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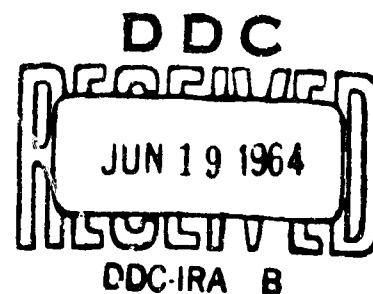
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**PREVENTION OF DETERIORATION CENTER
DIVISION OF CHEMISTRY AND CHEMICAL TECHNOLOGY
NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL**

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**SPRAYED METALLIC COATINGS FOR FERROUS METALS,
AN INTRODUCTORY BIBLIOGRAPHY**

Compiled by
Richard W. H. Lee



April 1, 1962

**2101 Constitution Avenue
Washington 25, D. C.**

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Prevention of Deterioration Center
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- A-581 U.S. Naval Engineering Experiment Station, Annapolis, Md. (D.R. Clark).
REPORT OF TEST OF METAL SPRAYED ATLAS LANOVA CRANKSHAFT. (Its Test
R-8626-C). July 1946.
- A-1032 U.S. Naval Air Material Center, Philadelphia, Pa. Aeronautical Materials
Laboratory (C.M. Dougherty).
THE INVESTIGATION OF SPOT-WELDING OF PLATED LOW CARBON STEELS. (Its
Report No. AML NAM 25789, Part II). October 1950.
- B-392 Australia. Council for Scientific and Industrial Research. Division
of Aeronautics (K.R. Hanna).
STRESS-CORROSION: A REVIEW OF THE LITERATURE. (Its Report SM. 120;
Australia. Scientific Liaison Office, Washington. Australian
Technical Papers. No. 1684). October 1940.
- B-463 Gt. Brit. Armament Research Dept. Applied Research Division.
HUMIDITY TESTS OF METALLIC COATINGS ON STEEL AND ALUMINUM. (Its
Metallurgical Report No. 2/48). February 1948.
- B-636 British Standards Institution, London.
SPRAYED METAL COATINGS: PART I. PROTECTION OF IRON AND STEEL AGAINST
ATMOSPHERIC CORROSION. (Its British Standard 2569:1955). 1955.
- B-637 British Standards Institution, London.
SPRAYED METAL COATINGS: PART 2. PROTECTION OF IRON AND STEEL BY ALUMINIUM
AGAINST CORROSION AT TEMPERATURES BETWEEN 120°C AND 950°C. (Its
British Standard 2569:1955). 1955.
- C-1214 Metallizing Engineering Company, Inc., Long Island City, N.Y.
CORROSION PREVENTION FOR IRON AND STEEL WITH THE METCO SYSTEMS. [A
Compilation of bulletins and specifications issued by Metallizing
Engineering Company]. 1952.
- F-671 Wüger, H.
[EXPERIENCE OF THE EKZ WITH UNDERWATER RUST PROTECTION]. Reprint Bull.
Assoc. Suisse Elec. 43:982-983. 1952.
- F-672 Oertli, H.
[EXPERIENCE WITH SPRAY GALVANIZING AS UNDERWATER RUST PROTECTION].
Reprint Bull. Assoc. Suisse Elec. 43:973-979. 1952.
- F-673 Schweizer, F.W. and G. Moll.
[EXPERIENCE WITH SPRAYED ZINC COATINGS ON DIKE SLUICE GATES]. Reprint
Bull. Assoc. Suisse Elec. 43:980-981. 1952.

