

CASE FILE 565
COPY

RM E9H03



Schorn

RESEARCH MEMORANDUM

BIBLIOGRAPHY OF UNCLASSIFIED AIRCRAFT-FIRE LITERATURE

By Solomon Weiss and Gerard J. Pesman

Lewis Flight Propulsion Laboratory
Cleveland, Ohio

REVIEWED BUT NOT
EDITED

NATIONAL ADVISORY COMMITTEE
FOR AERONAUTICS

WASHINGTON
November 10, 1949

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

RESEARCH MEMORANDUM

BIBLIOGRAPHY OF UNCLASSIFIED AIRCRAFT-FIRE LITERATURE

By Solomon Weiss and Gerard J. Pesman

INTRODUCTION

Although many reports and articles concerning the aircraft-fire problem have been written, this information is widely dispersed throughout the literature and no bibliography that specifically applies to aircraft fires has been available. A bibliography of unclassified aircraft-fire literature has therefore been prepared at the NACA Lewis laboratory. The bibliography includes reports and articles that have been published within an approximate 20-year period ending January 1, 1949.

Requests for reports and articles listed in this bibliography should be directed to the originating organization; no assurance can be given that all the listed documents will be available. The NACA can provide only NACA publications. Reports prepared by private industry for governmental agencies should be requested from the sponsoring agency.

In the preparation of the bibliography, various technical indexes, bibliographies, catalogs, and the NACA library files were used. The following indexes, bibliographies, and catalogs were consulted:

1. The Engineering Index, New York
2. The Industrial Arts Index, New York
3. Bibliography of Scientific and Industrial Reports,
U.S. Dept. Commerce
4. Technical Information Pilot, Library of Congress
5. Works Progress Administration Bibliography of
Aeronautics (Compiled from I.A.S. Index of
Aeronautics).
6. Air Materiel Command Catalog of Aeronautical and
Allied Technical Documents, Dayton, Ohio

7. Index of NACA Technical Publications, 1915-1947,
Washington, D.C.
8. U.S. Air Force Technical Data Digest, Dayton, Ohio
9. Index Aeronauticus, British M.O.S.
10. Air Materiel Command Desk Catalog of German and
Japanese Air-Technical Documents, Dayton, Ohio

In addition, the inclusion of material submitted upon request from many industrial and research agencies in the field of aviation enhances the value of the bibliography.

An outline of the subjects by which the publications are listed is presented. The publications are alphabetically arranged by author under these headings. Some publications are listed under several applicable headings. Documents that deal primarily with one topic, however, are listed only under that particular subject. An author index is also presented at the end of the bibliography.

OUTLINE OF SUBJECTS

	<u>Page</u>
AIRCRAFT FIRE ACCIDENTS AND STATISTICS	4
COMBUSTIBLES	8
Gasoline	8
Low Volatility Fuel	8
Hydraulic Fluid	10
Miscellaneous	12
IGNITION SOURCES	16
Electrical	16
Hot Surfaces	18
Miscellaneous	19
FIRE PROTECTION	21
FIRE PREVENTION	25
General	25
Inerting	27
FIRE RESISTANCE OF MATERIALS	29
FIRE DETECTING	32
FIRE EXTINGUISHING	35
PASSENGER PROTECTION OR RESCUE	40
AUTHOR INDEX	42

AIRCRAFT FIRE LITERATURE

AIRCRAFT FIRE ACCIDENTS AND STATISTICS

- Anon.: Air Carrier Accidents - Calendar Year 1946. Accident Analysis Div., Safety Bur., CAB, June 19, 1947.
- Anon.: Airplane Fire Record. Quarterly Nat. Fire Protection Assoc., vol. 25, no. 3, Jan. 1932, pp. 303-317.
- Anon.: CAB Resume of U.S. Air Carrier Accidents, Calendar Year 1947, Analyzed as Regards the Incidence of Fire. Bull. No. 31, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., Sept. 1948.
- Anon.: Cause of DC-6 Fires Found. Bus. Week, no. 956, Dec. 27, 1947, pp. 28, 31.
- Anon.: Conference on Aircraft Safety. Winter Meeting, Am. Inst. Elec. Eng. (New York), Jan. 30, 1947.
- Anon.: Fire in Aeroplanes. The Aeroplane, vol. XLIX, no. 1261, July 24, 1935, pp. 105-106.
- Anon.: Fire in the Air. The Engineer, vol. CLXVIII, no. 4358, July 21, 1939, pp. 73-74.
- Anon.: Fire Hazards of Planes. Weekly Underwriter, vol. 155, July 27, 1946, p. 218.
- Anon.: Fire Statistics. Aircraft Service Circular, CAA, June 30, 1948.
- Anon.: Fires in the Air; Air Carrier, Domestic and Foreign - Scheduled & Non-Scheduled, Jan. 1, 1938-Dec. 31, 1946. CAB.
- Anon.: Non-Air-Carrier Accidents, Fires in the Air, Jan. 1, 1938-Dec. 31, 1945. CAB.
- Anon.: Non-Air Carrier Fire Accidents, Calendar Year 1947. CAB.
- Anon.: The Possible Causes of Fire in an Aeroplane Crash and the Means That Can Be Taken to Lessen the Fire Risk. R. & M. No. 796, British A.R.C., Jan. 1922.
- Anon.: Preliminary Report of Air Carrier Accidents Involving Irregular Operators. Alaskan Air Carriers and Domestic Operation, Calendar Year 1948. Safety Bur., CAB.
- Anon.: Preliminary Report of Air Carrier Accidents Involving Scheduled Operators. International and Domestic Operation, Calendar Year 1948. Safety Bur., CAB, Oct. 27, 1948.
- Anon.: Some Recent Aircraft Crashes and the Fire Factor. Bull. No. 15, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., March 1947.

AIRCRAFT FIRE ACCIDENTS AND STATISTICS (Cont'd)

- Anon.: A Statistical Analysis of Non-Air Carrier Aircraft Accidents, Calendar Year 1943. Safety Bur., CAB, July 10, 1944.
- Anon.: A Statistical Analysis of Non-Air Carrier Accidents (Calendar Year 1947). Bur. Safety Investigation, CAB, Oct. 11, 1948.
- Anon.: A Statistical Presentation of the Importance of Fire in Aircraft Accidents. Bull. No. 6, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., Nov. 1946.
- Anon.: Transcript of Testimony by the Secretary before the Committee on Interstate and Foreign Commerce, House of Representatives - United States of America, Washington, D.C. Bull. No. 13, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., Feb. 1947.
- Anon.: Why Do Our Airplanes Take Fire? G-2 Rep. No. 12,122-W, War Dept., March 29, 1927.
- Baird, John W.: Survey of Power Plant Installation Troubles in Scheduled Air Carrier Operations. Paper presented before SAE Nat. Aero. and Air Transport Meeting (New York), April 13-15, 1948.
- Bangs, Scholar: Improvised Crash-Study Technique. Aviation Week, vol. 48, no. 14, April 5, 1948, pp. 24-25.
- Bass, E. L.: Safety and the Power Plant. Shell Aviation News (London), no. 89, Nov. 1938, pp. 18-21.
- Cleveland Laboratory Aircraft Fire Research Panel: Preliminary Survey of the Aircraft Fire Problem. NACA RM E8B18, 1948.
- Froesch, Charles: Fire and What is Being Done about It. Aviation, vol. 39, no. 1, Jan. 1940, pp. 38-39, 92.
- Gassmann, J. J.: Investigation of Fires Originating in Aircraft Vacuum Systems. Tech. Development Rep. No. 67, CAA, June 1947.
- Glendinning, W. G.: Possible Cause of Aircraft Fires on Crash. R. & M. No. 1375, British A.R.C., Jan. 1930.
- Hannan, W. A.: Towards Greater Air Safety. Flight, vol. LIII, no. 2056, May 20, 1948, pp. 556-557, 559.
- Hardingham, R. E.: Aircraft Accidents. R.A.S. Jour., vol. 52, no. 451, July 1948, pp. 447-480.
- Hoffman, James D.: Report of Fire XFJ-1 Airplane #39053, Tinker Field, Oklahoma, Aug. 27, 1947. Rep. No. NA-46-118, Eng. Dept., North American Aviation, Inc., Jan. 7, 1948. (U.S. Navy Contract NOa(s)-5311.)

AIRCRAFT FIRE ACCIDENTS AND STATISTICS (Cont'd)

- Hotz, Robert: Presidential Air Safety Board Urges Accelerated Fire Research. Aviation Week, vol. 48, no. 2, Jan. 12, 1948, pp. 12-13.
- Jones, Bradley: Credos and Crashes. U.S. Air Services, vol. XIV, no. 4, April 1929, pp. 34-36.
- Kehoe, Edward J.: Why Fires Burn. Nat. Safety News, vol. 55, no. 5, May 1947, pp. 34-35, 101-102.
- Kuhn, W. E.: Plane Crash Fire Danger Studied by Fuel Engineers. Aviation Week, vol. 48, no. 3, Jan. 19, 1948, pp. 24-25.
- Landis, James M., Hunsaker, J. C., Cox, Howard B., Wright, T. P., and Arnold, Milton W.: Report to the President of the United States by the President's Special Board of Inquiry on Air Safety, Dec. 29, 1947.
- Lederer, Jerome: Loss Prevention Programs in Civil Aviation. Aero. Eng. Rev., vol. 7, no. 7, July 1948, pp. 25-32.
- Lewis, Merna R.: A Statistical Analysis of Non-Air-Carrier Aircraft Accidents, Calendar Year 1944. Safety Bur., CAB.
- McLarren, Robert: An Engineering Omission That Cost \$16,000,000 and 52 Lives. Auto. Ind., vol. 98, no. 6, April 1, 1948, pp. 37, 68, 70.
- Nixon, J. A.: Summary of B-29 Engine Nacelle Fires. Memo. Rep. Serial No. TSEPL-5-525-268, Add. 2, Air Tech. Service Command, Army Air Forces, Dec. 1, 1945.
- Noyes, H.: Summary of Data on Fires and Explosions in Combat Aircraft Fuel Tanks. Memo. Rep. Serial No. TSEPP-524-1698, Air Materiel Command, Army Air Forces, Sept. 13, 1946.
- Petaja, A. E.: Investigation of B-32 Power Plant Nacelle Fires Conducted at Fort Worth, Texas. Memo. Rep. Serial No. TSEPL-5-525-256, Air Tech. Service Command, Army Air Forces, Jan. 30, 1945.
- Petaja, A. E.: Summary of B-29 Engine Nacelle Fires. Memo. Rep. Serial No. TSEPL-5-525-268, Add. I, Air Tech. Service Command, Army Air Forces, July 31, 1945.
- Robinson, R. R.: Analysis of 97 Power Plant Fires, Model B-17 Airplane. Document No. D-6993, Boeing Aircraft Co., July 2, 1945.
- Shepard, I. A.: Flight Report - XP-67 Airplane. Rep. No. 87-66, McDonnell Aircraft Corp. (St. Louis, Mo.), Sept. 6, 1944.
- Tryon, George H., III: Fire Factors in Aircraft Accidents. Air-Sea Safety, vols. 1 and 2, nos. 2 and 1, Dec. 1946-Jan. 1947, pp. 4-11.

AIRCRAFT FIRE ACCIDENTS AND STATISTICS (Cont'd)

Wilkinson, Paul H.: Fire and Aviation. Diesel Products, vol. V, no. 6, July 1938, pp. 22-23.

Wolfe, Frederick: Summary of B-29 Engine Nacelle Fires. Memo. Rep. Serial No. TSEPL-5-525-268, Power Plant Lab., Air Materiel Command (Wright-Patterson Air Force Base), March 20, 1945.

