a GEM Fan/Duct System, Report AP-5026-R, 11 Nov. 1960.
1015. Garrett Corp., Final Report of Navy Contract, Nonr-3232 Design and Fabrication of a GEM Fan/Duct System, Report AP-5032-R, 24 Feb. 1961, AiResearch Manufacturing Division.
1016. Garrett Corp., AiResearch Manufacturing Co. of Arizona, Progress Report of GEM Propulsion System Study, Report AP-5051-R, Dec. 1961.
1017. Garrett Corp., AiResearch Manufacturing Division, Progress Report, Interim Report, Contract Nonr 3024/00, AP-5039-R, 23 June 1961.
1018. Garrett Corp., AiResearch Manufacturing Company, Summary Report of Navy Contract Nonr-3232 Design and Fabrication of Shroud Test Fan, AP-5053-R, 16 March 1962.
1019. Garrett Corp., AiResearch Manufacturing Division, Engineering Report, Design and Test of a Fan Diffuser Bend System Suitable for a Ground Effect Machine, AD-5069-R, 31 July 1962.
1020. Garrett Corp., AiResearch Manufacturing Division, Engineering Report, Considerations on the Lifting Fan-Duct Systems of Ground Effect Machines, AD 5068-R, 1 Aug. 1962.

1021. Garrett Corp., AiResearch Manufacturing Division, Progress Report on Navy Contract Nonr 3024 G.E.M. Propulsion System Study, AP-5062-R, 7 December 1962.
1022. Garrett Corp., AiResearch Manufacturing Company, Engineering Report, GEM Lift Systems, AP-5069-R, 17 September 1963.
1023. Garrett Corp., AiResearch Manufacturing Co., Progress Report of Navy Contract Nonr 3173 GEM Control System Study, Report AP-5073-R, 1 May 1964.
1024. Garrett Corp., AiResearch Manufacturing Co., Engineering Report of Navy Contract Nonr 3024 GEM Propulsion System Study, Report AP-5072-R, 5 May 1964.
1025. Garrett Corp., AiResearch Manufacturing Company of Arizona, Final Engineering Report of Nonr 3173 GEM Control System Study, Report AP-5078-R, 16 August 1965.
1026. Hughes Tool Co., Hirsch and McJones, Hydrostreak Water Scoop Study, Report HTC 62-42, July 1962.
1027. Hydronautics, Inc., Theoretical and Experimental Investigation of Disc Propellers, Report No. 368-1, 7 June 1963.
1028. Hydronautics, Inc., Model Tests of a Twenty-Ton Hydrofoil Sled, Report of Progress for the period 1 December 1964 - 30 April 1965, Progress Report 498-2.
1029. Hydronautics, Inc., Design Study of Water Jet Propulsion for Shallow Draft Boats, Report 516-1, Laurel, Maryland, April 1965.
1030. Hydronautics, Inc., Airboat Noise Reduction, Report No. 532-3, Laurel, Maryland, U. S. Army Airboat Design Notes.
1031. Johns Hopkins University, Applied Physics Laboratory, Dragonfly Feasibility Study--Appendix No. 3 Control and Guidance Division, 1960.
1032. Litton Systems, Space Sciences Laboratories, Development of a Constant-Volume Pressure Suit, Interim Report, Contract NAS 9-1278, 1964.
1033. Lockheed Aircraft Corp., Surface Effect Ship Studies, SESOC Staff Memo to File, 5 January 1966 (SESOC 87).
1034. Martin Co., Recirculation Principle for Ground Effect Machines, Two Dimensional Tests, OR 2073, May 1962.

