SYMPOSIUM ON COAL SAMPLING

Presented at the

FIFTY-SEVENTH ANNUAL MEETING

AMERICAN SOCIETY FOR TESTING MATERIALS

Chicago, Ill., June 14, 1954



ASTM Special Technical Publication No. 162

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

SYMPOSIUM ON COAL SAMPLING

Presented at the FIFTY-SEVENTH ANNUAL MEETING AMERICAN SOCIETY FOR TESTING MATERIALS Chicago, Ill., June 14, 1954



ASTM Special Technical Publication No. 162

Published by the AMERICAN SOCIETY FOR TESTING MATERIALS 1916 Race St., Philadelphia 3, Pa. COPYRIGHT, 1955

BY THE

AMERICAN SOCIETY FOR TESTING MATERIALS

FOREWORD

The papers and discussions in the Symposium on Coal Sampling were presented at the Second and Fifth Sessions of the Fifty-seventh Annual Meeting of the Society held on June 14, 1954, in Chicago, Ill. This symposium was sponsored by Committee D-5 on Coal and Coke, W. W. Anderson, Technical Director, Commercial Testing and Engineering Co., Chicago, Ill., chairman. The symposium was developed by a Symposium Committee under the chairmanship of W. M. Bertholf, Coal Preparation Engineer, Colorado Fuel and Iron Corp., Pueblo, Colo.

Mr. H. F. Hebley, Director of Research, Pittsburgh Consolidated Coal Co., Pittsburgh, Pa., and Mr. W. W. Anderson acted as co-chairmen for the Second Session, while Mr. A. C. Fieldner, Past-President of ASTM and Chief Fuels Technologist, U. S. Bureau of Mines, Washington, D. C., and Mr. W. M. Bertholf presided over the Fifth Session.

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

CONTENTS

	PAGE
Introduction—Arno C. Fieldner and W. W. Anderson	1
The Development of the Theoretical Basis of Coal Sampling-W. M. Bertholf	5
Discussion	
Some Recent British Work on Coal Sampling—R. C. Tomlinson	35
Discussion	
A Test on a Slotted Revolving Cylinder Coal Sampler—A. O. Blatter	57
Tests of Accuracy of a Mechanical Coal Sampler—R. L. Coryell, F. J. Schwerd, and	
E. J. Parente	72
Tests of the Geary-Jennings Sampler at Cabin Creek-W. M. Bertholf and W. L.	
Webb	
Discussion	113
The Variances of Reduction and Analysis-W. W. Anderson and M. L. Sutherland.	116
Discussion	
Multilot Sampling-The Accuracies in Sampling of Large Coal Shipments by Applica-	
tion of the Variance Concept—T, A. Miskimen and R. S. Thurston	
Discussion	137
Tests on the Binomial Sampling Theory—J. Visman	141
Discussion	

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. 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 A.S.T.M. technical committees, or compilations of data developed in special Society groups with many organizations cooperating. A list of A.S.T.M. publications and information on the work of the Society will be furnished on request.

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. 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 A.S.T.M. technical committees, or compilations of data developed in special Society groups with many organizations cooperating. A list of A.S.T.M. publications and information on the work of the Society will be furnished on request.