



**CANADA CENTRE FOR MINERAL AND ENERGY TECHNOLOGY
(Former Mines Branch)**

REPORT ON ATTENDANCE AT THE FIRST ORGANIZATION
MEETING OF ISO/TC27/WG-12

J.C. BOTHAM

CANADIAN METALLURGICAL FUEL RESEARCH LABORATORY

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ENERGY RESEARCH PROGRAM

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REPORT ON ATTENDANCE AT THE FIRST
ORGANIZATION MEETING OF ISO/TC27/WG-12

ISO/TC27 - Solid Mineral Fuels
WG-12 - Plastic Properties of Coal
Secretariat - U.S.A.

by

J.C. Botham

PURPOSE

The purpose of establishing Working Group (WG) 12 (Plastic Properties of Coal), with the U.S.A. as the Secretariat is given as Item 8.1 of the Minutes of the Ninth Meeting of ISO/TC27 (Solid Mineral Fuels) which was held in Washington, D.C. September 12, 1973 and in Resolution 8 resulting therefrom.

Relevant extracts from Document No. ISO/TC27 (Washington 73-9) 7749E are reproduced as Appendix 1 of this report.

PLACE - DATE - ATTENDANCE - AGENDA

The first meeting of ISO/TC27/WG-12 was held at the Downtown Holiday Inn, Denver, Colorado on October 30 and 31, 1975 following the semi-annual meeting of ASTM D05 on Coal and Coke.

A complete list of the membership of WG-12 is reproduced herein as Appendix 2. Those in attendance at the Denver meeting are indicated with an asterisk.

GENERAL COMMENTS AND CANADIAN POSITION

In Canada there are six laboratories which use the Gieseler Plastometer. Five of the laboratories use the constant torque type (ASTM Method D2639-74) and one laboratory uses the manual model (ASTM D1812-69 (1974)). Two laboratories are converting their units to full automation for a printout of the fluidity of coal (dial divisions per minute as a function of temperature).

In order to present a comprehensive Canadian viewpoint at the Denver meeting a canvass of the coal, coke and related industries was made by letter (see Appendix 3). Only one serious reply resulted, namely from the Alberta Research Council (J.F. Fryer and Dr. L. Ignasiak). Therefore, the expressions given at the meeting were confined to the experiences of the Department of Energy, Mines and Resources (EMR) and the Alberta Research Council (RCA). However, a national viewpoint in this regard may be considered valid since these

two bodies have had the longest experience and the broadest scope in the use of this method of test. The Department of EMR has used Gieseler Plastometers extensively for the past 30 years and has actively participated, as a member of ASTM D05.15, in the development of the test as an ASTM Standard, (i.e. since its initial consideration in 1954). RCA have used the method of test exclusively in research studies for the past six years. Other laboratories, in the main, have acquired Gieseler Plastometers during the interim years.

In Canada the Gieseler Plastometer results are used for the following applications:

- (a) Research Studies - To indicate or to provide a parameter of caking propensity.
- (b) Resource Evaluation - To indicate caking propensity of new coal sources.
- (c) Quality Control - To monitor caking properties in relation to oxidation, uniformity of mine product and coal under storage.
- (d) Formed Coke - To select and to control the quality of the caking component in hot briquetting.
- (e) Coal Blending for conventional coke-making.

In general it may be stated that Canada considers the method of test to yield quite satisfactory results. The method is clear and comprehensive. However, there are some refinements which could be made to improve the repeatability and reproducibility of the test results.

RESULTS OF THE MEETING

The results of the meeting are, in essence, included in the three draft resolutions which are reproduced as follows:

RESOLUTION 1

Resolved that a task group comprized of Mr. R.J. Morlock and T. Miyazu supply two suitable viscous liquids and two plastic Gieseler crucibles to participating members of WG12 along with instructions for use of the above to calibrate their Constant Torque Plastometers at various applied torques. Calibration to be completed and results reported to the Secretariat by July 1, 1976.

RESOLUTION 2

Resolved that, where possible, members investigate methods to minimize heat transfer to the hysteresis brake system and submit recommendations to the Secretariat prior to the next meeting of WG12.

Document No:-

ISO/TC 27 (Washington 73-9)

1149

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ISO INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
 ORGANISATION INTERNATIONALE DE NORMALISATION

ISO/TC 27 - Solid mineral fuels

Secretariat United Kingdom

From: BRITISH STANDARDS INSTITUTION
 2 PARK STREET
 LONDON W1A 2BS

Telephone: 01-629 9000

Telegrams: STANDARDS LONDON W1

Telex: 266933 (Head Office)
 23218 (Sales & Accounts)

BRIEF MINUTES OF THE NINTH MEETING OF
 ISO/TC 27, WEDNESDAY, 12 SEPTEMBER, 1973

8. New work.

8.1 Plastic properties of coal.

Dr. Wilkinson introduced N 1137 on behalf of the Secretariat, indicating that, although the Giesler Method had been considered worthy of study under this heading, there were reasons to believe that its reproducibility was not adequate and suggesting that other methods also merited examination. The Japanese delegation presented N 1143, a detailed review of the Giesler Method with results and suggestions for improving the technique, and the USA delegation also mentioned some modifications recently introduced into the procedure described in N 1131 in order to achieve better reproducibility. There was a lengthy exchange of views about the information obtainable from various tests and the uses to be made of this information, at the conclusion of which it was agreed that the Secretariat should establish WG 12, inviting Member Bodies to nominate experts thereto, in order to study the subject in more detail and, if appropriate, to submit draft proposals to TC 27. The USA delegation agreed to undertake the duties of Secretariat of WG 12 (Resolution 8).