- 1035. Martin Co., Recirculation Principle for Ground Effect Machines, Three Dimensional Wind Tunnel Tests - Basic Data, OR 2505, May 1962.
- 1036. Martin Co., Recirculation Principle for Ground Effect Machines, Three Dimensional Wind Tunnel Tests, TCREC Tech. Report 62-74, July 1962.
- 1037. Martin Co., Recirculation Principle for Ground Effect Machines: Preliminary Design of a Research Vehicle, TRECOM Technical Report 64-27, August 1964.
- 1038. Martin Co., Report to Bureau of Ships, Department of the Navy, Hydrofoil Ship Structural Design Criteria Study, February 1965, (SESOC 48).
- 1039. Martin Marietta Corp., Baltimore Division, Analysis of Main Seawater Piping System Suction and Discharge Valves in One-Third Scale Model of SS (N)-637 Engine Room Engineering Report ER 14430, November 1966.
- 1040. National Research Associates, Test Experience and Comments on Air Cushion Vehicles. National Research Associates at Symposium on Ground Effect Phenomena, Princeton University, October 1959.
- 1041. Newport News Shipbuilding and Drydock Co., SESOC Technological Problems as Observed by Newport News Shipbuilding and Drydock Co., SESOC Staff Memo to File, 6 January 1966, (SESOC 83).
- 1042. North American Aviation, Inc., Comments on Economic Investigations of Surface Effect Ships for Ocean Commerce. For Department of Commerce SESOC Committee, 10 December 1965, NA 65-1065 (SESOC 63).
- 1043. Office of Naval Research, A Study of the Operational Feasibility of the Ground Effect Machine in the Amphibious Support Mission, ONR Report ACR/NAR-26, Washington, D. C., November 1962.
- 1044. Office of Naval Research, Naval Analysis Report No. 26, Appendix II, November 1962.
- 1045. Orenda Engines Ltd., Report on Canadian Government Program for Avrocar, Orenda Engines Ltd. Report No. CR-301, April 1961.
- 1046. ORO, Analysis of Means for Moving Logistic Cargo from Ship-To-Shore, Tech. Memo ORO-T-361 prepared by ORO for Dept. of the Army.
- 1047. Peat, Marwick Management Systems Co., Lessons Learned from Contract Definition, Office of Secretary of Defense, Director of Defense Research and Engineering, 16 August 1965, (SESOC 10).

- 1048. Peat, Marwick, Livingston and Co., Why Contract Definition?, 1965, (SESOC 8).
- 1049. Pratt and Whitney Aircraft, Military Turbofan Installation Handbook, JT3D Engine, Installation Engineering, East Hartford, Connecticut, April 1959.
- 1050. Pratt and Whitney Aircraft, Fact Sheet, FT3C-9 Marine Gas Turbine, East Hartford, Connecticut, 17 May 1965.
- 1051. Pratt and Whitney Aircraft Co., FT4A-2 Gas Turbine Engine Specifications, Specification 2659, (Rev. 26 August 1965).
- 1052. Princeton University, Forward Flight Characteristics of Annular Jets, Symposium on Ground Effect Machines, 21-23 October 1959.
- 1053. Republic Aviation Corp., VA-3 Air-Cushion Vehicle Test Program, Final Report RAC 2612, Prepared for Office of Naval Research under Contract Nonr 4500/00, 20 October 1964.
- 1054. Republic Aviation Corp., VA-3 Air-Cushion Vehicle Operation Tests at Norfolk, Virginia, Report RAC 2954, Prepared for Bureau of Ships under Contract Nobs 4848, 19 May 1965.
- 1055. Ryan Aeronautical Company, Interim Report, Ground Effect Machine Structures Study, Report No. G-42-62, 20 June 1960.
- 1056. SESOC 4. Part II - The Technical and Economic Feasibility Study of the Nuclear-Powered Surface Effect Ship, February 1964, PB 181677.
- 1057. SESOC 5. Part III - Comparative Performance and Cost Characteristics of Four Types of Surface Effect Ships, February 1964, PB 181678.
- 1058. SESOC 6. Part IV - A Comparative Study of the Economic Feasibility of Two Sidewall Concepts with Other Surface Effect Ships, March 1965, PB 167990.
- 1059. SESOC 7. Part V - Comparison of Transport Economy of Surface Effect Ships vs. Large Aircraft and Displacement Ships, July 1965, PB 168486.
- 1060. SESOC 3. Part I - An Economic Feasibility Study of the 100-Ton MARAD Surface Effect Ship, November 1965, PB 181676.
- 1061. SESOC Propulsion Panel, Minutes of Propulsion Panel Meeting, 22 November 1965, (SESOC 95).
- 1062. SESOC Committee Staff, Transportation System Development Plans and Costs, January 1966, (SESOC 93).
- 1063. SESOC Committee Staff, Economic Analysis, Mathematical Simulation and Sensitivity Studies, January 1966, (SESOC 92).

