

SYMPOSIUM ON RADIOGRAPHY

Held at the
Thirty-ninth Annual Meeting
Atlantic City, N. J., June 30-July 1, 1936
and
Forty-fifth Annual Meeting
Atlantic City, N. J., June 23, 1942
of the
AMERICAN SOCIETY FOR TESTING MATERIALS



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PREFACE

The first Symposium on Radiography and X-ray Diffraction sponsored by the American Society for Testing Materials was brought about by combining the papers of a number of contributors to a preliminary symposium held in Detroit in 1935. The information thus gathered was summarized by a series of editors into twelve papers which were presented at the annual meeting of the Society in Atlantic City the following year. The papers together with discussion were published in book form by the Society under the sponsorship of Subcommittee VI on X-ray Methods of the Society's Committee E-4 on Metallography under the chairmanship of Robert F. Mehl.

Shortly afterwards the need for a separate committee on radiographic testing became urgent, and in 1938 the A.S.T.M. Committee E-7 on Radiographic Testing was organized with H. H. Lester as chairman.

In 1941 Committee E-7 felt that it was desirable to organize a new symposium on radiography. The reasons were several: better tools had become available, such as the commercial million-volt X-ray outfit, the so-called no-screen (direct-exposure) X-ray films, and the microradiographic method. Besides, the war had broken out in Europe, and a tremendous amount of X-ray work was being done both in this country and in Canada on war materials, mostly light alloy structures for airplanes. A new symposium was considered as being very vital both for exchange of knowledge between those already experienced in radiography and for initiating those starting their work in this field.

It was felt, however, that the work made it impossible to work out a cooperative scheme like the one used for the first symposium and consequently papers were invited for specified topics from leaders in their particular fields. The response was very gratifying, and in June, 1942, the second Symposium on Radiography was held in Atlantic City.

In the meantime, the supply of printed copies of the 1936 Symposium had been exhausted, and rather than reprint, the committee decided to condense the radiography papers of this symposium and include them with the papers of the 1942 symposium. The reason for this was that certain aspects of radiography are very well presented in these 1936 symposium papers and would be valuable to the beginning student. The writer is responsible for the shortening of the papers in the reprinted form, a process which may easily be criticized. Apparent contradictions between the old

and the new articles may be found, and the judgment of what to leave out and what to retain was not easily made.

In order to round out the papers of the symposium, Dr. Lauriston S. Taylor's paper on "Industrial X-ray Protection" was reprinted from the *ASTM BULLETIN*. Also included is the Proposed Recommended A.S.T.M. Industrial Radiographic Terminology, the publication of which will serve a double purpose: it will help establish the meanings of the terms used in radiography both in the spoken and the written language, and it will serve to explain to students in a short, concise way some of the fundamentals of industrial radiography.

In his work to arrange this Symposium, the writer acknowledges the valuable suggestions and the unfailing interest of Dr. H. H. Lester, Chairman of Committee E-7, and the cooperation of the two other members of the Symposium Committee, Dr. Herman E. Seemann and Dr. John T. Norton.

Last, but not least, the committee desires to thank the contributors of papers who all gave their best under the tremendous pressure of the war.

LARS THOMASSEN, *Chairman*, Symposium
Committee and Subcommittee V on Technical
Programs of Committee E-7

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