COMBUSTIBLES

Gasoline

- Anon.: New Gasoline Aid to Safety in Dirigibles and Airplanes. The Oil and Gas Jour., vol. 30, no. 51, May 5, 1932, p. 22.
- Bair, W. E.: Determination of Ventilation Rates Required for Prevention of Explosive Fuel Air Mixtures in Enclosed Compartments. Document No. D-8540, Boeing Aircraft Co., Sept. 8, 1947.
- Jones, G. W., and Spolan, I.: Inflammability of Gasoline Vapor-Air Mixtures at Low Pressures. R.I. 3966, Bur. Mines, Oct. 1946.
- Miller, N. E.: Ignition Temperatures of Various Fluids Used in Aircraft. Misc. Test Rep. No. 218D, Eng. Labs., The Glenn L. Martin Co., Nov. 20, 1947.
- Willson, C. O.: Technologists' and Marketers' Reaction to Solid Gasoline Largely Negative. The Oil and Gas Jour., vol. 34, no. 15, Aug. 29, 1935, p. 27.
- Anon.: A Digest of an Investigation on "Inflammability of Low Volatility Fuels." The Beacon Labs., The Texas Co., Oct. 10, 1946.
- Anon.: Engine Performance of Aviation Safety Fuels. Rep. No. RL-3M-47(8), Res. Div., Esso Labs. (Standard Oil Development Co.), Jan. 24, 1947.
- Anon.: Fire-Safe Aviation Fuel. Aero Digest, vol. 25, no. 1, July 1934, pp. 31-32.
- Anon.: High Octane Safety Fuel for Aircraft. Aero Digest, vol. 51, no. 1, Oct. 1, 1945, pp. 82, 133-134.
- Anon.: The Knock-Limited Performance of Four Low Volatility Fuels in a Pratt and Whitney R-2800 (Front) Aircraft Engine Cylinder. Tech. and Res. Div., Refining Dept., The Texas Co., March 11, 1948.
- Anon.: New High Flash Aviation Fuel Confirmed as Safe, Economical. Aviation News, vol. 4, no. 2, Aug. 6, 1945, p. 22.
- Anon.: New Safety Fuel for Aircraft Demonstrated by Jersey Standard and Pan American Airways. Nat. Petroleum News, vol. XXXVII, no. 30, July 25, 1945, p. 42.

Low Volatility Fuel

- Anon.: Aviation Fuels. Lubrication, vol. 26, no. 9, Sept. 1940, pp. 97-108.

COMBUSTIBLES. (Cont'd)

- Anon.: Safety Fuel Awaits Engine Designers before Taking Its Place in Avgas Field. Nat. Petroleum News, vol. XXXVIII, no. 26, June 26, 1946, pp. 36-38.
- Anon.: Safety Fuels for Aero Engines. Shell Aviation News (London), no. 34, April 1934, pp. 10-11.
- "Badra": Relatively Safe Fuel. Flight, vol. XLVII, no. 1893, April 5, 1945, pp. 362-363.
- Bass, E. L.: Safety Fuels for Aircraft Engines. Shell Aviation News (London), no. 39, Sept. 1934, pp. 15-16.
- Cattaneo, A. G., Bollo, F. G., and Stanly, A. L.: A Petroleum Engineer Looks at Aircraft Fuels. SAE Jour. (Trans.), vol. 54, no. 2, Feb. 1946, pp. 55-63.
- Ellis, Robert E., and Sweeney, William J.: Availability and Characteristics of Aviation Safety Fuels. Nat. Petroleum News, vol. 32, no. 4, Jan. 24, 1940, pp. R18-R19.
- Grebel, A.: "Safety" Fuels for Aircraft Engines. NACA TM 494, 1929.
- Haskell, Raymond: Alkylation as a Source of Safety Fuels. Paper presented before SAE Ann. Meeting (Detroit), Jan. 15-19, 1940. (Abs. in SAE Jour., vol. 46, no. 2, Feb. 1940, p. 39.)
- Heron, S. D., and Beatty, Harold A.: Aviation Fuels - Present and Future Developments. Proceedings of Ninth Mid-Year Meeting of American Petroleum Institute, sec. III. Vol. 20M(III), pub. by A.P.I. (New York), 1939.
- Kelly, M. E.: Recent Developments in the Production of Aviation Spirits: The Use of "Safety" Fuels. Fuel in Sci. and Practice (London), vol. XIX, no. 9, Oct. 1940, pp. 200-201.
- Kunkel, John H.: New Safety 100-Octane Aviation Fuel. The Petroleum Eng., vol. XVI, no. 12, Aug. 1945, pp. 172, 176.
- MacGregor, J. R.: Which Will It Be? High Octane Gasoline or Safety Fuel. Aviation, vol. 39, no. 4, April 1940, pp. 57, 98, 101.
- Michel, Donald J., Hickel, Robert O., and Voit, Charles H.: Performance of a Double-Row Radial Aircraft Engine with Three Methods of Safety-Fuel Injection. NACA TN 1413, 1947.
- Miller, N. E.: Ignition Temperatures of Various Fluids Used in Aircraft. Misc. Test Rep. No. 218D, Eng. Labs., The Glenn L. Martin Co., Nov. 20, 1947.

COMBUSTIBLES (Cont'd)

- Monsell, J. R.: Test of Hydrogenated Safety Fuel in Maybach VL-2 Engine. Rep. Serial No. AEL-490, Aero. Eng. Lab., Naval Air Material Center (Philadelphia), Jan. 10, 1935.
- Parker, Will D., and Alden, R. C.: Some Economic Aspects of Aviation Fuel Volatility. Paper presented before SAE Summer Meeting (White Sulfur Springs), June 9-14, 1940.
- Rothrock, A. M., and Waldron, C. D.: Effect of Engine Operating Conditions on the Vaporization of Safety Fuels. NACA TN 430, 1932.
- Schey, Oscar W., and Young, Alfred W.: Engine Performance with a Hydrogenated Safety Fuel. NACA TN 466, 1933.
- Schey, Oscar W., and Young, Alfred W.: Performance of a Fuel-Injection Spark-Ignition Engine Using a Hydrogenated Safety Fuel. NACA Rep. 471, 1933.
- Schroeder, Robert W., Meador, Duis W., and Wiegand, Francis J.: Report on Performance Calibration of Navy XR-3350-6 Fuel Injection Engine #13399 with Low and High Volatile Fuel. W.A.C. Serial No. 526, Wright Aero. Corp., Oct. 17, 1940. (Bur. Aero. Contract No. 67510.)
- Soltz, C. D.: Safety Fuels. Flight, vol. XLVII, no. 1884, Feb. 1, 1945, pp. 122-122a.
- Sweeney, W. J., Kung, J. F., Jr., Howell, W. C., Jr., and Lewis, O. G.: Full Scale Engine Performance Characteristics of Aviation Safety Type Fuels. Paper presented before SAE Ann. Meeting (Detroit), Jan. 12-16, 1948.
- van Voohis, M. G.: High Anti-Knock "Safety" Aviation Fuel. Refiner, vol. 19, no. 1, Jan. 1940, pp. 57-59.

Hydraulic Fluid

- Anon.: "Aeroliquid" No. 909 Non-Inflammable Hydraulic Fluid - 3000 psi Pump - Test of. Project TED No. NAM-AE612008.5, Aero. Engine Lab., Naval Air Material Center (Philadelphia).
- Anon.: Bureau of Aeronautics Specification Fluid; Hydraulic, Aircraft, Non-Inflammable. 51F22(Aer), June 22, 1948.
- Anon.: Conference on Aircraft Safety. Winter Meeting, Am. Inst. Elec. Eng. (New York), Jan. 30, 1947.
- Anon.: Determination of Ignition Characteristics of Hydraulic Fluids under Simulated Flight and Crash Conditions. Tech. Development Rep. No. 64-(Advance Copy), CAA, April 1947.

COMBUSTIBLES (Cont'd)

- Anon.: Fluid - Hydraulic, Interim-Nonflammable Type. AMS 3150, SAE, May 1, 1948.
- Anon.: More Safety in the Air. Monsanto Mag., vol. XXVII, no. 6, Dec. 1948, pp. 12-15.
- Anon.: Navy Announces Hydrolube Development. Appl. Hydraulics, vol. 1, no. 8, Sept. 1948, p. 15.
- Anon.: Non-Inflammable (Hydrolube-U) Hydraulic Fluid, 3000 psi, Test of. Rep. No. AML NAM AE 612005, Aero. Materials Lab., Naval Air Material Center (Philadelphia), Jan. 15, 1947.
- Anon.: Summary of Experience with Hydrolube U-4. Prepared by Western Div. Sub-Comm. on Non-Flammable Hydraulic Fluids, Aircraft Res. and Testing Comm.
- Furby, N. W., and Christiansen, F. A.: Nonflammable Aircraft Hydraulic Fluids. Calif. Res. Corp. (Standard Oil Co. Calif.), Feb. 11, 1948.
- Glass, E. M.: Air Force Requirements for a Less Flammable Hydraulic Fluid. Tech. Data Digest, vol. 13, no. 23, Dec. 1, 1948, pp. 19-22.
- Glass, E. M.: What the Air Force Wants in Nonflammable Hydraulic Fluids. SAE Jour., vol. 56, no. 9, Sept. 1948, pp. 55-59.
- Howell, W. W., Williams, R. W., Ward, J. J., McCuiston, T. J., Bircher, J. R., and Croxton, F. C.: Survey Report on Nonflammable Hydraulic Fluids for Aircraft to Douglas Aircraft Co., Inc. Battelle Mem. Inst., Sept. 10, 1946.
- Loomis, R. C.: Status of Non-Inflammable Hydraulic Fluids. Eng. Rep. No. 785, Eng. & Overhaul Sec., TWA, Inc., Feb. 16, 1948.
- McLarren, Robert: Industry Seeks Ideal No-Fire Hydraulics. Aviation Week, vol. 49, no. 20, Nov. 15, 1948, pp. 23-24, 26.
- Militz, R. O., Spessard, D. R., and Zisman, W. A.: A Summary of Progress in Developing Non-Flammable Hydraulic Fluids for Use in Aircraft. Rep. P-2944, Naval Res. Lab., Off. Res. and Invention, Navy Dept., Aug. 1946.
- Miller, N. E.: Ignition Temperatures of Various Fluids Used in Aircraft. Misc. Test Rep. No. 218D, Eng. Labs., The Glenn L. Martin Co., Nov. 20, 1947.
- Mosteller, J. C.: Less Inflammable Aircraft Hydraulic Fluids, Literature Survey of Fluorine Containing Organic Compounds. Tech. Rep. No. 5658, Air Materiel Command, U.S. Air Force, Jan. 15, 1948.

COMBUSTIBLES (Cont'd).

- O'Rear, J. G., Militz, R. O., Spessard, D. R., and Zisman, W. A.: The Development of the Hydrolube Non-Inflammable Hydraulic Fluids. Rep. No. P-3020, Naval Res. Lab. (Washington), Navy Dept., April 1947.
- Sullivan, Miles V., Miller, Robert W., and Wolfe, John K.: The Laboratory Evaluation of Hydraulic Oils. I - Methods for Inflammability Test. Rep. No. P-2165, Naval Res. Lab. (Bellevue, D.C.), Navy Dept., Sept. 23, 1943.
- Sullivan, Miles V., and Wolfe, John K.: The Laboratory Evaluation of Hydraulic Oils. Part II - New Fluids Having Improved Inflammability Characteristics. NRL Rep. No. P-2308, Naval Res. Lab. (Washington, D.C.), Navy Dept., Sept. 1944.
- Wolfe, M. E., Tidd, A. J., and Maltby, A. L., Jr.: Final Report on Service Test of Non-Inflammable Hydraulic Fluid, Hollingshead 70965-B. NATC Rep. Serial No. ST-355, Service Test Div., U.S. Naval Air Test Center (Patuxent River, Md.), Aug. 31, 1948. (Proj. No. PTR AE-612041.)
- Miscellaneous
- Anon.: CFR Handbook. Coordinating Fuel Res. Comm., Coordinating Res. Council, Inc., 1944, p. 64.
- Anon.: CRC Handbook, Coordinating Res. Council, Inc., 1946.
- Anon.: Fire-Hazard Properties of Certain Flammable Liquids, Gases and Volatile Solids. Nat. Fire Protection Assoc. (Boston), 1941.
- Anon.: Flash and Fire Tests. The Significance of Tests of Petroleum Products. Rep. prepared by A.S.T.M. Comm. D-2 on Fuels and Lubricants, 1943, pp. 49-54.
- Anon.: General Operation Rules. CAR Amendment 43-0, CAB, July 1, 1945.
- Anon.: Phillips Hydrocarbons. Bull. 129, Chem. Prod. Dept., Phillips Petroleum Co., 1946, pp. 98-99.
- Anon.: Preliminary Tests with Solid Gasoline Prove Effectiveness as Safety Fuel. The Oil and Gas Jour., vol. 34, no. 9, July 18, 1935, p. 9.
- Anon.: Transportation of Explosives and Other Dangerous Articles. CAR Amendment 49-0, CAB, July 1, 1945.

