

International Conference on Materials

# APPLICATION OF ADVANCED AND NUCLEAR PHYSICS TO TESTING MATERIALS



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AMERICAN SOCIETY FOR TESTING AND MATERIALS  
1916 Race St., Philadelphia 3, Pa.

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# APPLICATION OF ADVANCED AND NUCLEAR PHYSICS TO TESTING MATERIALS

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A Symposium Presented at the  
International Conference on Materials

Sponsored by

AMERICAN SOCIETY FOR TESTING AND MATERIALS  
and  
INTERNATIONAL UNION OF TESTING AND RESEARCH  
LABORATORIES FOR MATERIALS AND STRUCTURES

Philadelphia, Pa., Feb. 3, 1964



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## FOREWORD

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The papers in this publication were presented at a symposium on the Application of Advanced and Nuclear Physics to Testing Materials which was held Feb. 3 and 4, 1964 during the Winter Meeting of the American Society for Testing and Materials in Philadelphia, Pa. This symposium was organized as a result of a request from the International Union of Testing and Research Laboratories for Materials and Structures, Paris, France, to develop a meeting on modern techniques of nuclear physics in the evaluation of materials. The partnership of an ASTM-RILEM symposium was a natural one since both organizations have common roots: The International Association for Testing of Materials. ASTM was incorporated in 1902 from the American branch of I.A.T.M. (the branch was formed in 1898); RILEM was organized in 1947 to reestablish international relations among laboratories for materials and structures, since I.A.T.M. did not survive World War II.

The co-chairman for RILEM was E. Amstutz, Director of the Federal Laboratory for Testing Materials, Dübendorf, Switzerland. The co-chairman for ASTM was A. G. H. Dietz, Professor of Building Technology, Massachusetts Institute of Technology, Cambridge, Mass.

Presiding officers for the four sessions were W. J. McGonnagle of the Southwest Research Institute Laboratories, Alexander Gobus of the Philips Electronic Instruments, W. E. Havercroft of the National Research Council of Canada, and S. A. Wenk of the Varian Associates.

Welcoming addresses were given by R. L'Hermite, Secrétaire Général, RILEM, Paris, France, and I. Vernon Williams, President, ASTM, and Head of the Metallurgical Engineering Dept., Bell Telephone Laboratories, Inc., Murray Hill, N. J.

The RILEM papers presented in this symposium also appear in French in the RILEM Quarterly.

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**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

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**Radiation Effects on Materials, STP 233 (1958)**

**Radioisotopes in Metals Analysis and Testing, STP 261 (1959)**

**Applied Radiation and Radioisotopes Test Methods, STP 268 (1959)**

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.

