

*Practical Applications of*  
● **NEUTRON RADIOGRAPHY  
AND GAGING**

**Harold Berger**

● **STP 586**



**AMERICAN SOCIETY FOR TESTING AND MATERIALS**

# PRACTICAL APPLICATIONS OF NEUTRON RADIOGRAPHY AND GAGING

A symposium  
sponsored by the National  
Bureau of Standards and  
ASTM Committee E-7 on  
Nondestructive Testing  
AMERICAN SOCIETY FOR  
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Gaithersburg, Md. 10–11 Feb. 1975

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## Foreward

The Symposium on Practical Applications of Neutron Radiography and Gaging was held at the National Bureau of Standards (NBS) in Gaithersburg, Md., on 10-11 Feb. 1975. The meeting was sponsored jointly by NBS and The American Society for Testing and Materials (ASTM). ASTM Committee E-7 on Nondestructive Testing and Subcommittee E-7.05 on Neutron Radiography were the ASTM sponsors. Several other organizations assisted in arrangements for the symposium. These cooperating societies include the Air Transport Association of America, the American Nuclear Society, the American Society for Nondestructive Testing, and the Nuclear Division of the American Society for Quality Control. Harold Berger, NBS, served as chairman of the symposium, and John K. Aman, E. I. du Pont de Nemours & Company, and Daniel Polansky, Naval Surface Weapons Center, served as cochairmen.

The papers included in this volume were all presented at the symposium.

Arrangements for the symposium were handled by a committee chaired by R. B. Johnson, NBS. The staff of ASTM assisted with the arrangements and also with the preparation of this special technical publication. Grateful acknowledgment for this assistance is made. Special thanks are given to Miss Jane Wheeler for her help throughout the symposium and the publication procedure.

The contributions of the session chairman at the meeting are also acknowledged. Mr. Richard L. Newacheck, Aerotest Operations; Mr. Oscar Hillig, Atomics International; Mr. Donald Garrett, Nuclear Systems, Inc.; Dr. Joseph John, IRT Corporation; Mr. J. J. Haskins, General Electric Company; and Prof. Frank A. Iddings, Louisiana State University, served as session chairmen. They kept the meeting on schedule and paved the way for the lively discussions that took place. The symposium committee is pleased to acknowledge their assistance.

## Related ASTM Publications

Monitoring Structural Integrity by Acoustic Emission, STP 571 (1975),  
\$23.75, 04-571000-22

Nondestructive Rapid Identification of Metals and Alloys by Spot Tests,  
STP 550 (1973), \$4.00, 04-550000-24

Acoustic Emission, STP 505 (1972), \$22.50, 04-505000-22

## A Note of Appreciation to Reviewers

This publication is made possible by the authors and, also, the unheralded efforts of the reviewers. This body of technical experts whose dedication, sacrifice of time and effort, and collective wisdom in reviewing the papers must be acknowledged. The quality level of ASTM publications is a direct function of their respected opinions. On behalf of ASTM we acknowledge with appreciation their contribution.

*ASTM Committee on Publications*

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