- 1064. SNAME, Nomenclature for Treating the Motion of a Submerged Body Through a Fluid, Technical and Research Bulletin No. 1-5, 1952.
- 1065. SNAME, Waterjet Propulsion for Small Craft, L. Arcand, Small Craft Hydrodynamics, Southeast Section Meeting, 27 May 1966.
- 1066. Solar Aircraft Company, San Diego 12, California, Engineering Report, Modification of the TT62-S-2 Gas Turbine Engine for Use in the Ground Effects Machine, Report 982, 3 May, 1960.
- 1067. United Aircraft Corp., Report SR-13534-9, A Generalized Approach to the Definition of Average Flow Quantities in Non-Uniform Streams, December 1955.
- 1068. U. S. Army Test and Evaluation Command, Project No. 7-40483-01, Final Report of Engineering Design Tests of Landing Vehicle Hydrofoil (LVH-X2), December 1964, Yuma Proving Grounds Report No. 4142.
- 1069. U. S. Department of Commerce, Interagency Maritime Task Force, The Merchant Marine in National Defense and Trade--A Policy and a Program, October 1965, (SESOC 88).
- 1070. U. S. Department of Commerce, Surface Effect Ships for Ocean Commerce, Washington, D. C., February 1966.
- 1071. U. S. Experimental Model Basin, Navy Yard, Washington, D. C., Model Tests With Paddlewheels, Report No. 176, September 1927.
- 1072. U. S. Marine Corps Landing Force Development Center, Marine Corps Schools, LVTP5 Emergency Bilge Pump Adequacy in Surf Zone, Project 179, 1957.
- 1073. U. S. Marine Corps Landing Force Development Center, Marine Corps Schools, LVTP5 Troop Space Evaluation, Project No. 157 , 1957.
- 1074. U. S. Marine Corps Landing Force Development Center, Marine Corps Schools, Landing Vehicle Hydrofoil (LVH-X1) Test Procedure, Project 46-63-06, May 1963.
- 1075. U. S. Marine Corps Landing Force Development Center, Amphibian Vehicles, Document No. FMFM9-2, May 1964.
- 1076. U. S. Marine Corps Landing Force Development Center, Marine Corps Schools, Test of a Jack and Heintz Shunt-Wound Bilge Pump for the LVTP5 Family of Vehicles, Project 258.
- 1077. U. S. Marine Corps Landing Force Development Center, Marine Corps Schools, Service Tests of Lighter Amphibian's Resupply Cargo, 5-Ton, LARC-5, Project No. 46-63-05.

(Proposals were written on basic research, supporting research, and design study aspects of this program.)

1078. Vehicle Research Corp., Internal Flow for GEM's, Vehicle Research Corp., Report No. 6 for ONR, Contract Nonr 3058(00), Oct. 15, 1960.

Vickers Armstrong Limited, Reports on the VA-3 (sometimes called Type 3031) Hovercraft:

1079. V/3031/AERO/01 Estimation of Directional Stability of Hovercraft
1080. V/3031/AERO/04 Type 3031 Modified for Open Circulation
1081. V/3031/AERO/05 Hovercraft VA-3 Performance
1082. V/3031/AERO/06 Hovercraft Test Program - Installation, and Functional and Initial Tests
1083. V/3031/AERO/07 Notes on Visit of Mr. J. R. Bowles of S. Smith and Sons (England) Lt., to Discuss VA-3 Cabin Heating
1084. V/3031/AERO/08 The Elementary Theory of Hovercraft, Stability Analysis of Single Jets
1085. V/3031/AERO/10 Hovercraft Test Program - Detailed Test Schedule
1086. V/3031/AERO/11 Issue 2 The Performance of the VA-3 Hovercraft over Sinusoidal Waves
1087. V/3031/AERO/12 Note of Preliminary Survey of Passenger Reactions to Travelling on VA-3 on 25-27 June 1962
1088. V/3031/AERO/13 On the Theory of Two Dimensional Hovercraft
1089. V/3031/AERO/15 A Survey of the Rhyl-Wallasey Ferry Service
1090. A/3031/16 Type 3031. Tests of Various Stability Jet Configurations
1091. DES/EJ/AR/14814 Technical Report on VA-3 - During the Rhyl-Wallasey Ferry Service
1092. F/3031/13 Final Report on Rhyl Exercises

