



MINUTES
of the
TECHNICAL & RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y.

September 21, 1961

Molded Section

Chairman H. P. Hoopes called the meeting to order at 9:30 A. M. with the following in attendance:

H. P. Hoopes, Chairman	Fibreboard Paper Products Corp.
D. A. Davis	The Ruberoid Company
V. L. Miller	Pittsburgh Corning Corp.
W. P. Sinclair	Union Asbestos & Rubber Company
W. R. Seipt	Keasbey & Mattison Co.
E. F. Ott, Jr.	Keasbey & Mattison Co.
L. L. Collonge	Mundet Cork Company
R. C. Parlett	NIMA
R. F. McKee	Baldwin-Ehret-Hill, Inc.
R. L. Schneider	Owens-Corning Fiberglas Corp.
W. W. Acher	Johns-Manville Sales Corp.

A. Review of Federal and Military Specs. An attempt to review Federal and Military Specs to decide which should be revised or cancelled, brought out the fact that in many cases the members of the Molded Section do not receive notice of government revision at the time these revisions are first published. In some cases committee members were not up to date on the latest action which NIMA had taken with regard to certain specifications. Following a general discussion of this problem, Mr. Barnhart agreed to:

1. Notify committee members when he notes revisions to specifications of interest in the Federal and Military Index, published yearly with a monthly supplement.
2. Provide NIMA members with the status of NIMA activities in regard to NIMA recommended changes in specific specs. This status to appear on meeting agendas.

Following discussion it was agreed that in those cases where individual companies are working with the government or ASTM on new product specifications or revision of existing specifications, that NIMA should be advised of this fact and the proposed revision, so that the committee's

knowledge could be applied toward standardization.

NIMA has recommended revisions to the government agency concerned for the following specifications:

- a. MIL-I-2781c, dated 15 February 1960. Changes recommended January 9, 1961.
- b. HH-I-523a, dated October 14, 1960. Changes recommended December 2, 1960.
- c. MIL-I-002819-B, dated 26 January 1960. Changes recommended August 25, 1960.

As far as is known, the government has taken no official action on the recommended changes as of this date.

Mr. Sinclair reported that Unarco is currently working with the government to revise HH-I-561c, to include material for use at 1200 F. The density in this revision will be the same as currently specified by ASTM. Mr. Parlett pointed out the desirability of giving three conductivity values in order to permit drawing of a conductivity curve. Mr. Sinclair agreed to observe this recommendation.

B. Definitions

The list of definitions as revised by Messrs. Ritchie and Barnhart were reviewed and additional changes suggested. These changes were accepted by the entire Technical and Research Committee on the following day and further changes as recommended by the Glass Section were incorporated. The final revision as agreed upon by the T & R Committee, is appended to these minutes. It should be noted that a definition for Insulating-Finishing Cement still requires composition by Messrs. Barnhart and Ritchie.

C. MIL-I-0015091B, Insulation, Felt, Thermal Asbestos Fiber

Mr. Sinclair reported the following revisions were being worked out this Mr. Chilcote.

Paragraph 2.2 - Reference to ASTM 335-54T will be included

Paragraph 3.3.5 - Thermal Conductivity Three values for each type will be specified as follows:

Type A - .47, .62 and .76 at a mean temperature of 100, 300 and 500 F respectively.

Type B - .44, .455 and .47 at a mean temperature of 50, 75 and 100 F respectively.

Paragraph 4.2.2 will be deleted.

Mr. Parlett suggested the following changes in the interest of accuracy, uniformity and clarity:

Paragraph 3.2.1 Construction. Substitute "felt" instead of "sheet".

Paragraph 3.1.2 Type B. Change "suitable repellent agent" to "suitable water repellent agent".

Paragraph 3.2.4 Water absorption - Delete this paragraph since as with all materials of this type, water is absorbed readily.

Paragraph 3.6 Workmanship - Delete the wording "The workmanship shall be first class in every respect" and substitute the words "Workmanship shall be such that the material contains no visual defects which would affect its service quality.

Paragraph 4.4.5 Vibration - Delete this test since it has no meaning without a description of the test apparatus.

Paragraph 6.1.2 should read "Type B Insulation", etc. (delete Type A)

D. HH-I-551a Insulation, Block and Pipe Covering, Thermal Cellular Glass

Mr. Miller reported that negotiations with the government are still under way regarding revision of this specification, and that Pittsburgh Corning has agreed to delete the thickness recommendation contained in this specification and also to delete C 177 procedure included in this specification. Reference to C-177 will be made. Reference will also be made to the compressive test developed by ASTM Committee C-14.

E. ASTM C-312 Recommended Practice for Clearance of Preformed Thermal Pipe Insulation

ASTM is currently considering the revision of this specification to include Thermal Preformed Pipe Insulation for temperatures up to 1200 F instead of 600 F as now written. It was generally felt that the present recommended clearances in C-312 were not adequate for temperatures between 600 and 1200 F, in view of the pipe expansion which occurs at these temperatures and also the normal variation in outside diameter of iron pipe. It was pointed out that NIMA has already recommended that the plus tolerances in 2781C be increased by 1/32 of an inch. Mr. Seipt proposed and it was agreed that the inner diameter tolerances as specified in 2781C, with the 1/32 increase in plus tolerance be substituted for the present clearances recommended in C 312. This revision, as proposed by Seipt would be for temperatures up to 1200 F. It was further suggested that Mr. Barnhart include tables showing the expansion which occurs in iron pipe at the

elevated temperatures, as well as normal variation expected in the outside diameter of iron pipe.