- F-675 Friedli, J.
[UNDERWATER CORROSION TESTS WITH ZINC COATED SHEETS]. Reprint Bull. Assoc. Suisse Elec. 43:965-973. November 1952.
- F-816 Rossum, O. van.
[CORROSION PROTECTION BY SPRAY METALLIZING]. Reprint Fette u. Seifen 55:100-102. February 1953.
- F-997 Reininger, H. and R. Rengshausen.
[MODERN METAL SPRAYING FOR RUST PROTECTION IN AUSTRIA]. In Metall 9: 487-488. June 1955.
- F-1181 Reininger, Hans.
[THE COLD-SPRAY-POWDER METHOD]. In Werkstoffe u. Korrosion 7:452-460. August/September 1956.
- G-1135 Illinois. University. Dept. of Ceramic Engineering (Frank Klane).
SPECIAL COATINGS FOR METAL. (Its Report 16, Section 8; U.S. Office of Technical Services. Publication Board [Series]. PB 27593). [n.d.].
- G-1322 Hudson, J.C.
THE CORROSION OF IRON AND STEEL AND ITS PREVENTION. In Oil & Colour Chemists' Assoc., J. 30:35-52. February 1947.
- G-2432 Compton, K.G.
SELECTION OF PROTECTIVE COATINGS. Reprint Corrosion 4:112-122. March 1948.
- G-3003 Widnall, F. and R. Newbound.
PROTECTIVE FINISHING OF ELECTRICAL EQUIPMENT. Reprint J. Brit. Inst. Elec. Eng. 94:512-527. 1947.
- G-3080(1) British Iron and Steel Research Association, London.
FIRST REPORT OF THE METHODS OF TESTING (CORROSION) SUB-COMMITTEE. (Its Metallurgy (General) Division. Paper MG/BF/29/47). Reprint J. Iron Steel Inst. (London) 158:463-493. April 1948.
- G-3086(2) British Iron and Steel Research Association, London.
SECOND REPORT OF THE METHODS OF TESTING (CORROSION) SUB-COMMITTEE. (Its Metallurgy (General) Division. Paper MG/BR/64/50). Reprint J. Iron Steel Inst. (London) 171:255-272. July 1952.
- G-3432 Tolley, G.
SOME CHARACTERISTICS OF SPRAYED METAL. In Metallurgia 38:263-266. September 1948.
- G-4651(1) Hoxeng, R.B. and C.F. Prutton.
ELECTROCHEMICAL BEHAVIOR OF ZINC AND STEEL IN AQUEOUS MEDIA. In Corrosion 15:330-338. October 1949.
- G-4651(2) Hoxeng, R.B.
ELECTROCHEMICAL BEHAVIOR OF ZINC AND STEEL IN AQUEOUS MEDIA. PART II. In Corrosion 6:308-312. September 1950.
- G-4781 Johnson, Fred D.
METAL COATING METHODS. In Can. Paint & Varnish Mag. 23(6):5-6. June 1949.

- G-4986 Tolley, G.
THE PROTECTIVE ACTION OF SPRAYED ALUMINIUM COATINGS ON STEEL. In Iron Steel Inst. (London), J. 162:377-384. August 1949.
- G-5130 Fontana, Mars G.
CORROSION. THE FOURTH OF A SERIES OF COLUMNS ON NEW DEVELOPMENTS IN METALS DESCRIBES CORROSION APPLICATIONS FOR ALUMINUM AND COPPER AND THEIR ALLOYS. In Ind. Eng. Chem. 42(3):83A-84A. March 1950.
- G-5511 Wakefield, John E.
METALLIZING FOR CORROSIVE [SIC] PREVENTION. In Iron Age 165(2):55-60. January 1950.
- G-5783 Gray, Allen G.
METAL COATINGS FORMED BY METHODS OTHER THAN ELECTRODEPOSITION. In Products Finishing 14(8):58,60,62,64,66,68,70,72,74,76,78,80. May 1950.
- G-6282 Case, S.L.
COATING OF STEEL WITH ALUMINUM. In Steel Processing 36:435-439,451. September 1950.
- G-6330 Hudson, J.C.
PERFORMANCE OF ANTI-CORROSIVE COMPOSITIONS IN SEA WATER; EFFECT OF SURFACE PREPARATION OF STEEL. (British Iron and Steel Research Association, London. Metallurgy (General) Division. Corrosion Committee. Protective Coatings Subcommittee. Paper MG/BA/42/49). Reprint J. Iron Steel Inst. (London) 165:314-334. July 1950.
- G-6646 Oxley, G.W.
COATINGS FOR PROTECTION OF STEEL IN WATER. In Paint & Varnish Production 41(3):10-13. March 1951.
- G-7044 CORROSION FATIGUE; HOW ZINC CAN DEFEAT THE COMBINED ATTACK OF CORROSION AND PERIODIC STRESSES ON STEEL AND ALUMINIUM. Reprint Zinc. Bull. 1949, No. 6:12-13. Spring 1949.
- G-7135 RECOMMENDED PRACTICES FOR METAL SPRAYING; BOOKLET ISSUED BY THE AMERICAN WELDING SOCIETY. In Electroplating 4:253-254;278-280. August-September 1951.
- G-7292 Burgess, Charles O.
METALLIC SURFACE COATINGS FOR GRAY IRON. Reprint Product Eng. 21(12):108-113. December 1950.
- G-7526 Ballard, W.E.
THE PROTECTION OF STEEL BY SPRAYED ALUMINIUM. In Electroplating 4:395-399. December 1951.
- G-7694 Tolley, G.
THE USE OF ETHYL SILICATE IN PROVIDING HEAT-RESISTANT COATINGS OF ALUMINIUM ON STEEL. Reprint J. Applied Chem. (London) 1:86-90. February 1951.
- G-7785 Close, Gilbert C.
METALLIZING FOR CORROSION PREVENTION. In Products Finishing 16(7):58-65. April 1952.