1093.	F/3031/14	Handling with Flexible Skirt Fitted
1094.	Memo 12	Summary of Static Tests
1095.	Memo 13	Additional Static Tests
1096.	H1/3031/AERO/ TRO1 and 02	Performance of VA-3 Hovercraft
1097.	V/3202/AERO/01	VA-3 Development - Estimates of Hoverheight for Various Arrangements of Peripheral Jet Nozzle
1098.	ISH/3031/3	Prediction of Maximum Wave Heights Between Wallasey and Rhyl
1099.	V/3031/HYDRO/01	Hovercraft Seakeeping Trails
1100.	V/3031/HYDRO/02	Notes on Visit to the Headquarters of the British Ship Research Association, London
1101.	V/3031/HYDRO/03	Some Brief Notes on a Visit to the Tidal Institute
1102.	V/3031/HYDRO/ 04 and 05	Wave Measurements in Liverpool Bay
1103.	H/3031/STR/TRO1	Analysis of Deck Frames Between Lift Engine Beams
1104.	H/3031/STR/TRO2	Analysis of Lift Engine Side Beams
1105.	S/3031/3 Issue 2	Hovercraft Type 3031 Stressing Assumptions
1106.	S/3031/1	Hovercraft Type 3031 Proposed Loading Cases
1107.	V/3031/W/03	Type 3031 Hovercraft Weight Breakdown
1108.	DS/3031/00/01 Issue 2	Engineering Specification for type 3031 Hovercraft
1109.	F/3090/1	Hovercraft Type 3090 VA-2
1110.	H/3031/TO/TRO1	VA-3 Weight Breakdown
1111.	V/3031/00/PHY01	Hovercraft Noise Measurements

1112.	V/3031/PHY02	Noise Measurements on VA-1
1113.	V/3031/PHY03	Noise Measurements on VA-3
1114.	V/3031/PHY04	Noise Measurements on VA-3
1115.	SDR1205	Propeller Stresses
1116.	SDR1206	Drive-System Torsional Frequency
1117.	SDR1317	Analysis of Lift-Fan Gear Bases
1118.	SDR1318	Analysis of Propeller Gear Bases
1119.	SDR1501 Issues 2 and 3	Analysis of Lift Fan
1120.	SDR1502	Weight Analysis of Lift Fan
1121.	F/3031/1 through 12	Hovercraft Series of Reports from Operations Manager, Mr. L. R. Colquhoun
1122.	-----	The Development of Flexible Skirts for Air Cushion Vehicles
1123.	DES/RTO/US32S	VA-3 Test Program
1124.	Report 2, 4, and 5	Hovercraft Operation - Montauk
1125.	3031 Test Memo WT/3 to WT/8	Variable Stability Curtain Model Tests
1126.	3031 Test Memo WT/6	1/10th Scale Tank Model Stability Tests Over Ground
1127.	3031 Test Memo WT/27, 28	Tests During January and February 1961 Wind Tunnel Model 6, Series 6
1128.	3031 Test Memo WT/40	Static Stability and Cushion Pressure Distribution of 1/12th Scale Model of Hovercraft
1129.	A/91	Description and Calibration of the South Marston 7- foot by 5.5- foot Low-Speed Wind Tunnel
1130.	WT/02	Intake Distribution Tests on 1/12th Scale Model of Hovercraft Type 3031

1131. WT/03 Wind Tunnel Tests on 1/12th Scale Working Model of Hovercraft Type 3031 Fitted with a Modified Bow
1132. WT/04 Static Stability Tests on 1/12- Scale Working Model of Hovercraft Type 3031
1133. WT/06 Hovercraft Type 3031 - Results of Tank Tests on 1/10 Scale Dynamic Model with Modified Bow
1134. WT/07 Hovercraft Type 3031 - Two-Dimensional Spray Tests
1135. V/3126/WT/02 Reynolds Number Effects on Hovercraft - Simple Curtain Systems
1136. V/3126/WT/03 Further Two-Dimensional Tests on the Effect of Nozzle Size on the Performance of Simple Curtain Stems -- Performance of Two-Dimensional Deep Cushions
1137. A/3031/1 Thrust and Drag of Hovercraft Type A/3031/1
1138. A/3031/4 Four-Spring Model Analysis of Hovercraft Motion over Waves
1139. A/3031/5 Heave Analysis
1140. A/3031/6 Hovercraft Type 3031 - Model Test of Centrifugal Impeller First Stage
1141. A/3031/7 Hovercraft Type 3031 - Model Test of Centrifugal Impeller First Stage
1142. A/3031/8 Hovercraft Type 3031 - Model Tests of Centrifugal Impeller Second Stage
1143. A/3031/9 Type 3031 - Note on Operating Performance of a 7-ton Hovercraft, and Addendum 1 - Note on Operating Performance of a 10-ton Hovercraft
1144. A/3031/10 Preliminary Tests on Double Ended Two-Dimensional Recirculation Rig
1145. A/3031/11 Hovercraft Type 3031 - Model Tests of Centrifugal Impeller Third Stage

