

FOREWORD

This Symposium on Radioisotopes covers testing techniques utilizing radioisotopes and demonstrates the wide range of industrial uses to which they are applicable. Two of the papers also describe possible changes in materials specifications as a result of the new radiation environment. The papers in this symposium were presented during two sessions September 21, 1956, at the Second Pacific Area National Meeting of the Society, Los Angeles, Calif. The symposium was sponsored by ASTM Committee E-10 on Radioisotopes and Radiation Effects.

Three papers presented at the West Coast Meeting are not included in this symposium: "Determination of Naphthalene in Coal Tar by Dilution Analysis," by O. K. Neville; "Application of a Beta Ray Backscatter Thickness Gage to Traffic Paint Wear Studies," by Bryant W. Pocock; and "Problems of Radiation Dosimetry," by C. H. Collins and V. P. Calkins. Mr. Pocock's paper may be found in the ASTM BULLETIN, May 1955, under the title "Measuring Traffic Paint Abrasion with Beta Rays," while the Collins and Calkins paper has been included in the Symposium on Radiation Effects, *ASTM STP No. 208*.

Mr. Charles E. Crompton, National Lead Co. of Ohio, Cincinnati, Ohio, acted as Symposium Chairman and, together with R. B. Stringfield, Consulting Engineer, Los Angeles, Calif., presided over the morning session. G. D. Calkins, Battelle Memorial Institute, Columbus, Ohio, presided over the afternoon session.

EDITORIAL NOTE.—A paper on "Application of a Beta Ray Backscatter Thickness Gage to Traffic Paint Wear Studies" was presented by Bryant W. Pocock, chairman of Subcommittee IV of Committee E-10. In this paper, Mr. Pocock, chemical research engineer and head of the isotopes section of the Michigan State Highway Dept., reported results of investigations using the beta ray gage which were not covered in his paper published in the May, 1955 ASTM BULLETIN.

Application of the Michigan gage to traffic paint wear studies has given physical proof of the impossibility of producing uniform wear across a paint stripe on a horizontally rotating turntable subjected to wear by a vertical wear wheel, a fact which can be shown analytically. The Michigan tests also disclosed that the coefficient of thermal expansion of the dried and cured paint film is a significant factor in the occurrence of chipping. Traffic paints having the best field performance possessed coefficients of thermal expansion closest to that of the concrete pavement over which they had been applied.