

Laboratory Corrosion Tests and Standards

Haynes/Baboian, *editors*



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LABORATORY CORROSION TESTS AND STANDARDS

A symposium by
ASTM Committee G-1 on
Corrosion of Metals
Bal Harbour, FL, 14–16 Nov. 1983

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William Henry Ailor, Jr.

15 July 1917 to 9 November 1983

Dedication

This volume, recording the activities of the International Symposium on Laboratory Corrosion Tests and Standards and serving as a permanent record of contributions to the field of laboratory corrosion testing, is hereby dedicated as a living memorial to our professional colleague and personal friend, Bill Ailor, who passed away on 9 November 1983.

Bill received his Bachelor of Science degree in history from the University of Tampa in 1939 and his Bachelor of Chemical Engineering from North Carolina State University in 1948.

A Lieutenant Commander in the U.S. Naval Reserve from 1942 to 1946 and from 1952 to 1953, Bill joined the Atlantic Coast Line Railroad as a chemist in 1948. In 1953, he became a research engineer in diesel engineering for North Carolina State University. He was an adjunct math instructor for Virginia Commonwealth University from 1959 to 1979, and joined Reynolds Metals Company in 1954 as a research engineer. He retired in 1982.

The author of 45 papers and editor of four books, Bill concentrated his career in atmospheric, marine, and deep sea corrosion, corrosion testing, engine coolant testing, and diesel engineering.

Bill served as Chairman of Committee G-1 on Corrosion of Metals from 1966 to 1972 and was active in committee

task groups and subcommittees for many years including chairing the ASTM Advisory Committee on Exposure Testing Facilities. In addition to his many other honors, he received the ASTM Award of Merit in 1970.

Bill will truly be missed, by his many friends and colleagues in Committee G-1. His many contributions to the Committee, however, provide a legacy that will serve its membership for years to come.

Foreword

The symposium on Laboratory Corrosion Tests and Standards was presented at Bal Harbour, FL, 14–16 Nov. 1983. The symposium was sponsored by ASTM Committee G-1 on Corrosion of Metals. Gardner S. Haynes and Robert Baboian of Texas Instruments, Incorporated presided as chairmen of the symposium and are editors of this publication.

Related ASTM Publications

Atmospheric Corrosion of Metals, STP 767 (1982), 04-767000-27

Electrochemical Corrosion Testing, STP 727 (1981), 04-727000-27

Corrosion of Reinforcing Steel in Concrete, STP 713 (1980), 04-713000-27

Stress Corrosion Cracking—The Slow Strain-Rate Technique, STP 665 (1979),
04-665000-27

Intergranular Corrosion of Stainless Alloys, STP 656 (1978), 04-656000-27

A Note of Appreciation to Reviewers

The quality of the papers that appear in this publication reflects not only the obvious efforts of the authors but also the unheralded, though essential, work of the reviewers. On behalf of ASTM we acknowledge with appreciation their dedication to high professional standards and their sacrifice of time and effort.

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ATS' corrosion testing enables clients to evaluate new designs and coatings in a controlled environment prior to release into the real world. Common Corrosion Testing Methods Include: Salt Spray (Fog). Cyclic Corrosion. Typical Specifications Include: IEC Standards. ASTM Standards. Military Standards. Automotive Standards. Quote Request Form. Request a quote. Start by marking "Laboratory Corrosion Tests and Standards: A Symposium by ASTM Committee G-1 on Corrosion of Metals, Bal Harbour, FL, 14-16 Nov. 1983" as Want to Read: Want to Read saving... An edition of Laboratory corrosion tests and standards (1985). Laboratory corrosion tests and standards. a symposium by ASTM Committee G-1 on Corrosion of Metals, Bal Harbour, FL, 14-16 Nov. 1983. Proceedings of the Symposium on Laboratory Corrosion Tests and Standards. "ASTM publication code number (PCN) 04-866000-27." Bibliogr. Designation: G 31 - 72 (Reapproved 2004) Standard Practice for Laboratory Immersion Corrosion Testing of Metals¹ This standard is issued under the fixed designation G 31; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (e) indicates an editorial change since the last revision or reapproval. 1. Scope G 16 Guide for Applying Statistics to Analysis of Corrosion 1.1 This practice² describes accepted procedures for and