1146. A/3031/14 Hovercraft Sideforce and Roll Stability
1147. Borg-Warner Corporation, Ingersoll-Kalamazoo Division, Research, Investigation and Experimentation in the Field of Amphibian Vehicles, Final Report, December 1957.
1148. Borg-Warner Corporation, Ingersoll-Kalamazoo Division, To Design, Develop and Test an Improved Engine Air Aspiration and Exhaust System, Final Report on Task Order 3855-56-156, November 1958.
1149. FMC Corporation, Assault Amphibian Personnel Carrier, LVTP-X12, Final Report of Engineering Study, May 1965.
1150. RAE Tech. Note, Some Hydrodynamic and Structural Aspects of Design for the Ditching of Landplanes, No. Aero 1848 SME 380, November 1946.
1151. USA Trecom Shallow Draft Boats for Limited Warfare: Engineering and Environmental Test Report, Technical Report 62-77, July 1962.
1152. USA Trecom Technical Report, Evaluation of Pneumatic Boats for Limited Warfare, 63-20, May 1963.
1153. USA Trecom (USA GETA) Final Report of Military Potential Test of Marsh Screw Amphibian, Project No. 7-5-0524-01-9, December 1964.
1154. Vehicle Research Corporation, Proposal: VRC Channel GEM Concept as Related to Ground Effect Machines, 28 March 1960.
1155. Westland Aircraft, Overturning - Causal Factors and Curative Measures, Air Cushion Vehicles (Flight Supp.), Vol. No. 39, September 1965, pp. 32-33, 40-42.
1156. USA Trecom Tech. Report, A Study of Radial Flow Fans for GEM Propulsion System Applications, Trecom Tech. Report 64-33.
1157. Northrop Corp., Technological Problems, Letter to Project Manager, SESOC, 10 Dec. 1965, (SESOC 80).

ARTICLES FROM THE AIR-CUSHION

VEHICLE SUPPLEMENT OF FLIGHT MAGAZINE

- 1158. Progress Report on SR H2, 19 July 1962, p. 16.
- 1159. VA-3 (The First Hovercraft in Scheduled Service), 19 July 1962, p. 9.
- 1160. The Cockerell Papers (Part 3), Hovercraft Report 1/1957; December 9, 1957, 25 April 1963, p. 62.
- 1161. Aspects of the Cushioncraft CC-2, 25 April 1963, p. 58.
- 1162. Cushion-assisted Land Vehicles, 25 April 1963, p. 60.
- 1163. Mr. Cockerell's Paper, 23 May 1963, p. 81.
- 1164. Westland Ride High, 23 May 1963, p. 72.
- 1165. The Cockerell Papers (Part 4), Ripplecraft Report No. 3/58, March 18, 1958, 27 June 1963, p. 98.
- 1166. The Captured Air Bubble, 27 June 1963, p. 96.
- 1167. Surface Effect Ship, 22 August 1963, p. 25.
- 1168. Hovercraft in the House, 22 August 1963, p. 27.
- 1169. Dynacraft Union Dynamics Ltd., 26 September 1963, p. 35.
- 1170. Denny D2 Hoverbus, 26 September 1963, p. 37.
- 1171. VA-2 On the Oresund, 24 October 1963, p. 54.
- 1172. The 90-Knot Frigate-ACVs as Anti-Submarine Craft? 21 November 1963, p. 70.
- 1173. Bell Aerosystem Hydrokeel, 21 November 1963, p. 71.
- 1174. Cockerell on Hovercraft, 26 December 1963, p. 86.
- 1175. SR N3, The Most Capable ACV Jet Built, 27 February 1964, p. 21.
- 1176. SR N3, February 1964.
- 1177. World's First Hovercraft Races, 23 April 1964, p. 49.

