GRADING OF PAVING ASPHALTS

ASTM
STP 424
American Society for Testing and Materials
GRADING OF PAVING ASPHALTS
BY VISCOITY AT 140 F VERSUS
PENETRATION AT 77 F

A symposium
presented at the
Sixty-ninth Annual Meeting
AMERICAN SOCIETY FOR
TESTING AND MATERIALS
Atlantic City, N. J., 26 June–1 July, 1966

ASTM SPECIAL TECHNICAL PUBLICATION NO. 424

List price $7.00; 30 per cent discount to members

published by the
AMERICAN SOCIETY FOR TESTING AND MATERIALS
1916 Race Street, Philadelphia, Pa. 19103
NOTE

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

Statistical Methods for Quality Control of Road and Paving Materials, STP 362 (1964), $3.00
Foreword

The Symposium on Grading of Paving Asphalts by Viscosity at 140 F Versus Penetration at 77 F was presented during the 69th Annual Meeting of the Society, in Atlantic City, N. J., 26 June–1 July, 1966. The symposium was sponsored by Committee D-4 on Road and Paving Materials. The symposium chairman was B. A. Vallerga, Materials Research & Development, Inc. Mr. Vallerga presided at the session during the presentation of the papers.
Contents

Introduction ................................................................. 1
The Philosophy of Using Viscosity for Grading Asphalt Cements—J.
YORK WELBORN .......................................................... 3
Motivation for and Implementation of Grading Asphalt Cement by Vis­
cosity at 140 F—H. R. HAWTHORNE ................................. 14
Texas Highway Department's Experience with Viscosity Grading of Pav­
ing Asphalts—C. W. CHAFFIN ......................................... 19
Laboratory Methods for Grading Setting Qualities of Paving Asphalts—
L. E. SANTUCCI AND R. J. SCHMIDT .................................. 27
Critical Appraisal of Proposal to Grade Paving Asphalts by Viscosity at
140 F—N. W. MCLEOD ..................................................... 47
Discussion ................................................................. 76
THIS PUBLICATION is one of many issued by the American Society for Testing and 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.