F. New Business

1. Tube O. D. 's

Mr. Hoopes presented a table of outside diameters of insulation for tubing which varied slightly with the NIMA table of 5/11/61. Mr. Hoopes' table reduced the insulation thickness overage above nominal, which resulted in several cases with the NIMA table. It was agreed to present Mr. Hoopes' table to the entire T & R Committee for consideration.

2. Trueness and Squareness of Block & Pipe Covering

Mr. Sinclair advised that he had completed a revision of the proposed test methods for measuring trueness and squareness of pipe and that he would bring these revisions to the ASTM Meeting the following week.

3. 3. HH-I-561C

Mr. Sinclair advised that HH-I-561C was currently being revised to increase the temperature limit to 1200 F. He proposes to list the physical characteristics as currently specified in ASTM C-391.

There being no further business, the meeting was adjourned at 4:30 P.M.

Respectfully submitted

Duane A. Davis
Secretary pro tem

BASIS OF CALCULATING HEAT LOSSES (cont'd).

for figuring heat loss from round and flat surfaces.

These facts will be circulated to the Committee for letter ballot

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It was decided that any NIMA "Recommended Practice" would be circulated to the Committee for letter ballot.

Mr. Barnhart was asked to catalogue all NIMA "Recommended Practices", and send it to the Committee and Board of Directors.

DEFINITIONS

The list of definitions applicable to thermal insulating materials dated 8/9/61 was discussed. The revised list including a definition for Insulating Finishing Cement will be sent to the Committee for letter ballot.

FEDERAL STANDARD FOR TEST METHODS

Mr. Barnhart reported that the General Services Administration in reply to an inquiry from NIMA relative to the procedure to follow necessary to establish a Federal Standard on Test Methods relating the insulating materials would welcome such a document. NIMA would have to write the document and send it to GSA for promulgation.

ECONOMIC THICKNESS STUDY

Mr. C. E. Ernst reviewed the discussions that had taken place at a meeting of the Steering Committee, West Virginia University and Union Carbide relative to the cold study.

Mr. Barnhart reported that the Board of Directors has asked that the T & R Committee determine a common method of presenting the economic thickness tables relating to the hot study which has been published.

A special committee, consisting of Messrs. C. E. Ernst, Chairman, K. M. Ritchie and R. L. Schneider, was appointed to study the subject and determine the basic conditions that should be set up. Their recommendations are to be submitted to the Committee prior to December 1, 1961.

SURETY BOND

Mr. Barnhart reviewed the surety bond situation and reported that a meeting with the New York State Architect was in consideration in the near future.

OTHER BUSINESS

1. Mr. Parlett had prepared "A Guide or Criteria for the Preparation of Insulation Specifications". A draft has been circulated to the Committee for comment. Comments should be sent to the NIMA Office by November 1, 1961.

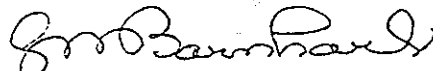
Based on these comments, it was suggested that the following be done with the criteria:

1. A copy should be sent to the various Government Agencies.
2. A copy should be sent to the ASTM C-16 Committee On Philosophy Of Specifications.
3. A publicity article should be written around the criteria.

ADJOURNMENT

There being no further business, the meeting was adjourned.

Respectfully submitted


J. M. Barnhart

DEFINITIONS APPLICABLE TO THERMAL INSULATING MATERIALS

COMPOSITIONS

1. Mineral Fiber - A generic term for all non-metallic inorganic fibers. These fibers may be natural, such as asbestos, or may be manufactured, such as rock, slag or glass.
2. 85% Magnesia Thermal Insulation is composed principally of hydrated basic magnesium carbonate with reinforcing mineral fiber.
3. Diatomaceous Silica thermal insulation is composed principally of diatomaceous earth with or without heat-resistant inorganic binder(s) and reinforcing mineral fiber.
4. Calcium Silicate thermal insulation is composed principally of hydrous calcium silicate with reinforcing mineral fiber.
5. Cellular Glass thermal insulation is composed of glass processed by fusion, comprising a homogeneous rigid cellulated mass of hermetically sealed cells.
6. Amosite Asbestos thermal insulation is composed principally of fibers manufactured from mineral substances such as rock, slag or glass.
8. Cellular Plastic thermal insulation is composed of organic materials which are formed into a homogeneous mass of cells.

FORMS

1. Pipe insulation is thermal insulation suited for application to cylindrical surfaces of pipe and tubing.
 - (a) Molded-type pipe insulation is thermal insulation preformed in cylindrical, semi-cylindrical or segmented sections to fit pipe and tubing.
 - (b) Blanket-type pipe insulation is thermal insulation furnished flat in sizes to fit around pipe and tubing.

2. Block or board insulation is rigid thermal insulation preformed in rectangular units to fit flat or curved surfaces.
3. Insulating Cement is composed of a dry mixture of fibrous, powdery or granular materials, which when mixed with water, applied as a plastic mass and dried in place, forms a monolithic thermal insulation.
4. Finishing Cement is composed of a dry mixture of fibrous, powdery or granular materials, which when mixed with water and applied as a plastic mass to thermal insulation dries to a smooth, hard, protective surface.
5. Loose Fill thermal insulation is composed of a dry mixture of fibrous, powdery or granular materials for installation between confining surfaces or as a top layer.
6. Blanket Insulation is flexible thermal insulation that can readily be conformed to curved surfaces, suitably bound together to provide units of substantial area for handling and application and which may be faced or reinforced with confining media.
7. Felt Insulation is semi-rigid or flexible thermal insulation composed of mineral fibers with or without binder, normally in flat sheets.
8. Insulating-Finishing Cement - (Definition to be written by Messrs. Barnhart and Ritchie.)