- 1178. Overturning--Casual Factors and Curative Measures, Westland's Report on the SR N5 Incidents, 23 September 1965, p. 32.
- 1179. Background to Skirts, Fans and Annular Jets, 23 September 1965, p. 43.
- 1180. Three Military Projects, 18 November 1965, p. 64.
- 1181. Ramsgate: The Wrong Base? 20 January 1966, p. 4.
- 1182. The ACV in the Canadian Arctic, 20 January 1966, p. 7.
- 1183. Little Skimmer II, 24 February 1966, p. 24.
- 1184. Britten - Norman CC-5, 24 March 1966, p. 33.
- 1185. Mr. Cockerell's Resignation Statement, 24 March 1966, p. 39.
- 1186. Far East -- And After, 21 April 1966, p. 52.
- 1187. Aspects of Navigation, 16 June 1966, p. 113.
- 1188. What the ACV World Has to Offer, 16 June 1966, p. 105.
- 1189. Hovercraft Fully Exposed, 16 June 1966, p. 96-97.
- 1190. A Range of Landing Craft, 16 June 1966, p. 83.
- 1191. The First Hovercircus, 21 July 1966, p. 16.
- 1192. On Display Before the World, Hovershow '66--The Industry's First Shop-Window-Reported, 21 July 1966, p. 4a.
- 1193. Bigger and Faster, General Dynamics, 17 November 1966, p. 71.
- 1194. ACV Parametric Assessment, 17 November 1966, p. 74.
- 1195. Apethorpe Afterthoughts, 17 November 1966, p. 79.
- 1196. General Dynamics, SKIP-1 Details of General Dynamics Research Craft, 29 December 1966, p. 85.
- 1197. ACV Parametric Assessment, Part 2 Powerplant and Structural Design, 29 December 1966, p. 89.
- 1198. CC-6 Provides Vosper's Entry, 19 January 1967, p. 2-3.
- 1199. Homebuilt Hovercraft Q and A (Reader's Queries; Author's Answers), 19 January 1967, p. 13.
- 1200. R and D: The New Arrangements, 23 February 1967, p. 17.

1201. MINTECH to Back Waterjet Research, 23 March 1967, p. 30.
1202. Homcraft Technical Establishment, What is HYTHE? The Hovercraft Technical Establishment Examined on the Eve of Its Transfer, 23 March 1967, p. 36.
1203. Hovercraft: The Government View, 23 March 1967, p. 33.
1204. Practical Experience with Hovercraft, 20 April 1967, p. 53.
1205. The First Commercial Sale, 28 March 1963.
1206. The Cockerell Papers, Part Two, 28 March 1963.
1207. The Cockerell Papers, Part Five, July 1963.
1208. Bell SKMR-1 Hydroskimmer, July 1963.
1209. Thames Hoverbus, July 1963.
1210. SKIP-1 Details of General Dynamics Research Craft, 29 December 1966.
1211. Vosper Licence, Talks Drag On, 20 April 1967, p. 44.

ARTICLES FROM HOVERING CRAFT AND HYDROFOIL REVIEW

Kalerghi Publications

1212. Hydrofoil Patrol Craft, August and September, 1962.
1213. Westland's SR. N5, Vol. 2, No. 12, September 1963.
1214. Novel High-Speed Soviet Hydrofoil, June 1964.
1215. From Sun Glasses to Snow Goggles, June 1964.
1216. U. S. Navy Tests Hydrofoil Patrol Craft, February 1965.
1217. The Civil Hovercraft Development Programme, July 1965.
1218. Theory and Experiments on Air-Cushion Vehicles at Zero Speed, Vol. 4, No. 11, August 1965.
1219. The Military Display, June and July, 1966.
1220. Norway's Hovercraft Legislation, August 1966.
1221. Some Notes on the Stability of Hovercraft, September 1966.
1222. Multihull Powercraft, December and January, 1966-67.
1223. Hovercraft: Some Military Applications and Findings, December and January, 1966-67
1224. A Contribution to the Theory of Hydrofoil Oscillations in Seaways, April 1967.
1225. Summary of a Report by the Transport Research Section Hovercraft Committee of the Royal Swedish Academy of Engineering Sciences, April 1967.
1226. Hydrofoil Boats or Hovercraft? August 1967.
1227. Hovercraft Development Ltd., The Civil Hovercraft Development Programme, 4(10), pp. 6-12.