- G-8075 Hudson, J.C.
SPRAYED METAL COATINGS FOR THE PROTECTION OF STEEL AGAINST CORROSION.
In Electroplating (Metal Spraying Sect.) 5:241-245, 247. July 1952.
- G-8350(1B) American Welding Society, New York, N.Y.
RECOMMENDED PRACTICES FOR METALLIZING: PART 1B. APPLICATION OF ALUMINUM
AND ZINC FOR PROTECTION OF IRON AND STEEL (TENTATIVE). [Prepared
by the American Welding Society Committee on Metallizing]. 1952.
- G-8609 Smith, E.M.
ALUMINUM COATINGS APPLIED TO STEEL BY MANY METHODS. In Materials &
Methods 36(6):105-103. December 1952.
- G-8966 Forsman, Otto.
THE INFLUENCE OF DIFFERENT SURFACE COATINGS ON THE FATIGUE STRENGTH OF
STEEL. Separate American Society for Metals, Cleveland, Ohio. Pro-
ceedings of the First World Metallurgical Congress, October 13-19,
1951. p. 606-612. 1952.
- G-8988 Hess, P.M.
COATING RESEARCH EXTENDS GATE LIFE. Reprint Elec. World 139(14):90-93.
April 1953.
- G-9063 Clarke, S.G. and W.N. Bradshaw.
TESTS OF THE PROTECTIVE VALUE OF METALLIC COATINGS UNDER SHELTERED
CONDITIONS (MARINE ATMOSPHERE). In J. Applied Chem. (London) 3:147-
154. April 1953.
- G-9300 GOOD CORROSION RESISTANCE OF ALUMINUM COATING ON STEEL PLATE IN SHEFFIELD.
Reprint Sheet Metal Inds 30:424. May 1953.
- G-9521 Benzlik, W.C.
METALLIZING A VADUCT. Reprint Welding Engr. 37(3):40-42. March 1952.
- G-9745 Bright, H.E.
THE PROTECTION OF STEEL STRUCTURES IN SALT ATMOSPHERES. Reprint
Main Roads (Australia) 18(2):53-59. December 1952.
- G-10013(1) Hudson, J.C.
THE PROTECTION OF IRON AND STEEL BY METALLIC COATINGS; RESULTS OF FIVE
YEARS' EXPOSURE TESTS. (Corrosion Committee (Joint Committee of the
Iron and Steel Institute and the British Iron and Steel Federation).
Paper No. 21). Reprint J. Iron Steel Inst. (London) 154:229P-264P.
1946.
- G-10013(2) Hudson, J.C.
THE PROTECTION OF IRON AND STEEL BY METALLIC AND NON-METALLIC COATINGS.
II. (British Iron and Steel Research Association, London. Metallurgy
(General) Division. Corrosion Committee. Protective Coatings Sub-
Committee. Paper MG/BA/47/52). Reprint J. Iron Steel Inst. (London)
175:381-390. December 1953.

