

---

*Symposium on*

BULK QUANTITY  
MEASUREMENT



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

---

***ASTM Special Technical Publication No. 249***

---

# SYMPOSIUM ON BULK QUANTITY MEASUREMENT

---

Sponsored by

RESEARCH DIVISION II ON MEASUREMENT AND SAMPLING  
OF ASTM COMMITTEE D-2 ON PETROLEUM PRODUCTS AND LUBRICANTS

Presented in

Houston, Texas, February 5, 1958



Reg. U.S. Pat. Off.

---

*ASTM Special Technical Publication No. 249*

---

Price \$2.25; to members \$1.80

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

---

© BY AMERICAN SOCIETY FOR TESTING MATERIALS 1959  
Library of Congress Catalog Card Number: 59-10963

---

Printed in Baltimore, Md  
May, 1959

## FOREWORD

---

The papers in this Symposium on Bulk Quantity Measurement were presented at a session sponsored by Research Division II of Committee D-2 on Petroleum Products and Lubricants, February 5, 1958 at Houston, Texas, through a symposium committee under the chairmanship of E. F. Wagner, The Atlantic Refining Co. Mr. P. L. DeVerter, Humble Oil and Refining Co., Baytown, Texas, acted as chairman of the Symposium session.

---

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

---

## CONTENTS

---

	PAGE
Introduction—P. L. DeVerter.....	1
How Accurate is Hand Gaging?—C. L. Peterson and E. F. Wagner.....	3
Discussion.....	9
Automatic Tank Gage Performance—H. E. Sims.....	11
Transfers Using Positive-Displacement Meters—Techniques and Procedures—M. A. Levy....	18
Discussion.....	26
Application, Installation, and Maintenance of Automatic Tank Gages—G. D. Robinson, Jr....	28
Suggested Standard Procedures for Use of Positive Displacement Meters in Custody Transfer Measurements—L. S. Wrightsman.....	45

THIS PUBLICATION is one of many issued by the American Society for Testing Materials in connection with its work of promoting knowledge of the properties of materials and developing standard specifications and tests for materials. Much of the data result from the voluntary contributions of many of the country's leading technical authorities from industry, scientific agencies, and government.

Over the years the Society has published many technical symposiums, reports, and special books. These may consist of a series of technical papers, reports by the ASTM technical committees, or compilations of data developed in special Society groups with many organizations cooperating. A list of ASTM publications and information on the work of the Society will be furnished on request.