LIST OF BOOKS

ALPHABETICALLY BY AUTHORS

1228. Betz, A., Aerofoils and Hydraulic Machines, Handbook der Physik, Vol. VII, 1927, Chapter 4.
1229. Betz, A., Ingenieur-Archiv., Vol. II, No. 3, Sept. 1931, Translated as NACA TM 1022.
1230. Bliss, Gilbert A., Lectures on the Calculus of Variations, University of Chicago Press, 1947.
1231. Bryson, A. E., Jr., and Yu Chi Ho, Optimal Programming, Estimation and Control, Harvard University, (Classnotes, Book to be Published).
1232. Cosgriff, R. L., Nonlinear Control Systems, McGraw-Hill, New York, 1958.
1233. Davis, Sir Robert H., Deep Diving and Submarine Operations, The Saint Catherine Press Ltd., London, 1962, 7th ed., Book II, Chapter 4, p. 595.
1234. Eckert, B. E., Axial-Compressoren and Radial-Compressoren, Springer-Verlag, 1953, p. 310.
1235. Flugge-Lotz, I., Discontinuous Automatic Control Systems, Princeton University Press, Princeton, N. J., 1953.
1236. Glauert, J. H., The Elements of Aerofoil and Airscrew Theory, Cambridge University Press, 1947.
1237. Hahn, W., Theory and Application of Liapunov's Direct Method, Prentice Hall, New Jersey, 1963.
1238. Hunsaker and Rightmyer, Engineering Applications - Fluid Mechanics, McGraw-Hill Book Co., New York, 1947.
1239. Keller, C., Ingenieur-Archiv., Vol. III, No. 5, May 1932, Translated as NACA TM-722.
1240. Keller, C., The Theory and Performance of Axial-Flow Fans, McGraw-Hill Book Co., Inc., 1937.
1241. Kuchemann, D. and Weber, J., Aerodynamics of Propulsion, McGraw-Hill Book Co., New York, 1953.

1242. Lane, W. R., and Green, H. L., The Mechanics of Drops and Bubbles. Surveys in Mechanics, pp. 162-215, edited by G. K. Batchelor and R. M. Davis, Cambridge University Press, London, 1956.
1243. Leondes, C. T., Modern Control Systems Theory, McGraw-Hill, New York, 1965.
1244. Newton, G. C., Jr., Gould, L. A., Kaiser, J. F., Analytical Design of Linear Feedback Controls, John Wiley, New York, 1957.
1245. Prandtl, L. and Tietjens, O. G., Fundamentals of Hydro- and Aero-Mechanics, New York Dover Publications, 1957.
1246. Schlichting, H., Boundary Layer Theory, McGraw-Hill Book Co., Inc., 1955.
1247. Scott, D. S., Properties of Coherent Gas Liquid Flow, Advances in Chemical Engineering, Vol. 4, pp. 200-278, edited by T. B. Drew, J. W. Hoopes, Jr., and T. Vermeulen, Academic Press, New York, 1963.
1248. Smith, O. J. M., Feedback Control Systems, McGraw-Hill, New York, 1958.
1249. Stoker, J. J., Water Waves, Interscience Publishers, New York, 1957.
1250. Truxal, J. G., Automatic Feedback Control System Synthesis, McGraw-Hill, New York, 1955.
1251. Vennard, J. K., Fluid Mechanics, Fourth Edition, John Wiley and Sons, Inc., New York, 1963.
1252. Wiener, N., Extrapolation, Interpolation and Smoothing of Stationary Time Series, John Wiley, New York, 1949.
1253. Wislicenus, G., Fluid Mechanics of Turbo Machinery, Vols. I and II, McGraw-Hill Book Co., 1947, Dover Publications, 1965.
1254. Davenport, W. B., Jr. and Root, W. L., An Introduction to the Theory of Random Signals and Noise, New York, McGraw-Hill, 1958.
1255. Hinze, Turbulence: An Introduction to Its Mechanism and Theory, McGraw-Hill, New York, 1959.
1256. Ruzhitskii, E. I., Ground Effect Machines, Book in Russian, Moscow Izdatel'stvo Maschinostrenie, 1964, 178 pp.

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