COMBUSTIBLES (Cont'd)

- The Associated Factory Mutual Fire Insurance Cos.: Properties of Flammable Liquids, Gases, and Solids. Ind. and Eng. Chem. (Ind. ed.), vol. 32, no. 6, June 1940, pp. 880-884.
- Bollo, F. G., and Whitney, L. M.: Effect of Temperature, Wind Velocity and Delay before Ignition on Flame Spread Rates in the Open. Shell Development Co. (Emeryville, Calif.), Nov. 24, 1947.
- Bradley, D. C.: Burning Rates of Materials Used in Cabin Interiors. Eng. Rep. No. 763, TWA, Inc., Nov. 6, 1947.
- Cattaneo, A. G.: Comments on Fuel Injection and the Safety Characteristics of Aviation Gasolines. Rep. No. S-7224, Inv. No. 3810, Shell Development Co. (Emeryville, Calif.), Jan. 4, 1940.
- Cattaneo, A. G., Bollo, F. G., and Stanly, A. L.: A Petroleum Engineer Looks at Aircraft Fuels. SAE Jour. (Trans.), vol. 54, no. 2, Feb. 1946, pp. 55-63.
- Cattaneo, A. G., and McMacken, D. C.: Safety Aircraft Engine Lubricating Oil. Rep. No. S-4896, Shell Development Co. (Emeryville, Calif.), Aug. 2, 1939.
- Coward, H. F., and Jones, G. W.: Limits of Inflammability of Gases and Vapors. Bull. 279, Bur. Mines, 1928. (Rev., 1930, 1938.)
- Davis, E. Rutledge: Determining the Combustibility of Gas-and-Air Mixtures. The Elec. Jour., vol. 32, no. 11, Nov. 1935, pp. 465-467.
- Edgar, Graham: Ignition Temperatures of Aircraft Combustible Liquids. SAE Jour. (Trans.), vol. 45, no. 1, July 1939, p. 294.
- Glendinning, W. G., and Parker, W. G.: Explosion Risks in Fuel Tanks. Part 3. Various Experimental and Other Fuels. Rep. No. Ch.325, British R.A.E., Aug. 1941.
- Grove-White, C. W., and Parker, W. G.: Note on Preliminary Investigation of the Effect of Tank "Breathing" on the Explosion Risk in Aircraft Fuel Tanks. Chem. Note No. 650, British R.A.E., Sept. 13, 1943.
- Kauppi, T. A., and Pedersen, W. W.: Silicone Lubricants. Lubrication Eng., vol. 3, no. 1, Feb.-March 1947, pp. 17-19, 22-23.
- Klose, W.: Laboratory Test of Flame Propagation. Rep. No. T-22465, Boeing Aircraft Co., June 24, 1944.
- Lotz, Geo. C., Jr.: Determination of the Critical Speed at Which Wind Ceases to Fan Flames and Starts to Subdue Them. Serial No. AEL-393, Aero. Engine Lab. (Philadelphia), Bur. Aero., June 30, 1932.

COMBUSTIBLES (Cont'd)

- Mitchell, F. C., and Vernon, H. C.: Some Physical Considerations in the Safe Handling of Flammable Liquids. Chem. & Metallurgical Eng., vol. 44, no. 12, Dec. 1937, pp. 733-736.
- Moore, David H., Jr.: Magnesium Fires in Aircraft. Air Transport, vol. 5, no. 4, April 1947, p. 46.
- Nuckolls, A. H., Matson, A. F., and Dufour, R. E.: Propagation of Flame in Gasoline Vapor-Air Mixtures at Pressures below Atmospheric. Bull. of Res. No. 7, Underwriters' Labs., Inc., March 1939.
- Olsen, John C., Ferguson, George E., and Scheflan, Leopold: Gases from Thermal Decomposition of Common Combustible Materials. Ind. and Eng. Chem. (Ind. ed.), vol. 25, no. 6, June 1933, pp. 599-603.
- Parker, W. G.: Explosion Risks in Aircraft Fuel Tanks at Temperatures below the Flash Point of the Fuel. Part I. Fuel to Specn. RDE/F/KEE (Pool Burning Oil). Chem. Note No. 851, British R.A.E., Dec. 15, 1944.
- Ridley, H. G.: A Study of the Auto-Ignition of Fuel and Oil with Respect to XB-29 Exhaust Tunnel Wall Temperatures. Rep. No. D-4789, Boeing Aircraft Co., May 31, 1943.
- Scott, G. S., Jones, G. W., and Scott, F. E.: Determination of Ignition Temperatures of Combustible Liquids and Gases. Anal. Chem., vol. 20, no. 3, March 1948, pp. 238-241.
- Snell, Foster Dee: What Are the Hazards of New Materials? Address presented before New England Assoc. Fire Chiefs (Boston, Mass.), Jan. 16, 1946. (Copies available from Foster D. Snell, Inc., Consulting Chemists (Brooklyn, N. Y.).)
- Sortman, Charles W., Beatty, Harold A., and Heron, S. D.: Spontaneous Ignition of Hydrocarbons. Ind. and Eng. Chem. (Ind. ed.), vol. 33, no. 3, March 1941, pp. 357-360.
- Sullivan, M. V., Wolfe, J. K., and Zisman, W. A.: Flammability of the Higher Boiling Liquids and Their Mists. Ind. and Eng. Chem. (Ind. ed.), vol. 39, no. 12, Dec. 1947, pp. 1607-1614.
- Taylor, C. Fayette, and Taylor, Edward S.: Crash Fire Tests with Diesel Oil. Aviation, vol. 29, no. 5, Nov. 1930, pp. 283-285.
- Wiberg, W. R.: Breather Flow Tests to Determine Fire Hazard. Rep. No. D-4647, Boeing Aircraft Co., Feb. 15, 1943.

COMBUSTIBLES (Cont'd)

Wilkinson, Paul H.: Aircraft
Diesels. Pitman Pub. Corp.
(New York), 1940, p. 191.

IGNITION SOURCES

Electrical

- Anon.: Army-Navy Aeronautical Specification Wiring; Installation of Aircraft. AN-W-14a, May 15, 1944.
- Anon.: Electrical Equipment for Hazardous Locations. Nat. Safety News, vol. 53, no. 1, Jan. 1946, pp. 30-31, 116-122.
- Anon.: Electrical Grounding of Airplanes. Industrial Data Sheet D-A 1. Nat. Safety News, vol. 51, no. 1, Jan. 1945, pp. 31-32.
- Anon.: The Fire Hazard of Airborne Radio (Radar) Equipment. Bull. No. 5, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., Oct. 31, 1946.
- Anon.: Fire Hazards of Static Electricity in Aircraft Maintenance and Servicing Operations. Bull. No. 14 (3d Rev.), Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., Sept. 1948.
- Anon.: Fire Test of Electrical Wiring. Model; C-97. Preliminary Test Report, Boeing Aircraft Co., Sept. 3, 1946.
- Anon.: Intrinsically Safe Electrical Apparatus. B.S. No. 1259, British Standards Inst. (London), Nov. 2, 1945.
- Anon.: Report on Aircraft Electric System Guide. AIEE No. 750, July 1947. (Pub. by Am. Inst. Elec. Eng., New York.)
- Anon.: Static Electricity. Pub. by the Nat. Fire Protection Assoc. (Boston, Mass.), 1947. (Rev., 1948.)
- Beach, Robin: Electrostatic Ills and Cures of Aircraft. I. Electrification of Airplanes and How it Causes Radio Interference. Elec. Eng., vol. 66, no. 4, April 1947, pp. 325-334; II. Radio Interference and Its Control, vol. 66, no. 5, May 1947, pp. 453-462.
- Beach, Robin: Grounding Principles and Practice. Part V - Static Electricity in Industry. Elec. Eng., vol. 64, no. 5, May 1945, pp. 184-194.
- Beach, Robin: Letter to the Editor. Elec. Eng., vol. 66, no. 10, Oct. 1947, pp. 1045-1046.
- Beach, Robin: Static Electricity on Rubber-Tired Vehicles. Res. Pub. of Polytechnic Inst. Brooklyn, vol. IV, pt. I, 1940-1941, pp. 34-40.
- Beach, Robin: What of Air Safety? Elec. Eng., vol. 67, no. 5, May 1948, pp. 423-429.
- Brown, F. W., Kusler, D. J., and Gibson, F. D.: Sensitivity of Explosives to Initiation by Electrostatic Discharges. R.I. No. 3852, Bur. Mines, Jan. 1946.
- Bullard, W. R.: Grounding Principles and Practice. Part IV - System Grounding. Elec. Eng., vol. 64, no. 4, April 1945, pp. 145-151.

IGNITION SOURCES (Cont'd)

- Corcoran, A. E.: Comparative Tests of Aircraft Wire. Staff Eng. Rep. No. 3-2032, TWA, Inc., May 13, 1947.
- Crago, H. R.: Explosion-Proof Electric Units Seen "Must" for Future Aircraft. Aviation, vol. 46, no. 6, June 1947, pp. 51-53.
- Exner, D. W.: Protection of the Airplane Main Bus. Elec. Eng., vol. 67, no. 11, Nov. 1948, p. 1050.
- Fagge, A. K.: Investigation of the Risk of Petrol Fires Resulting from Frictional Electricity. Rep. No. E.E.108, British R.A.E., Oct. 29, 1925.
- Guest, P. G.: Apparatus for Determining Minimum Energies for Electric Spark Ignition of Flammable Gases and Vapors. R.I. No. 3753, Bur. Mines, May 1944.
- Guest, Paul G.: Static Electricity in Nature and Industry. Bull. No. 368, Bur. Mines, 1939.
- Gunn, Ross, Hall, Wayne C., and Kinzer, Gilbert D.: Army-Navy Precipitation-Static Project. Part I - The Precipitation-Static Interference Problem and Methods for Its Investigation. Proc. I.R.E., vol. 34, no. 4, April 1946, pp. 156P-161P.
- Gunn, Ross, and Parker, James P.: Army-Navy Precipitation-Static Project. Part V - The High-Voltage Characteristics of Aircraft in Flight. Proc. I.R.E., vol. 34, no. 5, May 1946, pp. 241-247.
- Harrison, L. P.: Lightning Discharges to Aircraft and Associated Meteorological Conditions. NACA TN 1001, 1946.
- Jensen, Claude: Grounding Principles and Practice. Part II - Establishing Grounds. Elec. Eng., vol. 64, no. 2, Feb. 1945, pp. 68-74.
- Johnson, A. A.: Grounding Principles and Practice. Part III - Generator-Neutral Grounding Devices. Elec. Eng., vol. 64, no. 3, March 1945, pp. 92-99.
- Kinzer, Gilbert D., and McGee, John W.: Army-Navy Precipitation-Static Project. Part IV - Investigations of Methods for Reducing Precipitation-Static Radio Interference. Proc. I.R.E., vol. 34, no. 5, May 1946, pp. 234-240.
- Lindblad, W. N.: Tests to Ascertain the Fire Hazard of Friction Sparks. Proc. Pacific Coast Gas Assoc., vol. 36, 1945, pp. 123-124.
- Mackeown, S. S., and Wouk, Victor: Electrical Charges Produced by Flowing Gasoline. Ind. and Eng. Chem. (Ind. ed.), vol. 34, no. 6, June 1942, pp. 659-664.

