

SYMPOSIUM ON NONDESTRUCTIVE TESTS IN THE FIELD OF NUCLEAR ENERGY

INTRODUCTION

BY WARREN J. MCGONNAGLE¹

This symposium evolved from the meetings of an informal committee within the Atomic Energy Commission contractors dealing with the general subject of nondestructive testing. These included representatives from the National Laboratories, the Plutonium Plants and several other AEC contractors. Considerable development of ultrasonic and eddy current test procedures had been accomplished, and in addition work had been done on several other types of nondestructive testing. Applications had been made in the inspection of castings, tubing, unclad fuel element components, and clad fuel elements.

As the information developed in the committee meetings was in the process of being declassified, there was a desire for a national meeting where papers on the subject could be presented. The objectives of the proposed symposium were to disseminate fifteen years of research and development in the non-destructive testing applications in the nuclear field, and to reach people interested in nuclear and industrial applications. The symposium was held in Chicago, Ill., on April 16-18, 1957, co-sponsored by the American Institute of Chemical Engineers, Nuclear Division; American Nuclear Society; American Society for Testing Materials; Atomic Industrial Forum; and Society

for Nondestructive Testing. The executive committee of the symposium was W. J. McGonnagle, Chairman; S. Lawroski; F. L. LaQue; Stuart McLain; H. Migel; J. L. Swanson; and S. A. Wenk.

The atomic energy installations and contractors participating in the symposium included: Argonne National Laboratory, Battelle Memorial Inst., Hanford Products Operation, Los Alamos Scientific Laboratory, National Lead Company of Ohio, Oak Ridge National Laboratory, Phillips Petroleum Co., du Pont Savannah River Laboratory, University of California Livermore Laboratory, and Westinghouse Atomic Power Division.

As a special feature of the meeting two evening discussion panel sessions were held. No discussion was presented during the morning and afternoon technical sessions of the first two days. Prepared questions were submitted to a panel which included the authors and speakers for the day.

More papers were offered for the symposium than could be presented orally in the three-day session. Many of these were presented by title only at the symposium but have been included in the symposium proceedings.

There follows a list of co-chairmen for the various sessions and the panel moderators.

Session I: J. J. Kanter, Crane Co.,

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and W. D. Manly, Oak Ridge National Laboratory; *Session II*: R. C. Dalzell, Atomic Energy Commission, and C. C. Woolsey, Atomics International; *Session III*: F. L. LaQue, The International Nickel Co., and G. D. Calkins, Battelle Memorial Inst.; *Session IV*: B. S. Old, Arthur D. Little, Inc., and C. R. Sutton, The International Nickel Co.; *Session V*: Stuart McLain, Argonne National Laboratory, and Marcel A. Cordovi, The Babcock & Wilcox Co.; *Session VI*:

Sidney H. Liebson, Nuclear Development Associates, Inc., and D. T. O'Connor, Machlett Laboratories, Inc.; *Panel Session No. I*: W. J. McGonnagle, Argonne National Laboratory, W. D. Manley, Oak Ridge National Laboratory, and C. C. Woolsey, Atomics International; *Panel Session No. II*: F. G. Foote, Argonne National Laboratory, G. D. Calkins, Battelle Memorial Inst., and C. R. Sutton, The International Nickel Co.