

## EDITORIAL STAFF

S. F. ETRIS, *Editor*  
Y. R. FIORINI, *Advertising Sales Manager*  
K. C. LIEB, *Assistant Editor*  
I. C. MOORE, *Manager, Production and Purchasing*  
A. L. BATIK, *Director of Publications*

## OFFICERS

F. E. CLARKE, *President*

### *Vice-Presidents*

BRYANT MATHER      J. S. WHEELER  
J. G. O'GRADY, *Treasurer*

### *Directors*

<i>Term ending 1975</i>		<i>Term ending 1976</i>	
C. C. COLYER	F. J. KOVAC	C. J. HALE	R. W. MCKINLEY
MARGARET DANA	W. A. McADAMS	N. B. HANNAY	J. G. O'GRADY
R. J. EILERS	F. C. WILSON	R. N. JOHNSON	L. R. ROGERS

### *Term ending 1977*

C. J. COLLAZZO, JR.	J. D. HOFFMAN
W. P. ELLIS	L. B. SARGENT, JR.
D. A. HICKS	V. L. TOFANY

### *Past-Presidents*

G. H. NELSON      R. A. JONES  
W. T. CAVANAUGH, *Managing Director*

## COMMITTEE ON PUBLICATIONS

ELIO PASSAGLIA, *Chairman*

E. P. BARTKUS	J. W. GUINNEE	G. KAUFMAN
A. L. BEMENT, JR.	J. J. HEGER	J. D. McCLELLAND
D. BROTHERRSON	E. R. HENDRICKSON	J. V. MULLIN
H. L. CRAIG, JR.		PAUL STRIGNER

The Society is not responsible, as a body, for the statements and opinions advanced in this publication.

JOURNAL OF TESTING AND EVALUATION is published bimonthly by the American Society for Testing and Materials. Publication office at York Road, Luther-ville-Timonium, Md. 21093. Editorial office at the Headquarters of the Society, 1916 Race St., Philadelphia, Pa. 19103. Subscriptions: For 6 consecutive issues \$18.00 (\$14.40 to ASTM members), for 12 consecutive issues \$35.00 (\$28.00 to ASTM members). Single copies, \$5.00. Second-class postage paid at Philadelphia, Pa. and additional mailing offices. Copyright 1974 by the American Society for Testing and Materials.

POSTMASTER: Send Form 3579 to Subscription Dept., ASTM Headquarters, 1916 Race St., Philadelphia, Pa. 19103.

CHANGE OF ADDRESS: Please return entire addressing label on wrapper to Journal of Testing and Evaluation, 1916 Race St., Philadelphia, Pa. 19103, along with new address.

## EDITORIAL OBJECTIVES

TESTING AND EVALUATION are the essential means for determining relative merit of materials, products, systems and services. The techniques by which such data are gathered are fundamental to practical engineering and are the vital elements that provide the basis for ASTM's engineering standards.

The objective of this Journal is therefore to provide a unique forum for the testing and evaluation field of technology. This Journal will continue to be, as was the case for the previous *Journal of Materials*, which it replaces, a forum for presenting data derived from the testing and evaluation of materials, products, and systems of interest to the practicing engineer. Papers will be accepted on the grounds that they present new testing and evaluation techniques, that they provide new information on existing testing and evaluation methodology, or that they contain new data resulting from the testing and evaluation of materials, products, systems or services.

The importance of engineering standards used in industry, national and international trade, and for the protection of the public, is now universally recognized. Thus, the Journal is designed to provide a unique forum for presenting the advances in testing and measurement technology. These advances will enhance the technical validity of engineering standards—the international vocabulary of practical engineering communication.

Contributions are judged on the basis of: (1) the paper contributes to the permanent literature; (2) the paper includes experimental data or mathematical derivations, or both, either as original work or as needed to confirm the theoretical conclusions or proposals; (3) the substance of the paper has not been published in the open literature. Discussions of published papers may be submitted at any time and are also subject to review.

## INFORMATION FOR AUTHORS

AUTHORS preparing papers for submittal to the Journal should observe the conventions of style explained in the *ASTM Style Manual*. Since the Journal does not request page charges, the author is expected to observe these standard conventions for style.

Four copies of the manuscript including all charts and illustrations should be submitted to the Editor, S. F. Etris, ASTM Headquarters, 1916 Race Street, Philadelphia, Pa. 19103.

## GENERAL

THIS PUBLICATION is one of many issued by the American Society for Testing and Materials in connection with its work in promoting knowledge of the properties and performance of materials, products, systems, and services, as well as in developing standard specifications and test measurement techniques to establish their value. Much of the information results from the voluntary contributions of many of the country's leading technical authorities from industry, scientific agencies, and government.

A list of ASTM publications and information on the work of the Society will be furnished on request.