IGNITION SOURCES (Cont'd)

- Mackeown, S. S., and Wouk, Victor: Generation of Electric Charges by Moving Rubber-Tired Vehicles. Elec. Eng. (Trans.), vol. 62, no. 5, May 1943, pp. 207-210.
- Minser, E. J.: Meteorological Conditions Associated with Aircraft Lightning Discharges and Atmospheric. Jour. Aero. Sci., vol. 7, no. 2, Dec. 1939, pp. 51-55.
- Newmann, M., and Kemppainen, A. O.: Army-Navy Precipitation-Static Project. Part VI - High-Voltage Installation of the Precipitation-Static Project. Proc. I.R.E., vol. 34, no. 5, May 1946, pp. 247-254.
- Rüdenburg, Reinhold: Grounding Principles and Practice. Part I - Fundamental Considerations on Ground Currents. Elec. Eng., vol. 64, no. 1, Jan. 1945, pp. 1-13.
- Silsbee, Francis B.: Static Electricity. Circular C438, Nat. Bur. Standards, June 10, 1942.
- Stimmel, Ronald G., Rogers, Emery H., Waterfall, Franklin E., and Gunn, Ross: Army-Navy Precipitation-Static Project. Part III - Electrification of Aircraft Flying in Precipitation Areas. Proc. I.R.E., vol. 34, no. 4, April 1946, pp. 167P-177P.
- Trimble, L. S., and Carlson, P. R.: Constellation Electrical Fire Hazards. Rep. No. 4268, Lockheed Aircraft Corp., July 7, 1943.
- Waddel, Raymond C., Drutowski, Richard C., and Blatt, William N.: Army-Navy Precipitation-Static Project. Part II - Aircraft Instrumentation for Precipitation-Static Research. Proc. I.R.E., vol. 34, no. 4, April 1946, pp. 161P-166P.
- Wasserbach, T. B.: Rate of Static Electricity Buildup in Pumping Hydrocarbons. Memo. Rep., Res. Div., Esso Labs. (Standard Oil Development Co.), June 14, 1948.
- Willox, J. H.: Letter to the Editor. Elec. Eng., vol. 66, no. 10, Oct. 1947, pp. 1044-1045.

Hot Surfaces

- Jones, Bradley: Cremos and Crashes. U.S. Air Services, vol. XIV, no. 4, April 1929, pp. 34-36.
- Lowler, J. A.: Summary Report of Fire Tests on 377 Ground Rig. Document No. D-8831, Boeing Aircraft Co., Jan. 22, 1948.

IGNITION SOURCES (Cont'd)

- Mason, Walter, and Wheeler, Richard Vernon: The Ignition of Gases. Part II. Ignition by a Heated Surface. Mixtures of Methane and Air. Jour. Chem. Soc., Trans., vol. 121, pt. 2, 1922, pp. 2079-2091.
- Schey, Oscar W., and Young, Alfred W.: A Method for Reducing the Temperature of Exhaust Manifolds. NACA TN 390, 1931.
- Silver, Robert S.: The Ignition of Gaseous Mixtures by Hot Particles. Phil. Mag. and Jour. Sci., ser. 7, supp., vol. 23, no. 156, April 1937, p. 641.
- Veinott, Cyril G.: Inherent Overheating Protection of D-C Aircraft Motors. Tech. Paper 44-191, AIEE, July 1944.
- White, Albert Greville, and Price, Tudor Williams: The Ignition of Ether-Alcohol-Air and Acetone-Air Mixtures in Contact with Hot Surfaces. Jour. Chem. Soc., Trans., vol. 115, 1919, pp. 1462-1505.
- Miscellaneous
- Dallas, A. W., and Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part I. Tech. Development Rep. No. 33, CAA, Sept. 1943.
- Edwards, J. A., Jr.: Effect of Reverse Burning of Anti-Icing Heater, Model 202. Rep. No. 41804, Eng. Labs., The Glenn L. Martin Co., July 30, 1947.
- Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part III. Tech. Development Rep. No. 38, CAA, April 1944.
- Landau, H. G.: Ignition of Gases by Local Sources. Chem. Rev., vol. 21, no. 2, Oct. 1937, pp. 245-257; discussion, p. 258.
- Marcus, L.: Report on Investigation of Possible Fire Hazard of Fuel Quantity Gage Transmitters. Rep. No. NAES-INSTR-27-45, Naval Aircraft Modification Unit (Johnsville, Pa.), Bur. Aero., Navy Dept., June 2, 1945.
- Pigman, George L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part II. Tech. Development Rep. No. 37, CAA, Oct. 1943.
- Ridley, H. G.: A Study of the Auto-Ignition of Fuel and Oil with Respect to XB-29 Exhaust Tunnel Wall Temperatures. Rep. No. D-4789, Boeing Aircraft Co., May 31, 1943.
- Theodorsen, Theodore, and Freeman, Ira M.: The Elimination of Fire Hazard Due to Back Fires. NACA Rep. 409, 1932.

FIRE PROTECTION

- Anon.: Aircraft Fire Protection. Rep. No. 3, Airworthiness Proj. No. 7, Aircraft Fire Protection Subcomm. of the Airworthiness Requirements Comm., Aircraft Ind. Assoc. Am., Inc., June 2, 1947. (Rev., Aug. 18, 1947.)
- Anon.: Airplane Airworthiness - Transport Categories, Pt. 04b. CAR Amendment 04-0, CAB, Nov. 9, 1945, pp. 96-97.
- Anon.: British Civil Airworthiness Requirements, sec. D: Aeroplanes. Issue I, Air Registration Board (London), Jan. 1, 1948, pp. 148-153.
- Anon.: British Civil Airworthiness Requirements, vol. 1, sec. D.11, Air Registration Board (London).
- Anon.: Fire Protection for Aircraft Powerplants. Aero Digest, vol. 44, no. 3, Feb. 1, 1944, pp. 86-88, 224-226.
- Anon.: Insurance Savings Seen in Plan for Plane Crash Tests. The Nat. Underwriter, vol. 48, no. 52, Dec. 28, 1944, p. 26.
- Anon.: Proposed 1947 Edition of Airworthiness (AIR) Standards and Recommended Practices. Vol. III, 2d Session - Final Rep., Airworthiness Div., Provisional Int. Civil Aviation Organization (Montreal), March 1947, pp. 164-169.
- Anon.: Report No. 2 on Aircraft Fire Protection. Airworthiness Proj. No. 7, Airplane Tech. Comm. of Aircraft Ind. Assoc. Am., Inc., May 27, 1946.
- Anon.: Summary of Comments and Suggestions Concerning Future Course of Civil Aeronautics Administration Fire Test Program. Aero. Chamber Commerce America (Washington, D.C.), Nov. 5, 1941.
- Anon.: Tentative Recommendations for Fire Protection of Fuselage, Baggage and Passenger Compartments - Air Carrier Aircraft. Bull. No. 19, 1st rev., Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., March 1948.
- Anon.: Transportation Fire Safety. Bull. No. 24, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., Feb. 1948. (Ch. 68 of NFPA Handbook of Fire Protection.)
- Blair, E. A., Cousins, E. W., Hirst, Heston S., Tuells, C. F., and Kling, Alan L.: Protection of Aircraft against Magnesium Fires. Tech. Rep. No. 5526, Air Materiel Command, Army Air Forces, Aug. 27, 1946. (Prepared by Factory Mutual Res. Corp. under AAF Contract No. W33-038 ac-8437.)
- Caldwell, Roy: Airplane Fuel Dumping Tests. Flight Eng. Rep. No. 16, CAA, Feb. 20, 1945.

FIRE PROTECTION (Cont'd)

- Collbohm, F. R.: Fire Hazard Due to Dump Valve Operation, Model DC-2 & DC-3. Rep. No. 2012, Eng. Dept., Douglas Aircraft Co., Inc., March 11, 1948.
- Dallas, Allen W.: Tests Conducted to Determine Safe Methods of Dumping Fuel from Airplanes in Flight. Tech. Development Rep. No. 13, CAA, July 1938.
- Dallas, A. W., and Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part I. Tech. Development Rep. No. 33, CAA, Sept. 1943.
- Exner, D. W.: Protection of the Airplane Main Bus. Elec. Eng., vol. 67, no. 11, Nov. 1948, p. 1050.
- Fedden, A. H. Roy: Aircraft Power Plant - Past and Future. (32d Wilbur Wright Mem. Lecture.) R.A.S. Jour., vol. XLVIII, no. 405, Sept. 1944, pp. 337-389; cont., vol. XLVIII, no. 406, Oct. 1944, pp. 397-460.
- Gordon, K. C.: General Conclusions Resulting from the Civil Aeronautics Administration Power Plant Fire Test Program Involving the Curtiss-Wright CW-20 Type Cowling. Aero. Chamber Commerce America, July 6, 1942.
- Gordon, K. C.: General Conclusions Resulting from the Civil Aeronautics Administration Power Plant Fire Tests on DC-3 Type Cowl. Aero. Chamber Commerce America, June 4, 1941.
- Hammill, I. J.: Engineered Fire Protection. Air Transport, vol. 4, no. 11, Nov. 1946, pp. 61-62.
- Hansberry, Harvey L.: Aircraft Power-Plant Fire Protection. Aero. Eng. Rev., vol. 3, no. 10, Oct. 1944, pp. 9-16, 23-27.
- Hansberry, H. L.: Design Recommendations for Fire Protection of Aircraft Powerplant Installations. Tech. Development Note No. 31, CAA, Sept. 1943.
- Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part III. Tech. Development Rep. No. 38, CAA, April 1944.
- Hansberry, H. L.: Test Facilities, Aircraft Fire Protection Program. Tech. Development Rep. No. 54, CAA, July 1947.
- Hromada, J. C.: Fire Protection Programme. Shell Aviation News (London), no. 122, Aug. 1948, pp. 17-19.
- Lederer, Jerome: Fire Protection Problems of Private Flying. Western Flying, vol. XXVII, no. 3, March 1947, pp. 20, 34-36.

FIRE PROTECTION (Cont'd)

- Lindsay, C. H.: Fire Protection for Radial Engines. Aero Digest, vol. 50, no. 2, July 15, 1945, pp. 107, 132.
- Mathisen, A.: Reducing Fire Risks in Aircraft. Aircraft Eng., vol. XI, no. 126, Aug. 1939, pp. 364-365.
- Moore, David H., Jr.: Aircraft Fire Protection. Aero Digest, vol. 56, no. 4, April 1948, pp. 70-76, 110-112.
- Naiman, J.: Study of Rocket Fire Protection Problems. Memo. Rep. Serial No. TSEPE-664-502, Air Materiel Command, Army Air Forces, March 20, 1947.
- Neal, M.: Engine Fires in Aeroplanes. Aircraft Eng., vol. XVIII, no. 212, Oct. 1946, p. 352.
- Noyes, H.: Performance of Non-Self-Sealing Tanks. Memo. Rep. Serial No. TSEPP-524-1801, Air Materiel Command, Army Air Forces, Oct. 6, 1947.
- Noyes, H.: Summary of Data on Fires and Explosions in Combat Aircraft Fuel Tanks. Memo. Rep. Serial No. TSEPP-524-1698, Air Materiel Command, Army Air Forces, Sept. 13, 1946.
- Petaja, A. E.: Aircraft Power Plant Installation Design to Reduce the Fire Hazard. Tech. Note Serial No. TN-57-3, Eng. Div., ATSC, Army Air Forces, Feb. 2, 1945. (Abs. Bib. Sci. Ind. Repts., vol. 1, no. 14, April 12, 1946, p. 737, PB 8140.)
- Pigman, George L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part II. Tech. Development Rep. No. 37, CAA, Oct. 1943.
- Posner, D. L.: Aircraft Power Plant Fire Protection. Rep. No. 34, Aircraft Eng. Div., CAA, Sept. 13, 1948.
- Rickwood, G. E., and McMillan, J. A.: Tests of Aeroplane Firewalls. Rep. No. MM-28, Nat. Res. Council Canada (Ottawa), May 1939.
- Ridley, H. G.: Proposed Research Program for the Reduction of Aircraft Fuel Tank Explosion Hazards for Navy Department. Doc. No. D-7569, Boeing Aircraft Co., March 26, 1946.
- Sack, M.: Danger of Explosion of Fuel Tanks under Surface and Altitude Conditions. Proposal for a Safety Measure. Cornell Aero. Lab. Trans., May 1947.
- Speas, Dixon, and Whitlock, Marvin: Beating the Fire Hazard. Aviation, vol. 44, no. 10, Oct. 1945, pp. 181-184, 249-254.

FIRE PROTECTION (Cont'd)

Swan, Andrew, Helmore, W., and
Clothier, W. C.: Reduction
of Fire Risk by Induction Pipe
Flame Traps. R. & M. No. 1484,
British A.R.C., Aug. 1932.

Weyl, A. R.: Fire Protection
of Petrol Tanks. R.A.S. Jour.,
vol. XLIV, no. 356, Aug. 1940,
pp. 657-674.

