
ADVANCES IN THE TECHNOLOGY OF STAINLESS STEELS AND RELATED ALLOYS



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A compilation of papers presented at four symposiums:
"Advances in the Technology of Stainless Steels and Related Alloys," sponsored by the American Society for Testing and Materials, Atlantic City, N.J., June, 1963; "Recent Advances in the Metallurgy of Stainless Steels," sponsored by the Metallurgical Society of the American Institute of Mining, Metallurgical, and Petroleum Engineers, Cleveland, Ohio, October, 1963; and "Stress Corrosion Cracking" and "Evaluation Tests for Stainless Steels," sponsored by the National Association of Corrosion Engineers in collaboration with The Electrochemical Society, New York, N.Y., March, 1963.



Reg. U.S. Pat. Off.

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FOREWORD

During 1963 the American Society for Testing and Materials; the Metallurgical Society of the American Institute of Mining, Metallurgical, and Petroleum Engineers; and The Electrochemical Society and the National Association of Corrosion Engineers, organized symposia dealing with several aspects of the technology of stainless steels. Members of these organizations who were concerned with these activities decided that it would be advantageous to those interested in stainless steels if the papers presented at these meetings could be combined in a single publication for convenient future reference. They formed an Intersociety Co-ordinating Committee to accomplish this.

With the collaboration of the authors of the several papers, the participating societies, and particularly the American Society for Testing and Materials which undertook publication of the papers in this volume, the desired consolidation of papers from the several societies has been achieved.

The symposia in which the several papers originated were as follows: (1) symposium on *Advances in the Technology of Stainless Steels and Related Alloys*, Atlantic City, N. J., June, 1963, Sponsored by ASTM Committee A-10, M. A. Cordovi, chairman; (2) symposium on *Stress Corrosion Cracking*, H. L. Logan, E. H. Phelps, and H. R. Copson, co-chairmen, and symposium on *Evaluation Tests for Stainless Steels*, R. B. Mears, chairman, Second International Congress on Metallic Corrosion Sponsored by NACE in collaboration with The Electrochemical Soc., New York, N. Y., March, 1963; and (3) symposium on *Recent Advances in the Metallurgy of Stainless Steels*, Cleveland, Ohio, October, 1963, sponsored by the Metallurgical Society of AIME, E. J. Dulis and L. R. Scharfstein, co-chairmen.

The task force concerned with this activity wishes to express its thanks to all who have co-operated in this venture. It is hoped that the results of this effort will be well received by those in whose interests it was undertaken and that its success will prompt similar future action in consolidating information from several sources in single publications for more convenient reference.

The Intersociety Co-ordinating Committee consisted of M. A. Cordovi, ASTM; E. J. Dulis, AIME; R. B. Mears, NACE; and E. H. Phelps, ECS, with F. L. LaQue, chairman.

NOTE—The Society is not responsible, as a body, for the statements
and opinions advanced in this publication.

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RELATED ASTM PUBLICATIONS

Stress-Corrosion Cracking of Austenitic Chromium-Nickel Stainless Steels, STP 264 (1960)
Comparison of the Properties of Basic Oxygen and Open Hearth Steels, STP 364 (1963)
Trends in the Metallurgy of Low-Alloy, High-Yield-Strength Steels, Gillette Lecture (1963)

Advances in the Technology of Stainless Steels and Related Alloys

THIS PUBLICATION is one of many issued by the American Society for Testing and Materials in connection with its work of promoting knowledge of the properties of materials and developing standard specifications and tests for materials. Much of the data result from the voluntary contributions of many of the country's leading technical authorities from industry, scientific agencies, and government.

Over the years the Society has published many technical symposiums, reports, and special books. These may consist of a series of technical papers, reports by the ASTM technical committees, or compilations of data developed in special Society groups with many organizations cooperating. A list of ASTM publications and information on the work of the Society will be furnished on request.