- G-10378 PROTECTIVE COATINGS FOR IRON AND STEEL COMPARED; A REVIEW OF A REPORT ON THE B.I.S.R.A. CORROSION TESTING PROGRAMME. Reprint Electroplating 7:201,203,205-207. May 1954.
- G-11003 Shepard, A.P. and R.J. McWaters. METALLIZING FOR CORROSION PREVENTION. In Corrosion 11(3):29-32. March 1955.
- G-11965 Ingham, H.S. (Metallizing Engineering Company, Inc., Westbury, N.Y.). SPRAYED METAL AS A BASE FOR PAINTS. [Paper presented at the fall Corrosion Conference, Northeastern Region, National Association of Corrosion Engineers, 1955]. 1955.
- G-12152 PAINTING STRUCTURAL STEELWORK. I. THE 3RD INTERIM REPORT OF B.I.S.R.A. JOINT PANEL JP/1. In Corrosion Prevention & Control 3(1):43-46. January 1956.
- G-13153 Halls, E.E. PAINT-ZINC COMBINATIONS FOR CORROSION PROTECTION OF IRON AND STEEL. In Electroplating and Metal Finishing 9:186-187. June 1956.
- G-13177 Mansford, R.E. SPRAYED ALUMINIUM AND ZINC IN CORROSIVE ENVIRONMENTS. In Corrosion Technol. 3:314-316. October 1956.
- G-13447 Hudson, J.C. (British Iron and Steel Research Association, London). THE CORROSION OF STEEL SLEEPERS; AND PROTECTIVE MEASURES FOR STRUCTURAL STEEL. In Permanent Way Inst., J. 73(1):33-44. April 1955.
- PDL-30466 Gebhardt, E. and H.-D. Seghezzi. [CORROSIVE BEHAVIOR OF FLAME-SPRAYED ZINC LAYERS]. In Metalloberfläche 10:369-376. December 1956.
- PDL-31130 Metallizing Engineering Company, Inc., Westbury, N.Y. CORROSION PREVENTION WITH METALLIZED ZINC OR ALUMINUM. (Its Bulletin 62F-M). January 1957.
- PDL-31249 Mayne, J.E.O. and D. van Rooyen (Cambridge University). THE MECHANISM OF THE PROTECTION OF STEEL BY SPRAYED ALUMINIUM COATINGS. In Chemistry & Industry No. 23:718-721. June 1957.
- PDL-31530 Kimberley, J.L. (American Zinc Institute, New York, N.Y.). CONTROL OF CORROSION WITH ZINC COATINGS. In Corrosion 13(6):43-49. June 1957.
- PDL-31907 Colbus, J. [THE INFLUENCE OF THE pH VALUE OF RIVER WATER ON THE CORROSION RESISTANCE OF ZINC- AND ALUMINUM-SPRAYED LAYERS ON UNDERWATER STEEL STRUCTURES]. In Schweissen u. Schneiden 8:476-481. December 1956.
- PDL-32630 Skerry, E.W. (British Aluminium Company, Ltd. Research Laboratories, Chalfont Park, Eng.). ANTIPOUING PROPERTIES OF ZINC COATINGS. In Chemistry & Industry No. 38:1275. September 1957.

