

Sixtieth Annual Meeting Papers

Symposium on

**LARGE FATIGUE
TESTING MACHINES
AND THEIR RESULTS**



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

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Symposium on
**LARGE FATIGUE
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AND THEIR RESULTS**

Presented at the
SIXTIETH ANNUAL MEETING
AMERICAN SOCIETY FOR TESTING MATERIALS
Atlantic City, N. J., June 18, 1957



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FOREWORD

Most of our knowledge of fatigue has come from tests of relatively small specimens. This is only natural since full scale tests are expensive, time consuming, and difficult.

Therefore the nine papers in this Symposium on Large Fatigue Machines and Their Results, representing the aircraft, electrical, marine, railroad, and earth removal industries, provide a valuable contribution to our knowledge of fatigue.

Seven of the papers were presented on June 18, 1957, during two sessions at the Sixtieth Annual Meeting of the American Society for Testing Materials. Two additional papers were submitted by Soviet Engineers from the Academy of Science, Moscow, USSR.

This symposium was sponsored by Committee E-9 on Fatigue with J. M. Lessells, Lessells and Associates, Inc., serving as symposium chairman. D. J. Richards of United Aircraft Corp. and O. J. Horger of Timkin Roller Bearing Co. presided over the morning session of the symposium. At the afternoon session J. F. Millan, Caterpillar Tractor Co. and H. J. Grover, Battelle Memorial Inst., presided.

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

CONTENTS

	PAGE
Introduction—J. M. Lessells	1
A Unique Machine for Large Scale Fatigue Testing—H. V. Cordiano	3
Discussion	18
Torsional Fatigue Testing of Axle Shafts—E. J. Eckert	21
Discussion	34
Fatigue Testing of Airframe Structural Components—H. W. Foster	37
Discussion	54
Fatigue Performance of Marine Shafting—Laboratory and Service Tests—T. W. Bunyan	59
Discussion	79
Fretting Corrosion of Large Shafts as Influenced by Surface Treatments—O. J. Horger and H. R. Neifert	81
Discussion	94
Fatigue Tests of Large Alloy Steel Shafts—F. C. Eaton	96
Discussion	103
Influence of Operating Experience and Full Scale Tests on Propulsion Shafting Design of U. S. Navy Ships—R. Michel	107
Discussion	122
Sudden Fracture of Machine Parts and Structure Elements—G. V. Uzhik, M. J. Galperin and A. A. Zooykova	132
Determination of Dynamical Loading in Full Size Fatigue Tests and Some Results—S. V. Serensen, M. E. Garf	142

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.