FIRE PREVENTION

General

- Anon.: Aircraft Fire Protection. Rep. No. 3, Airworthiness Proj. No. 7, Aircraft Fire Protection Subcomm. of the Airworthiness Requirements Comm., Aircraft Ind. Assoc. Am., Inc., June 2, 1947. (Rev., Aug. 18, 1947.)
- Anon.: Description of Items with Outline of Material - DC-3, DC-4 Fire Prevention Program. Douglas Aircraft Co., Inc., rev., Jan. 1, 1947.
- Anon.: Fire and Life Safety in Aviation. Proc. 34th Annual Meeting Nat. Fire Protection Assoc. (Atlantic City), May 12-15, 1930, pp. 98-124; discussion, pp. 124-125.
- Anon.: Fire Precautions in Aircraft with Gas Turbine Power Units. Aircraft Design Memo. No. 633 (Issue 1), British M.O.S., Oct. 17, 1947.
- Anon.: Flight Test Summary Report - Wing Tip Ventilation for Fire Hazard Reduction, B-17G. Rep. No. D-6928, Boeing Aircraft Co., May 22, 1945.
- Anon.: Gravier. Aeronautics, vol. 19, no. 6, Nov. 1948, p. 48.
- Anon.: I.A.T.A. Info. Bull. No. 23. Rep. of XXXth Session, International Air Traffic Assoc. (Madrid), April 24-25, 1935, pp. 81-100.
- Anon.: The Prevention of Fire in Single-Engined Aeroplanes. R. & M. No. 795, British A.R.C., Jan. 1922.
- Anon.: Report No. 2 on Aircraft Fire Protection. Airworthiness Proj. No. 7, Airplane Tech. Comm. of Aircraft Ind. Assoc. Am., Inc., May 27, 1946.
- Anon.: Safer Flying. Flight, vol. XLIX, no. 1936, Jan. 31, 1945, pp. 120-122.
- Anon.: Stop That Aviation Fire. Air Transport, vol. 5, no. 1, Jan. 1947, pp. 19-34.
- Baird, J. W.: Crashproof Fuel Tanks. Aero Digest (Aviation Eng.), vol. 40, no. 4, April 1942, pp. 130, 133-134, 136, 154.
- Brunat, Henri: Combating Airplane Fires. NACA TM 550, 1930.
- Echols, O. P.: Fire Prevention in Modern Airplanes and Recent Experimentation. First Nat. Aero. Safety Conf. (New York), Oct. 4-5, 1928, pp. 475-477; discussion, pp. 478-480.
- Finch, G. I.: A Scientific Approach to Fire Fighting and Prevention. Jour. Roy. Soc. Arts, vol. XCIV, no. 4716, April 26, 1946, pp. 342-349.
- Foster, S. W. G.: Fire Risk in Aircraft. Flight, vol. XLVI, no. 1856, July 20, 1944, pp. 67-69.

FIRE PREVENTION (Cont'd)

- Gelzenlichter, R.: Aircraft Fire Prevention. Materiel Div. Rep. Serial No. 2794, Air Corps, Sept. 15, 1927.
- Glendinning, W. G., and Drinkwater, J. W.: The Prevention of Fire in Aircraft. R.A.S. Jour., vol. 51, no. 439, July 1947, pp. 616-641; discussion, pp. 641-650.
- Goldstein, J. R., and Wood, Carlos: Aircraft Fire Hazard Reduction Tests. Rep. No. 2323, Eng. Dept., Douglas Aircraft Co., Inc., March 20, 1939.
- Hansberry, Harvey L.: CAA Reports Progress in Fire Prevention Work. SAE Jour., vol. 56, no. 2, Feb. 1948, pp. 36-37.
- Hansberry, Harvey L.: Civil Aeronautics Administration Aircraft Fire Prevention Developments. Paper presented at the SAE Nat. Aero. Meeting (Los Angeles), Oct. 2-4, 1947.
- Johnson, W. F.: Jet Engine Fire Protection Study. Memo. Rep. Serial No. TSEPE-664-466-F, Air Tech. Service Command (Wright Field), July 21, 1947.
- Koch, A. S.: Compliance of Equipment and Materials Used in Air-Carrier Aircraft with Fire Prevention Requirements. Safety Regulation Release No. 259, CAA, Aug. 26, 1947.
- Kuhn, Fritz: Fire Prevention on Aircraft. NACA TM 628, 1931.
- Lederer, Jerome: Fires Can Be Prevented. Flying and Popular Aviation, vol. 26, no. 4, April 1940, pp. 38-39, 80, 82.
- Lederer, Jerome: Loss Prevention in Non-Scheduled Civil Aviation. SAE Jour. (Trans.), vol. 44, no. 4, April 1939, pp. 173-180.
- Lederer, Jerome: Safety in the Operation of Air Transportation. A James Jackson Cabot Professorship Lecture, Norwich Univ., April 20, 1939.
- Littlewood, William: The Fire Prevention Problem. Paper presented before Regional Meeting, Aero. Sec. of Nat. Safety Council (New York), March 29, 1939.
- McCord, C. G.: Aviation Fire Prevention in the Navy. Jour. Am. Soc. Naval Eng., vol. XLI, no. 2, May 1929, pp. 239-245.
- McCord, C. G.: Fire-Prevention Problems. Trans. A.S.M.E., AER-52-32, vol. 52, pt. I, 1930, pp. 273-278; discussion, pp. 278-280.
- McCord, C. G.: Preventing and Extinguishing Aircraft Fires. Aviation, vol. 27, no. 26, Dec. 28, 1929, pp. 1265-1267.
- Mayo, R. H.: Fire Hazards in Flight and the Application of Exhaust Collector Rings. G-2 Rep., War Dept., Feb. 1929.
- Naiman, J.: Prevention of Rocket Aircraft Fires. Plane Facts, Oct. 1947, pp. 6-7.

FIRE PREVENTION (Cont'd)

- Noyes, H.: Summary of Data on Fires and Explosions in Combat Aircraft Fuel Tanks. Memo. Rep. Serial No. TSEPP-524-1698, Air Materiel Command, Army Air Forces, Sept. 13, 1946.
- Raume, A.: Test of Fuel Leakage into Inboard Supercharger B-17 Airplane. Test No. 24439, Boeing Aircraft Co., Jan. 12, 1944.
- Reller, J. O.: Flight Test Summary Report - Fuel Leakage in Wing. Rep. No. D-6068, Boeing Aircraft Co., Aug. 3, 1944.
- Reller, J. O.: Flight Test Summary Report - Fuel Leakage in Wing with Dams and Drains, B-17G. Rep. No. D-6162, Boeing Aircraft Co., Aug. 29, 1944.
- Sabatier, J.: Fire Prevention on Airplanes. Part I. NACA TM 536, 1929.
- Sabatier, J.: Fire Prevention on Airplanes. Part II. NACA TM 537, 1929.
- Sabatier, J.: A Study of Precautions against Fire on Board of Airplanes. First Nat. Aero. Safety Conf. (New York), Oct. 4-5, 1928, pp. 480-495.
- Whiteley, R., and Daniel, S. G.: An Investigation of the Fire Hazards Associated with the Use of Various Petroleum Fractions under Simulated Aircraft Crash Conditions. Rep. No. R.181/47.0, Investigation Nos. 4149 and 4150, Aero-Engine Lab., Thornton Res. Centre, Shell Oil Co., Inc., Oct. 1947.
- Wood, B. D.: A Preliminary Survey of the Literature of Fire Prevention and Suppression. Rep. No. MX-12, Nat. Res. Council Canada (Ottawa), Sept. 1944.
- Wyman, R., and Bird, R. E.: Study of Fire Prevention Methods for XC-97 Electrical Equipment. Rep. No. D-4862, Boeing Aircraft Co., May 10, 1943.

Inerting

- Anon.: Effect of CO₂ Dissolved in 100 Octane Fuel on the Vapour Locking Height of a Spitfire VB Aeroplane. Chem. Note No. 629, British R.A.E.; Aug. 9, 1943.
- Brice, P. E. R.: Design and Analysis of the Exhaust Gas Purge System for the Mareng Fuel Cells in the XF-12 Airplane. Rep. No. EP-22, Republic Aviation Corp. (Farmingdale, N.Y.), Feb. 10, 1945.

FIRE PREVENTION (Cont'd)

- Brown, M. N., Naulty, H. W., Rothgery, G. H., and Smith, L. W.: The Development of Temporary Installation to Apply Exhaust Gases to Inert the Vapor Space in Aircraft Fuel Tanks. Rep. No. V-212-D-1, V-213-M-1, Curtiss Res. Lab., Curtiss-Wright Corp., June 1, 1944. (OSRD Contract No. OEMsr-1944, Symbol 3676.)
- Clemens, R. K.: Survey of Fuel Tank Purging Agents. Document No. D-8990, Boeing Aircraft Co., March 16, 1948.
- Glendinning, W. G., and Parker, W. G.: Note on the Solubility of Gases in Aviation Fuel and Hexane at Temperatures between -40° C. and $+35^{\circ}$ C. C.N. No. 501, British R.A.E., July 7, 1942.
- Glendinning, W. G., and Parker, W. G.: Report on the Probable Frequency and the Danger of Explosive Mixtures in Fuel Tanks During Operational Flying. Rep. No. Ch.333, British R.A.E., Aug. 1942.
- Greene, G. R.: Summary of Data on Fires and Explosions in Combat Aircraft Fuel Tanks. Rep. Serial No. TSEPP-524-1698, Add. 1, Power Plant Lab., Air Materiel Command, U.S. Air Force, March 8, 1948.
- Hock, R.: Internal Exhaust Gas Purging System for Fuel Tanks in the B-17F Airplane. Memo. Rep. Serial No. ENG-57-524-1085, Materiel Command, Army Air Forces, May 11, 1944.
- Kostochkin, V. V.: Fuel Tank Protection by Inert Gases. R.T.P. Trans. No. 2545, British M.A.P. (Reprinted by Durand Reprinting Comm., CIT.)
- Lynch, P. J.: Purging System for B-36A Fuel Tanks - Four Proposals. Rep. No. FZM-36-250, Consolidated Vultee Aircraft Corp. (Fort Worth), Jan. 15, 1947. (AAF Contract W33-038-ac-7.)
- Naulty, Howard W.: An Inert Gas Installation for Aircraft Fuel Tanks. Aero. Eng. Rev., vol. 7, no. 12, Dec. 1948, pp. 18-25.
- Simpson, N. H., and Dorcas, Kenneth E.: Power Plant - Fuel Tanks - Aviation Gasoline - Possible Methods for Prevention of the Formation of Explosive Mixtures Therein. Rep. No. FZM-239, Consolidated Vultee Aircraft Corp. (Fort Worth), Oct. 2, 1946.

FIRE RESISTANCE OF MATERIALS

- Allen, A.: Misc. Test Rep. No. 174-D, Eng. Labs., The Glenn L. Martin Co., Nov. 14, 1947. (Aluminum Nut Fire Test.)
- Anon.: Fireproofing Preparations, Investigation of (Fredrico Duacastella). Rep. Serial No. PTL-135, Naval Aircraft Factory (Philadelphia), Bur. Aero., Nov. 7, 1932.
- Anon.: Fire-Resisting Hose. Aircraft Prod., vol. VIII, no. 92, June 1946, p. 290.
- Anon.: Flameproofing Aircraft Fabrics. Air Transport, vol. 2, no. 1, Jan. 1944, pp. 90, 92, 94.
- Anon.: Flameproofing Textile Fabrics, Robert W. Little, ed. Reinhold Pub. Corp. (New York), 1947.
- Anon.: Flameproofing of Textiles. Letter Circular LC 467, Nat. Bur. Standards, May 5, 1936.
- Anon.: Inconel and 18-8 Stainless Steel Airplane Firewall Burning through Tests for Aircraft Airworthiness Section Civil Aeronautics Authority. Rep. from Development and Res. Div., The International Nickel Co., Inc.
- Berger, Lawrence B., Schrenk, H. H., Gale, James A., Stewart, Ralph W., and Sieffert, Lorenz E.: Toxicity and Flame Resistance of Thermosetting Plastics. R.I. 4134, Bur. Mines, Oct. 1947.
- Blalock, J. C.: Flame Resistance Tests of Fuel and Oil Hose. Memo. Rep. Serial No. TSEPL-5-524-1554, Eng. Div., Air Tech. Service Command, Army Air Forces, July 16, 1945.
- Bolz, R. C.: Flame Test of XF-12 Cabin Insulation. Rep. No. ERM-620, Eng. Res. Sec., Republic Aviation Corp. (Farmingdale, N.Y.), July 10, 1947.
- Bradley, D. C.: Burning Rates of Materials Used in Cabin Interiors. Eng. Rep. No. 763, TWA, Inc., Nov. 6, 1947.
- Chapin, H. D.: Flame Resistant Materials - RC-3 - Cluff Fabric Products. Rep. No. ERM-603, Eng. Res. Sec., Republic Aviation Corp. (Farmingdale, N.Y.), May 29, 1947.
- Chesneau, R.: The Flame Proofing of Textiles. Use of Ammonium and Boron Compounds. Textile Colorist, vol. 55, no. 654, June 1933, pp. 375-377.
- Corcoran, A. E.: Comparative Tests of Aircraft Wire. Staff Eng. Rep. No. 3-2032, TWA, Inc., May 13, 1947.
- Fromm, C. W.: Flame Resistance Tests of NC711 and DC100 Materials Mfg. by Armstrong Cork Co., and 22170E-CL91 Naugahide Manufactured by U.S. Rubber Co. Rep. No. ERM-556, Eng. Res. Div., Republic Aviation Corp. (Farmingdale, N.Y.), March 10, 1947.