- PDL-32714 SURFACE PREPARATION IS KEY TO COATINGS LIFE ON UNDERWATER STRUCTURES.
In Corrosion 14(5):111-112. May 1958.
- PDL-33059 Zamzow, Ernst.
[SPRAY GALVANIZING AS A MEANS OF RUST PROTECTION ON IRON POLES]. In
Elektrotech. Z. B9:359-361. September 1957.
- PDL-33256 Gleser, Sol M. (A.M. Kinney, Inc., Cincinnati, Ohio).
COATINGS FOR UNDERWATER METAL SURFACES IN FRESH WATER EXPOSURES. In
Corrosion 14(8):41-50. August 1958.
- PDL-33360 Tator, Kenneth (Tabor Associates).
SACRIFICIAL METALS AS A BASE FOR ORGANIC COATINGS. In Ind. Eng. Chem.
50(8):77A-78A. August 1958.
- PDL-33444 Jenner, G.H. (F.W. Berk and Company, Ltd., London).
SPRAYED METAL AND PLASTIC COATINGS. In Industry Fights Corrosion;
Proceedings of the Corrosion Convention, sponsored by Corrosion
Technology, October 1957, p. 91-96. 1958.
- PDL-33740 Franklin, J.N. (Metallizing Equipment Company, Ltd., Chobham, Eng.).
METAL SPRAYING IN RELATION TO THE CORROSION PROCESS. In Corrosion
Technol. 5:323-325. October 1958.
- PDL-33840 ELECTRIC ARC "PLASMA SPRAY." COATING TECHNIQUE SPRAYS VAPORIZED TUNGSTEN
ONTO COLD STEEL. In Electromechanical Design 2(9):40. November 1958.
- PDL-34356 Bourcelot, R.
SPRAYED ELECTROLYTIC ZINC COATINGS. In Metal Ind. (London) 93:453-454.
November 1958.
- PDL-34359 Zinc Development Association, Oxford, Eng.
THE BEHAVIOUR OF ZINC COATINGS IN MARINE CONDITIONS. In Corrosion
Prevention & Control 5(9):45-48, 74. September 1958.
- PDL-34513 Faust, Charles L. and William H. Safranek (Battelle Memorial Institute,
Columbus, Ohio).
METALLIC COATINGS FOR CORROSION PREVENTION. In Materials in Design Eng.
47(2):147, 149. February 1958.
- PDL-35164 Ingham, Herbert S. (Metallizing Engineering Company, Inc., Westbury, N.Y.).
SPRAYED METAL AS A BASE FOR PAINTS. In Corrosion 13(4):44-48. April 1957.
- PDL-35365 Kowalski, Zbigniew.
[PROTECTIVE ACTION OF SPRAYED ZINC AND ALUMINUM COATINGS AGAINST
CORROSION BY LIQUID FUELS]. In Corrosion et Anti-Corrosion 6:457-
462. December 1958.
- PDL-35639 Martin, W.A.
ZINC COATINGS ON STEEL. In Ontario Hydro Research News 10(2):12-14, 22.
April/June 1958.
- PDL-35997 Reininger, Hans.
[PROTECTIVE COATS OF SPRAYED METALS]. In Werkstoffe u. Korrosion 10:477-
489. August 1959. English Summary Attached.

- PDL-37016 Souskè, R.
[POSSIBILITIES PRESENTED BY THE USE OF ZINC TO PREVENT MARINE CORROSION]. In Corrosion et Anti-Corrosion 7:356-359. October 1959.
- PDL-38602 U.S. Office of Technical Services.
METAL COATINGS (1950-1960). (Its Selective Bibliography 409). May 1960.
- PDL-40221 Parker, A.K. (Zinc Development Association, Oxford, Eng.).
ZINC COATINGS ON IRON AND STEEL. PART 3. CORROSION RESISTANCE OF ZINC COATINGS. In Metal Finishing J. (London) 5:445-453. December 1959.
- PDL-40697 ALUMINIUM BASED ANTI-CORROSION COATING. In Engineering 189:639. May 1960.
- PDL-40703 Ross, T.K. (Manchester. University. College of Science and Technology, Victoria) and E.L. Smith (Unilever House Ltd., London, Eng.).
THE CORROSION RESISTANCE OF SOME SPRAYED METALLIC COATINGS. In Brit. Chem. Eng. 6:172-175. March 1961.
- PDL-41448 Ratcliffe, M. Eileen.
CORROSION FATIGUE AND AIR FATIGUE TESTS ON 85 TON AIRCRAFT STEEL TO B.S. S.99. (Gt. Brit. Ministry of Aviation. Technical Information and Library Services. S&T Memo 38/60). January 1961.
- PDL-41620 Akimov, G.V., G.B. Klark and G.G. Koshelev.
[CORROSION OF METALS IN CONTACT WITH OTHER STRUCTURAL MATERIALS]. In Promyshlennoe Stroitel'stvo 39(2):49-53. 1961. In Russian.
- PDL-42859 Porter, F.C. (Aluminium Development Association, London).
ALUMINIUM SPRAYED STEEL IN MARINE CONDITIONS. In Engineer 211:906-907. June 1961.