Sixty-third Annual Meeting Papers

Papers on

ROAD AND PAVING MATERIALS (BITUMINOUS)-1960



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

ASTM Special Technical Publication No. 294

PAPERS ON ROAD AND PAVING MATERIALS (BITUMINOUS)—1960

Presented at the

Sixty-third Annual Meeting AMERICAN SOCIETY FOR TESTING MATERIALS

Atlantic City, N. J., June 30, 1960



Reg. U. S. Pat. Off.

ASTM Special Technical Publication No. 294

Price \$3.50; to Members \$2.80

Published by the AMERICAN SOCIETY FOR TESTING MATERIALS 1916 Race St., Philadelphia 3, Pa. © BY AMERICAN SOCIETY FOR TESTING MATERIALS 1961 Library of Congress Catalog Card Number: 61-13000

> Printed in Baltimore, Md. April, 1961

FOREWORD

The papers and discussions published in this volume were presented at the Thirty-third Session of the Sixty-third Annual Meeting of the Society held in Atlantic City, N. J., June 30, 1960. The session was sponsored by Committee D-4 on Road and Paving Materials.

Mr. E. A. Whitehurst, University of Tennessee, served as Symposium Chairman and presided over the session. NOTE.—The Society is not responsible, as a body, for the statements and opinions advanced in this publication.

CONTENTS

_

	PAGE
Introduction—E. A. Whitehurst	1
Stress Deformation Characteristics of Sand-Bituminous Mixtures-Jake Carpenter	3
Discussion	18
The Effect of Compaction Temperature on the Properties of Bituminous Concrete-	
Ralph W. Kiefer	
Discussion	26
The Influence of Asphalt Composition on Its Rheology-R. S. Winniford	31
Discussion	48
Emulsified Asphalt Tests and Specifications-K. E. McConnaughay	51
Discussion	67
Cationic Asphalt Emulsions-Recommended Tests and Specifications-E. W. Mer-	
tens, L. D. Coyne, and E. D. Rogers	68
Discussion	84
A Method for Measuring the Air Permeabilities of Asphalt Concrete Pavements-	
W. H. Ellis and R. J. Schmidt	85

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.