FIRE RESISTANCE OF MATERIALS (Cont'd)

- Kleine, R. F.: Fire Resistant Fuel and Oil Lines, Connections, and Flexible Hose. Rep. No. D-42, Wright Aero. Corp., Sept. 8, 1948.
- Kline, Gordon M.: Fire-Resistant Doped Fabric for Aircraft. Ind. and Eng. Chem. (Ind. ed.), vol. 27, no. 5, May 1935, pp. 556-561.
- Levin, N.: Flame Resistance Test of Koroseal #1000 (Brown, Flame-Proofed) Mfg. by B. F. Goodrich Company. Rep. No. ERM-R-457, Eng. Res. Div., Republic Aviation Corp. (Farmingdale, N.Y.), Jan 2, 1947.
- Levin, N. L.: Test of "Seabee" Cabin Interior Materials for Flame Resistant Qualities. Rep. No. ERM-R-441, Eng. Res. Div., Republic Aviation Corp. (Farmingdale, N.Y.), Dec. 6, 1946.
- McSurely, Alexander: Flame-Resistant Materials Are Urged for Lightplane Use. Aviation News, vol. 7, no. 7, Feb. 17, 1947, pp. 22-23.
- Miller, N. E.: Fire Resistant Quality of Albi-RX. Rep. No. 41882, Eng. Labs., The Glenn L. Martin Co., July 15, 1948; rev., Nov. 15, 1948.
- Miller, N. E.: Misc. Test Rep. No. 304-B, Eng. Labs., The Glenn L. Martin Co., Feb. 3, 1947. (Firewall Fairlead Fire Test.)
- Mutchler, Willard: The Effect of Temperature on Sheet Metals for Airplane Firewalls. NACA TN 965, 1944.
- Perkins, A. J.: Comparative Burning Tests of Common Plastics. Bull. of Res. No. 22, Underwriters' Labs., Inc., Aug. 1941.
- Ridgway, R. T.: Flame Resistant Test of AN-H-24 and AN-H-35 Hose with Aeroquip, Weatherhead or AN-840 Hose Nipples and AN-748 Clamps Installed. Memo. Rep. Serial No. TSEPP-524-1783, Power Plant Lab., Air Materiel Command (Wright-Patterson Air Force Base), July 12, 1948.
- Walker, G. W., and Frey, G. C.: Preliminary Tests of High Temperature Protective Coatings for Aluminum. Rep. No. NA-48-378, Eng. Res. Lab., North American Aviation, Inc., March 24, 1948.
- Weissberg, S. G., and Kline, G. M.: The Development of Fire-Retardant Coatings for Fabric Covered Aircraft. Tech. Development Rep. No. 86, CAA (Indianapolis, Ind.), Oct. 1948.
- Wichser, Robert F.: Paint - Albi 'RX' Fire Retardant, Investigation of Properties. Rep. No. ERT-587, Eng. Res. Div., Republic Aviation Corp. (Farmingdale, N.Y.), July 23, 1948.

FIRE RESISTANCE OF MATERIALS (Cont'd)

Williams, S. E.: Fire Tests on
Fire Walls for Airplanes -
Fairchild Aircraft Corporation.
Rep. No. 28-492, Johns-Manville
Res. Labs., Nov. 1, 1938.

FIRE DETECTING

- Anon.: Aircraft Fire Protection. Rep. No. 3, Airworthiness Proj. No. 7, Aircraft Fire Protection Subcomm. of the Airworthiness Requirements Comm., Aircraft Ind. Assoc. Am., Inc., June 2, 1947. (Rev., Aug. 18, 1947.)
- Anon.: Aircraft Wing Fire Extinguishing Tests, B-17 Airplane. Tech. Rep. No. 5183, Eng. Div., Air Tech. Service Command (Wright-Patterson Field), Jan. 12, 1945. (Tests conducted by Walter Kidde & Co., Inc., under AAF Contract No. W33-038-ac-2388.)
- Anon.: Airplane Fire Detection and Extinguishing Systems. Info. Bull., Aero. Center, CAA, Sept. 1948.
- Anon.: An Electronic Fire Alarm. The Aeroplane, vol. LXXIII, no. 1889, Aug. 22, 1947, pp. 228-229.
- Anon.: Fire and Heat Detectors. Aero. Standard AS 401, SAE, Dec. 1, 1947.
- Anon.: New Fire Detection Unit. Aero Digest, vol. 54, no. 6, June 1947, pp. 50, 117-118.
- Anon.: Pyrene. Aeronautics, vol. 19, no. 6, Nov. 1948, p. 47.
- Anon.: Report No. 2 on Aircraft Fire Protection. Airworthiness Proj. No. 7, Airplane Tech. Comm. of Aircraft Ind. Assoc. Am., Inc., May 27, 1946.
- Anon.: Tentative Recommendations for Fire Protection of Fuselage, Baggage and Passenger Compartments - Air Carrier Aircraft. Bull. No. 19, 1st rev., Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., March 1948.
- Anon.: U.S. Air Force Specification; Detector; Overheat, Thermal Switch Unit, Installation of. No. 41409, Aug. 23, 1948.
- Cantlin, John H.: Smoke-Spotting "Eyes" Give Plane-Fire Alert. Aviation, vol. 46, no. 4, April 1947, pp. 44-45.
- Dallas, A. W., and Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part I. Tech. Development Rep. No. 33, CAA, Sept. 1943.
- Friedman, Herbert: Ultraviolet Counters - Application to a Fire Alarm. Rep. No. H-2027, Naval Res. Lab. (Washington, D.C.), March 20, 1943.
- Glendinning, W. G., and Drinkwater, J. W.: Fire Prevention in Aircraft. Shell Aviation News (London), no. 122, Aug. 1948, pp. 19-22.
- Gordon, K. C.: General Conclusions Resulting from the Civil Aeronautics Administration Power Plant Fire Test Program Involving the Curtiss-Wright CW-20 Type Cowling. Aero. Chamber Commerce America, July 6, 1942.

FIRE DETECTING (Cont'd)

- Gordon, K. C.: General Conclusions Resulting from the Civil Aeronautics Administration Power Plant Fire Tests on DC-3 Type Cowl. Aero. Chamber Commerce America, June 4, 1941.
- Hansberry, H. L.: Design Recommendations for Fire Protection of Aircraft Powerplant Installations. Tech. Development Note No. 31, CAA, Sept. 1943.
- Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part III. Tech. Development Rep. No. 38, CAA, April 1944.
- Johnson, W. F.: Jet Engine Fire Protection Study. Memo. Rep. Serial No. TSEPE-664-466-F, Air Tech. Service Command (Wright Field), July 21, 1947.
- Klein, H. A.: Engine Fire Extinguishing Tests - B-17 Airplane. Memo. Rep. Serial No. TSEPE-664-524, Air Materiel Command, Army Air Forces, Oct. 30, 1947. Including Appendix A: Rep. No. R-662, Walter Kidde & Co., Inc., by D. G. Faust, H. R. Keeler, and W. L. Ziegler.
- Klein, H. A.: Engine Fire Extinguishing Tests - B-29 Airplane Engine Nacelle. Memo. Rep. Serial No. MCREXE-664-532, Air Materiel Command, U.S. Air Force, July 9, 1948. Including Appendix A: Final Rep. on AAF Contract No. W-33-038-ac-8489, C-O-Two Fire Equipment Co., by John H. Cantlin, Ralph B. Williams, and Norman H. Siebens.
- Maschi, A. P.: Compliance Test Report on Fenwal Aircraft Fire and Heat Detector 17343-61 in Accordance with Aeronautical Standard AS 401 Issued Dec. 1, 1947. Fenwal, Inc. (Ashland, Mass.), Sept. 3, 1948.
- Moore, David H., Jr.: Aircraft Fire Protection. Aero Digest, vol. 56, no. 4, April 1948, pp. 70-76, 110-112.
- Patterson, George A., and Slocum, C. W.: Flight Test of Edison Fire Detector System for All Airplanes. Rep. No. D-6114, Boeing Aircraft Co., Oct. 17, 1944.
- Pigman, George L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part II. Tech. Development Rep. No. 37, CAA, Oct. 1943.
- Posner, D. L.: Aircraft Power Plant Fire Protection. Rep. No. 34, Aircraft Eng. Div., CAA, Sept. 13, 1948.
- Reller, J. O.: Flight Test Summary Report - Edison Aircraft Fire Detector System. Rep. No. D-6909, Boeing Aircraft Co., May 7, 1945.
- Salkind, H.: Wilcolator Fire Detector, Type No. A-4981. Memo. Rep. Serial No. MCREXE-664-480-B, Air Materiel Command, U.S. Air Force, March 31, 1948. (Distribution restricted.)

FIRE DETECTING (Cont'd)

Tanenholz, L.: Smoke Detection
Test. Rep. No. ERT-537, Eng.
Res. Div., Republic Aviation
Corp. (Farmingdale, N.Y.),
Aug. 1948.

Wedell, J. J.: Flame Detector.
Memo. No. 4-32, Jet Prop. Lab.,
C.I.T., June 2, 1948. (ORDCIT
Proj. Contract No. W-04-200-
ORD-455.)

Weisz, Paul B.: Electronic Fire
and Flame Detector. Electronics,
vol. 19, no. 7, July 1946, pp.
106-109.

Wichser, Robert F.: Fenwal -
Fire Detector - Functional
Test - P-84. Rep. No. ERMR-593,
Eng. Res. Sec., Republic Avia-
tion Corp. (Farmingdale, N.Y.),
June 13, 1947.

Wichser, Robert F.: Fire
Detector - Silver Win - Func-
tional Test. Rep. No. ERMR-665,
Eng. Res. Div., Republic Avia-
tion Corp. (Farmingdale, N.Y.),
Oct. 27, 1947.

Wichser, Robert F.: Fire
Detectors - Temperature Setting
and Rate of Rise Tests. Rep.
No. ERMR-724, Eng. Res. Sec.,
Republic Aviation Corp. (Farm-
ingdale, N.Y.), March 9, 1948.

Wrigley, D. A.: Preliminary
Analysis of the Response of a
Thermocouple Actuated Fire
Detector. Product Engineering
Rep. No. 103-1, Instrument Div.,
Thomas A. Edison, Inc., July 26,
1948.