Draft Resolution 8 - Plastic properties of coal

That the TC 27 Secretariat shall invite Member Bodies to nominate experts to a new WG 12 'Plastic properties of coal', with the USA as Secretariat, and that the Working Group shall study the subject indicated by the title with the object of submitting one or more draft proposals to ISO/TC 27.

APPENDIX 2

WORKING GROUP - 12 MEMBERSHIP

ISO/TC-27/WG-12

Plastic Properties of Coal

Secretariat - U.S.A.

Chairman - Dr. J. R. Cameron *

Republic Steel Corporation
P. O. Box 6778
Cleveland, OH 44101
U.S.A.

Secretary - W. A. Jasulaitis

Consolidation Coal Company
3300 One Oliver Plaza
Pittsburgh, PA 15222
U.S.A.

P-Members

Australia

Mr. W. Isbister (tentative contact)
Standards Association of Australia
Standards House
80-86 Arthur Street
North Sidney, N.S.W. 2060
Australia

Canada

Mr. J. C. Botham *
Manager
Canadian Metallurgical Fuels Research Laboratories
Energy Research Laboratories
Department of Energy, Mines and Resources
c/o 555 Booth Street
Ottawa, Ontario K1A 0G1
Canada

Italy

Mr. M. Conti
Italsider S.p.A. (alternate)
Via Corsica, 4
16128 - Genova
Italy

Dott. A. Berveglieri
ITALSIDER S.p.A.
Stabilimento "Oscar Sinigallia"
Reparto L.M.P.
Genova Cornigliano
Via S.G. ACRI, Italy

Japan

Dr. T. Miyazu *
c/o The Fuel Society of Japan
Chiyoda ku
Sotokanda 6-5-4
Tokyo, Japan 101

Poland

Mr. Rajmund Karkosz, eng.
Główny Instytut Wegla
Kierownik Laboratorium Oceny Wegla
Pl. Gwarkow 1, Skrzynka pocztowa 206
40- 951 Katowice - Poland
c/o Polski Komitet Normalizacji i Miar
ul. Elektoralna 2,
00-139 - Warszawa - Poland

Republic of South Africa

Mr. W. H. D. Savage
Fuels Research Institute of South Africa
P. O. Box 217
Pretoria 0001
Republic of South Africa

United Kingdom

Dr. H. C. Wilkinson *
The British Carbonization Research Association
Wingerworth
Chesterfield
Derbyshire S42 6JS
England

U.S.A.

Mr. L. J. Verno *
Manager - Central Laboratories
Clinchfield Coal Company, Pittston Coal Group
Dante, Virginia 24237

U.S.S.R.

Gosstandart
Mr. IV Eremin
Leninsky, Prospekt 9b
Moscova 117049
U.S.S.R.

O-Members

Chile

Mr. Hugo Brangier M.
Director Ejecutivo
Instituto Nacional de Normalizacion
Casilla 995
Santiago, 1
Chile

Colombia

Dra. Magdalena de la Portilla
Chief Standardization Department
Instituto Colombiano de Normas Tecnicas
Apartado Aereo 14237
Bogota, Colombia

West Germany

Dr. A. Scholz (tentative contact)
Ruhrkohle AG
Rellinghauser Strasse 1
4300 Essen 1
West Germany

c.c. as per attached lists (copy also to Mr. Ted G. Davy, The Coal Assoc.)

APPENDIX 3

CANADIAN CARBONIZATION RESEARCH ASSOCIATION

September 12, 1975.

Please reply to: c/o CANMET, Energy Research Laboratories,
555 Booth Street,
Ottawa, Ontario
K1A 0G1.

MEMORANDUM TO: Members of Technical Committee

FROM: J.C. Botham, Secretary,
Board of Directors

NOTICE OF FIRST ORGANIZATIONAL MEETING FOR WG12 (PLASTIC PROPERTIES OF COAL)

Technical Committee 27 (Solid Mineral Fuels) of the International Standards Organization (ISO) has announced an organizational meeting of WG12 (Plastic Properties of Coal) to be held in Denver, Colorado, October 30-31, 1975. The United States is the Secretariat for this working group and the meeting has been conveniently arranged in conjunction with the ASTM meetings of Committee D-5 (Coal and Coke). Relevant correspondence on this matter is attached for your information.

Canada is a participating member of ISO/TC27/WG12 and I have been delegated as the official representative. As in the case of ISO/TC27/SC3 (Coke), the Standards Council of Canada recognizes CCRA as a body with representations from the Canadian steel and coal industries. As the official delegate to ISO must express the national interests rather than personal interests, the purpose of this memorandum is to solicit your opinions concerning the "Standard Method of Test for Plastic Properties of Coal by the Constant-Torque Gieseler Plastometer - ASTM Designation:D2639-74". A copy of the draft agenda is attached.

Any comments which you would care to make concerning this test method, as per the items listed on the agenda, will be gratefully appreciated.

In order to obtain a national opinion to the fullest, I have taken the liberty of sending copies of this memorandum to others in Canada with possible experience in the use of this method of test and/or opinions concerning its use and application.

An early reply on this matter will be appreciated.

c.c. Mr. W.J. Montgomery

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APPENDIX 3

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SOMERHALLS

