

OP

SYMPOSIUM ON
DETERMINATION OF
ELASTIC CONSTANTS

American Society for
Testing Materials

UNIVERSITY MICROFILMS, INC.
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Anh Arbor

XEROX

**This "O-P Book" is an Authorized Reprint of the
Original Edition, Produced by Microfilm-Xerography
by University Microfilms, Ann Arbor, Michigan, 1967**

DETERMINATION OF ELASTIC CONSTANTS —STP 129

There has in recent years been a revival of interest in the determination of elastic constants. This symposium was designed to review critically the various methods and focus attention on those which might be suitable for standardization. There is an analysis of a questionnaire on the needs regarding elastic constants and on current practice in their determination. An ingenious static method for modulus determinations at elevated temperatures and its application to steels is described. Static and dynamic methods for non-metals are surveyed. Dynamic methods with their advantages and limitations are discussed. Finally there is a comparison of values of elastic constants for a beryllium-copper alloy obtained by several static and dynamic methods. 104 pages. (December, 1952.)

Paper cover, \$2.00; to ASTM members, \$1.50.

SYMPOSIUM ON DETERMINATION OF ELASTIC CONSTANTS

Presented at the
FIFTY-FIFTH ANNUAL MEETING
(FIFTIETH ANNIVERSARY MEETING)
AMERICAN SOCIETY FOR TESTING MATERIALS
New York, N. Y., June 25, 1952



Reg. U. S. Pat. Off.

Special Technical Publication No. 129
FIFTIETH ANNIVERSARY PUBLICATION

Published by the
AMERICAN SOCIETY FOR TESTING MATERIALS
1916 Race St., Philadelphia 3, Pa.

THIS "O-P BOOK" IS AN AUTHORIZED REPRINT OF THE ORIGINAL EDITION, PRODUCED BY MICROFILM-XEROX BY UNIVERSITY MICROFILMS, INC., ANN ARBOR, MICHIGAN, 1959.

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**Printed in Baltimore, Md.
November, 1952**

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FOREWORD

The papers and discussions in this Symposium on Determination of Elastic Constants were presented at the Seventeenth Session of the Fifty-fifth Annual Meeting of the American Society for Testing Materials held in New York, N. Y. on June 25, 1952. The Symposium was sponsored by the Task Group on Elastic Constants of Committee E-1 on Methods of Testing. Past President R. L. Templin, Assistant Director of Research and Chief Engineer of Tests, Aluminum Company of America, New Kensington, Pa. acted as Chairman of the session. Mr. Walter Ramberg, Chief, Mechanics Division, National Bureau of Standards, Chairman of the Task Group and of the Symposium Committee, was Secretary of the session.