FIRE EXTINGUISHING

- Anon.: Aircraft Fire Extinguishers. *Airway Age*, vol. 10, no. 2, Feb. 1929, pp. 215, 216.
- Anon.: Aircraft Fire-Fighting Equipment. *The Engineer*, vol. CLXVIII, no. 4363, Aug. 25, 1939, pp. 217-219.
- Anon.: Aircraft Fire-Fighting Equipment. *Engineering*, vol. 148, no. 3841, Aug. 25, 1939, p. 236.
- Anon.: Aircraft Fire Protection. Rep. No. 3, Airworthiness Proj. No. 7, Aircraft Fire Protection Subcomm. of the Airworthiness Requirements Comm., Aircraft Ind. Assoc. Am., Inc., June 2, 1947. (Rev., Aug. 18, 1947.)
- Anon.: Aircraft Wing Fire Extinguishing Tests, B-17 Airplane. Tech. Rep. No. 5183, Eng. Div., Air Tech. Service Command (Wright-Patterson Field), Jan. 12, 1945. (Tests conducted by Walter Kidde & Co., Inc., under AAF Contract No. W33-038-ac-2388.)
- Anon.: Airplane Fire Detection and Extinguishing Systems. *Info. Bull.*, Aero. Center, CAA, Sept. 1948.
- Anon.: Army Air Forces Specification; Extinguisher, Aircraft Fire (Fixed Installation). No. 40690, Oct. 1, 1943.
- Anon.: The Effectiveness of Salts in Water Solution as a Means of Fire Fighting. *R.T.P. Trans.* No. 1592, British M.A.P.
- Anon.: Fire Extinguishing in Aircraft Engine Installations. *A.R.B. Handbook No. 5*, Air Registration Board (London), March 1945.
- Anon.: Fire-Fighting Trials on Magnesium-Base Alloys. *Engineering*, vol. 162, no. 4219, Nov. 22, 1946, pp. 481-483, 492.
- Anon.: Fire Suppression. *Flight*, vol. XLIX, no. 1956, June 20, 1946, pp. 629-631.
- Anon.: Graviner. *Aeronautics*, vol. 19, no. 6, Nov. 1948, p. 48.
- Anon.: Hazard Due to Accidental Discharge of CO₂ Fire Extinguishers. *Air Commerce Bull.* (CAA), vol. 10, no. 4, Oct. 15, 1948, pp. 118-119.
- Anon.: Introduction to the Basic Principles of Extinguishing Fires in Engines and Gasoline Tanks During Flight - also Temporary Directives for the Installation of Fire Extinguishing Apparatus. *CGD-24, ADRC Trans.*, Jan. 25, 1945.
- Anon.: Minimising Fire Risks. *Flight*, vol. XXXVI, no. 1600, Aug. 24, 1939, pp. 192-193.
- Anon.: Phylax Fire Protection. *Airway Age*, vol. 11, no. 1, Jan. 1930, p. 96.

FIRE EXTINGUISHING (Cont'd)

- Anon.: Report on the Life Hazards and Nature of the Products Formed When Chlorobromomethane Extinguisher Liquid is Applied to Fires. NC415, Underwriters' Labs., Inc., Nov. 3, 1947.
- Anon.: Report No. 2 on Aircraft Fire Protection. Airworthiness Proj. No. 7, Airplane Tech. Comm. of Aircraft Ind. Assoc. Am., Inc., May 27, 1946.
- Anon.: Tentative Recommendations for Fire Protection of Fuselage, Baggage and Passenger Compartments - Air Carrier Aircraft. Bull. No. 19, 1st rev., Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., March 1948.
- Anon.: Use of Monochlorobromomethane by the German Navy and Air Forces as a Fire Extinguishing Agent. Bull. No. 10, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc.
- Anon.: Water Carried in Floats for Drenching Fires. Canadian Aviation, vol. 20, no. 11, Nov. 1947, pp. 27, 54.
- Bangs, Scholar: Methyl Bromide as Fire Extinguisher. Aviation Week, vol. 47, no. 22, Dec. 1, 1947, p. 28.
- Beardsley, G. F.: Report on Japanese Naval Aircraft CO₂ System Design. Air Tech. Intell. Rev. Rep. No. F-IR-76-RE, Air Materiel Command, Air Corps, Aug. 1946.
- Brown, Hylton R., and Hartmann, Irving: Pitch for Extinguishing Magnesium Fires. Quarterly Nat. Fire Protection Assoc., vol. 35, no. 3, Jan. 1942, pp. 226-231.
- Brown, H. R., Hartmann, Irving, and Nagy, John: Extinguishing Magnesium Fires with Hard Pitch Derived from Coal Tar. R.I. 3672, Bur. Mines, Dec. 1942.
- Cameron, A. M.: Chemistry in Relation to Fire Risk and Fire Extinction. Isaac Pitman & Sons, Ltd. (London), 2d ed., 1944.
- Condice, Graham M.: Coordination Report on Fire Tests on B-29 Nacelle at Wright Field & Indianapolis. Document No. D-8366, Boeing Aircraft Co., June 9, 1947.
- Dallas, A. W., and Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part I. Tech. Development Rep. No. 33, CAA, Sept. 1943.
- Denne, R. A.: Aircraft and the Fire Problem. R.A.S. Jour., vol. XXXVI, no. 257, May 1932, pp. 433-443.
- Denne, R. A.: The Problem of Fire in Aircraft. Aircraft Eng., vol. IV, no. 38, April 1932, pp. 98-100.

FIRE EXTINGUISHING (Cont'd)

- Dimmig, L.: Physical and Corrosive Properties of Monochlorobrommethane. Memo. Rep. Serial No. TSEPE-651-23A, Eng. Div., Air Materiel Command, Army Air Forces, July 23, 1946.
- Eberhardt, P. W.: Aircraft Fire-fighting Equipment. Aero Digest, vol. 52, no. 3, March 1946, pp. 59, 154.
- Ellis, Oliver C. de C.: Extinction of Petrol Fires by Methyl Iodide. Nature, vol. 161, no. 4089, March 13, 1948, pp. 402-403.
- Fisher, W. A. P., and Maclellan, A. M.: Application of Methyl Bromide Fire Extinction System to Fuel Tank Bays. Tech. Note No. S.M.E.180, British R.A.E., Oct. 1943.
- Glendinning, W. G., and Drinkwater, J. W.: Fire Prevention in Aircraft. Shell Aviation News (London), no. 122, Aug. 1948, pp. 19-22.
- Gordon, K. C.: General Conclusions Resulting from the Civil Aeronautics Administration Power Plant Fire Test Program Involving the Curtiss-Wright CW-20 Type Cowling. Aero. Chamber Commerce America, July 6, 1942.
- Gordon, K. C.: General Conclusions Resulting from the Civil Aeronautics Administration Power Plant Fire Tests on DC-3 Type Cowl. Aero. Chamber Commerce America, June 4, 1941.
- Greten, R. H., and Faust, D. G.: Pressure Developed in Discharge Tubing of Aircraft Fire Extinguishing Systems (Carbon Dioxide). Rep. No. 557, Walter Kidde & Co., Inc., Feb. 19, 1945.
- Gretz, John L.: Methyl Bromide Fire Extinguishing Systems, Magnesium Alloy Tubing for. Rep. No. AML NAM 251004, Aero. Materials Lab., Naval Air Material Center (Philadelphia), Aug. 26, 1941.
- Griffin, C. L.: Dry-Ice Gas Fights Aviation Fires. Ice and Refrigeration, vol. XCIX, no. 2, Aug. 1940, pp. 89-90.
- Hammill, I. J.: Methyl Bromide vs Carbon Dioxide. Kidde Ind., vol. 5, no. 2, June 1948, p. 6.
- Hansberry, H. L.: Design Recommendations for Fire Protection of Aircraft Powerplant Installations. Tech. Development Note No. 31, CAA, Sept. 1943.
- Hansberry, H. L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part III. Tech. Development Rep. No. 38, CAA, April 1944.
- Harlan, R. B.: Test of Extinguishing Agents for Magnesium Fires. Test Rep. No. T-22838, Boeing Aircraft Co., Oct. 4, 1943.

FIRE EXTINGUISHING (Cont'd)

- Hartman, Irving: Test of Anspach Fire Extinguishing Equipment. Serial No. AEL-271, Aero. Engine Lab. (Philadelphia), Bur. Aero., Jan. 28, 1930.
- Huffman, W. E.: CO₂ Fire Tests. Memo. Rep. Serial No. X-54-27, Materiel Div., Air Corps, Oct. 18, 1932.
- Huffman, William E.: Fire Extinguisher Tests. Memo. Rep. Serial No. 54-6-186, Materiel Div., Air Corps, May 27, 1932.
- Johnson, W. F.: Jet Engine Fire Protection Study. Memo. Rep. Serial No. TSEPE-664-466-F, Air Tech. Service Command (Wright Field), July 21, 1947.
- Jones, G. W., and Gilliland, W. R.: Extinction of Gasoline Flames by Inert Gases. R.I. 3871, Bur. Mines, April 1946.
- Jones, G. W., and Scott, G. S.: Extinction of Isobutane Flames by Carbon Dioxide and Nitrogen. R.I. 4095, Bur. Mines, June 1947.
- Kasarjian, A.: Composite Test of Fire Extinguishers. Serial No. AEL-242, Aero. Eng. Lab. (Philadelphia), Bur. Aero., April 15, 1929.
- Klein, H. A.: Engine Fire Extinguishing Tests - B-17 Airplane. Memo. Rep. Serial No. TSEPE-664-524, Air Materiel Command, Army Air Forces, Oct. 30, 1947. Including Appendix A: Rep. No. R-662, Walter Kidde & Co., Inc., by D. G. Faust, H. R. Keeler, and W. L. Ziegler.
- Klein, H. A.: Engine Fire Extinguishing Tests - B-29 Airplane Engine Nacelle. Memo. Rep. Serial No. MCREXE-664-532, Air Materiel Command, U.S. Air Force, July 9, 1948. Including Appendix A: Final Rep. on AAF Contract No. W-33-038-ac-8489, C-0-Two Fire Equipment Co., by John H. Cantlin, Ralph B. Williams, and Norman H. Siebens.
- Kuhn, F.: Examination and Testing of Fire Alarm and Fire Extinguishing Devices for Use in Aircraft. Trans. No. F-TS-775-RE, Air Materiel Command, Army Air Forces, Nov. 1946. (Abs. Bib. Sci. Ind. Repts., vol. 4, no. 8, Feb. 21, 1947, p. 697, PB 49057.)
- Lange, H. W.: Extinguishing Fire with Low Pressure Carbon Dioxide. Ill. Tech. Eng. and Alumnus, vol. 8, no. 1, Oct. 1942, pp. 11-16.
- Lederer, Jerome: Fire Extinguishers. Aviation Eng., vol. 6, no. 1, Jan. 1932, pp. 18-23.
- Lindsay, C. H.: Methyl Bromide vs Carbon Dioxide for Quenching Aircraft Fires. Aero Digest, vol. 47, no. 1, Oct. 1, 1944, pp. 120-124, 222.
- McCord, C. G.: Preventing and Extinguishing Aircraft Fires. Aviation, vol. 27, no. 26, Dec. 28, 1929, pp. 1265-1267.

FIRE EXTINGUISHING (Cont'd)

- Miller, Joshua: Hand Fire Extinguishers. Serial No. AML(A)-392, Aero. Materials Lab. (Philadelphia), Bur. Aero., Aug. 15, 1939.
- Moore, David H., Jr.: Aircraft Fire Extinguishing. Aero Digest, vol. 55, no. 3, Sept. 1947, pp. 44-45, 114-115.
- Moore, David H., Jr.: Aircraft Fire Protection. Aero Digest, vol. 56, no. 4, April 1948, pp. 70-76, 110-112.
- Musante, A. F. S.: Quality of Aviation Gasoline after Subjection to Fire and Foam. Final Rep., Sun Oil Co., July 28, 1941.
- Nicholson, A.: Extinction of Petrol Fires by Methyl Iodide. Nature, vol. 162, no. 4107, July 17, 1948, pp. 111, 112.
- Pearce, S. J., Schefflan, Leopold, Schrenk, H. H., Ferguson, G. E., and Brown, H. R.: Application of Carbon Tetrachloride-Type Fire-Extinguisher Liquid to Burning Magnesium Chips and Magnesium Incendiary Bombs. R.I. 3686, Bur. Mines, Feb. 1943.
- Pigman, George L.: Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight. Part II. Tech. Development Rep. No. 37, CAA, Oct. 1943.
- Posner, D. L.: Aircraft Power Plant Fire Protection. Rep. No. 34, Aircraft Eng. Div., CAA, Sept. 13, 1948.
- Williams, Ralph B.: Monochlorobrommethane Demonstration. Memo. Rep. Serial No. TSEPE-651-23, Eng. Div., Air Tech. Service Command, Army Air Forces, Feb. 4, 1946.
- Williamson, H. V.: How Carbon Dioxide Conquers Fire. Petroleum Refiner, vol. 23, no. 11, Nov. 1944, pp. 123-126.

PASSENGER PROTECTION OR RESCUE

- Anon.: AAF Crash Fire Equipment. Aero Digest, vol. 54, no. 6, June 1947, pp. 38-39.
- Anon.: Airplane Crash Fire Fighting Manual. Nat. Fire Protection Assoc. (Boston, Mass.), 1945.
- Anon.: Fire Control. Canadian Aviation, vol. 17, no. 1, Jan. 1944, pp. 56-57, 97.
- Anon.: Fire and Life Safety in Aviation. Proc. 34th Annual Meeting Nat. Fire Protection Assoc. (Atlantic City), May 12-15, 1930, pp. 98-124; discussion, pp. 124-125.
- Anon.: Hazard Due to Accidental Discharge of CO₂ Fire Extinguishers. Air Commerce Bull. (CAA), vol. 10, no. 4, Oct. 15, 1948, pp. 118-119.
- Anon.: Paper on Crash Fire and Rescue Facilities on Aerodromes. I. Bull. No. 20, Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., Dec. 1947.
- Anon.: Report on the Life Hazards and Nature of the Products Formed When Chlorobromomethane Extinguisher Liquid is Applied to Fires. NC415, Underwriters' Labs., Inc., Nov. 3, 1947.
- Anon.: Tentative Recommendations for Fire Protection of Fuselage, Baggage and Passenger Compartments - Air Carrier Aircraft. Bull. No. 19, 1st rev., Comm. Aviation and Airport Fire Protection, Nat. Fire Protection Assoc., March 1948.
- Berger, Lawrence B., Schrenk, H. H., Gale, James A., Stewart, Ralph W., and Sieffert, Lorenz E.: Toxicity and Flame Resistance of Thermosetting Plastics. R.I. 4134, Bur. Mines, Oct. 1947.
- Hardingham, R. E.: Aircraft Accidents. R.A.S. Jour., vol. 52, no. 451, July 1948, pp. 477-480.
- Koch, A. S.: Protection against Smoke and Noxious Gases Aboard Aircraft. Aviation Safety Release No. 295, CAA, July 22, 1948.
- McFarland, Ross A.: Human Factors in Air Transport Design. McGraw-Hill Book Co., Inc., 1946, pp. 584-592.
- Taplin, J. E.: Current Techniques in Fighting Aircraft Crash Fires. Fire Eng., vol. 97, no. 12, Dec. 1944, pp. 867-869; cont., vol. 98, no. 1, Jan. 1945, pp. 30-31.
- Tryon, George H., III: Airplane Crash Fire Fighting. Quarterly Nat. Fire Protection Assoc., vol. 37, no. 3, Jan. 1944, pp. 186-200.

PASSENGER PROTECTION OR RESCUE (Cont'd)

White, Clayton S.: Calculation of CO₂ Percentage Equivalents at Sea Level and Various Pressure Altitudes. Aviation Medical Consultants' Rep. to Douglas Aircraft Co., Inc. Appendix No. 1 to Rep. No. 2, Proj. No. 200, Dept. Aviation Medicine, Lovelace Clinic (Albuquerque, N.M.), Oct. 11, 1948.

White, Clayton S.: Estimated Tolerance of Human Subjects to Various CO₂-Time Concentrations. Aviation Medical Consultants' Rep. to Douglas Aircraft Co., Inc. Rep. No. 2, Proj. No. 200, Dept. Aviation Medicine, Lovelace Clinic (Albuquerque, N.M.), July 27, 1948.

Lewis Flight Propulsion Laboratory,
National Advisory Committee for Aeronautics,
Cleveland, Ohio.

AUTHOR INDEX

Alden, R. C.	10	Daniel, S. G.	27
Allen, A.	29	Davis, E. Rutledge	13
Arnold, Milton W.	6	Denne, R. A.	36
"Badra"	9	Dimmig, L.	37
Bair, W. E.	8	Dorcas, Kenneth E.	28
Baird, John W.	5,25	Drinkwater, J. W.	26,32,37
Bangs, Scholar	5,36	Drutowski, Richard C.	18
Bass, E. L.	5,9	Dufour, R. E.	14
Beach, Robin	16	Eberhardt, P. W.	37
Beardsley, G. F.	36	Echols, O. P.	25
Beatty, Harold A.	9,14	Edgar, Graham	13
Berger, Lawrence B.	29,40	Edwards, J. A., Jr.	19
Bircher, J. R.	11	Ellis, Oliver C. de C.	37
Bird, R. E.	27	Ellis, Robert E.	9
Blair, E. A.	21	Exner, D. W.	17,22
Blalock, J. C.	29	Fagge, A. K.	17
Blatt, William N.	18	Faust, D. G.	33,37,38
Bollo, F. G.	9,13	Fedden, A. H. Roy	22
Bolz, R. C.	29	Ferguson, George E.	14,39
Bradley, D. C.	13,29	Finch, G. I.	25
Brice, P. E. R.	27	Fisher, W. A. P.	37
Brown, F. W.	16	Foster, S. W. G.	25
Brown, Hylton R.	36,39	Freeman, Ira M.	20
Brown, M. N.	28	Frey, G. C.	30
Brunat, Henri	25	Friedman, Herbert	32
Bullard, W. R.	16	Froesch, Charles	5
Caldwell, Roy	21	Fromm, C. W.	29
Cameron, A. M.	36	Furby, N. W.	11
Cantlin, John H.	32,33,38	Gale, James A.	29,40
Carlson, P. R.	18	Gassmann, J. J.	5
Cattaneo, A. G.	9,13	Gelzenlichter, R.	26
Chapin, H. D.	29	Gibson, F. D.	16
Chesneau, R.	29	Gilliland, W. R.	38
Christiansen, F. A.	11	Glass, E. M.	11
Clemens, R. K.	28	Glendinning, W. G.	5,13,26,28,32,37
Clothier, W. C.	24	Goldstein, J. R.	26
Collbohm, F. R.	22	Gordon, K. C.	22,32,33,37
Condice, Graham M.	36	Grebel, A.	9
Corcoran, A. E.	17,29	Greene, G. R.	28
Cousins, E. W.	21	Greten, R. H.	37
Coward, H. F.	13	Gretz, John L.	37
Cox, Howard B.	6	Griffin, C. L.	37
Crago, H. R.	17	Grove-White, C. W.	13
Croxton, F. C.	11	Guest, Paul G.	17
Dallas, Allen W.	19,22,32,36		

AUTHOR INDEX (Cont'd)

Gunn, Ross	17,18	Kung, J. F., Jr.	10
Hall, Wayne C.	17	Kunkel, John H.	9
Hammill, I. J.	22,37	Kusler, D. J.	16
Hannan, W. A.	5	Landau, H. G.	19
Hansberry, Harvey		Landis, James M.	6
L.	19,22,26,32,33,36,37	Lange, H. W.	38
Hardingham, R. E.	5,40	Lederer, Jerome	6,22,26,38
Harlan, R. B.	37	Levin, N. L.	30
Harrison, L. P.	17	Lewis, Merna R.	6
Hartman, Irving	38	Lewis, O. G.	10
Hartmann, Irving	36	Lindblad, W. N.	17
Haskell, Raymond	9	Lindsay, C. H.	23,38
Helmore, W.	24	Littlewood, William	26
Heron, S. D.	9,14	Loomis, R. C.	11
Hickel, Robert O.	9	Lotz, Geo. C., Jr.	13
Hirst, Heston S.	21	Lowler, J. A.	18
Hock, R.	28	Lynch, P. J.	28
Hoffman, James D.	5	McCord, C. G.	26,38
Hotz, Robert	6	McCuistion, T. J.	11
Howell, W. C., Jr.	10	McFarland, Ross A.	40
Howell, W. W.	11	McGee, John W.	17
Hromada, J. C.	22	McLarren, Robert	6,11
Huffman, William E.	38	McMacken, D. C.	13
Hunsaker, J. C.	6	McMillan, J. A.	23
Jensen, Claude	17	McSurely, Alexander	30
Johnson, A. A.	17	MacGregor, J. R.	9
Johnson, W. F.	26,33,38	Mackeown, S. S.	17,18
Jones, Bradley	6,18	MacLennan, A. M.	37
Jones, G. W.	8,13,14,38	Maltby, A. L., Jr.	12
Kasarjian, A.	38	Marcus, L.	19
Kauppi, T. A.	13	Maschi, A. P.	33
Keeler, H. R.	33,38	Mason, Walter	19
Kehoe, Edward J.	6	Mathisen, A.	23
Kelly, M. E.	9	Matson, A. F.	14
Kempainen, A. O.	18	Mayo, R. H.	26
Kinzer, Gilbert D.	17	Meador, Duis W.	10
Klein, H. A.	33,38	Michel, Donald J.	9
Kleine, R. F.	30	Militz, R. O.	11,12
Kline, Gordon M.	30	Miller, Joshua	39
Kling, Alan L.	21	Miller, N. E.	8,9,11,30
Klose, W.	13	Miller, Robert W.	12
Koch, A. S.	26,40	Minser, E. J.	18
Kostochkin, V. V.	28	Mitchell, F. C.	14
Kuhn, Fritz	26,38	Monsell, J. R.	10
Kuhn, W. E.	6	Moore, David H.,	
		Jr.,	14,23,33,39

AUTHOR INDEX (Cont'd)

Mosteller, J. C.	11	Siebens, Norman H.	33,38
Musante, A. F. S.	39	Sieffert, Lorenz E.	29,40
Mutchler, Willard	30	Silsbee, Francis B.	18
Nagy, John	36	Silver, Robert S.	19
Naiman, J.	23,26	Simpson, N. H.	28
Naulty, Howard W.	28	Slocum, C. W.	33
Neal, M.	23	Smith, L. W.	28
Newmann, M.	18	Snell, Foster Dee	14
Nicholson, A.	39	Soltz, C. D.	10
Nixon, J. A.	6	Sortman, Charles W.	14
Noyes, H.	6,23,27	Speas, Dixon	23
Nuckolls, A. H.	14	Spessard, D. R.	11,12
Olsen, John C.	14	Spolan, I.	8
O'Rear, J. G.	12	Stanly, A. L.	9,13
Parker, James P.	17	Stewart, Ralph W.	29,40
Parker, Will D.	10	Stimmel, Ronald G.	18
Parker, W. G.	13,14,28	Sullivan, Miles V.	12,14
Patterson, George A.	33	Swan, Andrew	24
Pearce, S. J.	39	Sweeney, William J.	9,10
Pedersen, W. W.	13	Tanenholz, L.	34
Perkins, A. J.	30	Taplin, J. E.	40
Petaja, A. E.	6,23	Taylor, C. Fayette	14
Pigman, George L.	19,23,33,39	Taylor, Edward S.	14
Posner, D. L.	23,33,39	Theodorsen, Theodore	20
Price, Tudor Williams	19	Tidd, A. J.	12
Raume, A.	27	Trimble, L. S.	18
Reller, J. O.	27,33	Tryon, George, H., III	6,40
Rickwood, G. E.	23	Tuells, C. F.	21
Ridgway, R. T.	30	van Voohis, M. G.	10
Ridley, H. G.	14,19,23	Veinott, Cyril G.	19
Robinson, R. R.	6	Vernon, H. C.	14
Rogers, Emery H.	18	Voit, Charles H.	9
Rothgery, G. H.	28	Waddel, Raymond C.	18
Rothrock, A. M.	10	Waldron, C. D.	10
Rudenberg, Reinhold	18	Walker, G. W.	30
Sabatier, J.	27	Ward, J. J.	11
Sack, M.	23	Wasserbach, T. B.	18
Salkind, H.	33	Waterfall, Franklin E.	18
Scheflan, Leopold	14,39	Wedell, J. J.	34
Schey, Oscar W.	10,19	Weissberg, S. G.	30
Schrenk, H. H.	29,39,40	Weisz, Paul B.	34
Schroeder, Robert W.	10	Weyl, A. R.	24
Scott, F. E.	14	Wheeler, Richard Vernon	19
Scott, G. S.	14,38	White, Albert Greville	19
Shepard, I. A.	6	White, Clayton S.	40

AUTHOR INDEX (Cont'd)

Whiteley, R.	27
Whitlock, Marvin	23
Whitney, L. M.	13
Wiberg, W. R.	14,20
Wichser, Robert F.	30,34
Wiegand, Francis J.	10
Wilkinson, Paul H.	7,15
Williams, Ralph B.	33,38,39
Williams, R. W.	11
Williams, S. E.	31
Williamson, H. V.	39
Willox, J. H.	18
Willson, C. O.	8
Wolfe, Frederick	7
Wolfe, John K.	12,14
Wolfe, M. E.	12
Wood, B. D.	27
Wood, Carlos	26
Wouk, Victor	17,18
Wright, T. P.	6
Wrigley, D. A.	34
Wyman, R.	27
Young, Alfred W.	10,19
Ziegler, W. L.	33,38
Zisman, W. A.	11,12,14