

MINUTES
of the
TECHNICAL & RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y. June 22, 1960

Molded Section

Chairman E. C. Shuman called the meeting to order at 9:30 A. M. with the following in attendance:

E. C. Shuman, Chairman	Owens-Corning Fiberglas Corp.
L. L. Collogne	Mundet Cork Corporation
Duane Davis	The Ruberoid Company
M. E. DeReus	Union Asbestos & Rubber Company
D. Gaches	Johns-Manville Sales Corp.
H. P. Hoopes	Fibreboard Paper Products Corp.
V. L. Miller	Pittsburgh Corning Corp.
W. R. Seipt	Keasbey & Mattison Company
T. J. Walters	The Ruberoid Company
D. B. Wingerter	Johns-Manville Sales Corp.
R. C. Parlett	National Insulation Mfrs. Assn.

The Section reviewed and made the following recommendations after discussion of the specifications listed.

MIL-I-0015091 dated 12/15/59 "Insulation Felt Thermal Asbestos Fiber" This pertains to a woven asbestos blanket made only by Union Asbestos & Rubber Company so was referred first to Mr. DeReus for his study and recommendations which will be reviewed later by the Technical & Research Committee.

MIL-I-00281913 (SHIPS) Insulation Block, Thermal dated 1/26/60
Par. 3.4 Dimensions & Tolerance Eliminate the table form and the terms "Thickness - As specified" and state "Material shall be furnished in block form in 18" length by 3" width or 36" length by 6" or 12" width. Blocks shall be furnished in thicknesses of 1, 1-1/2, 2, 2-1/2, 3, 3-1/2 or 4". Tolerances in dimensions are length ± 1/8", width ± 1/16", thickness ± 1/16".

Par. 4.2 Table II State compressive strength as follows " at not more than 10 per cent deformation".

Change Density Class 3 to 24 pct. (Mr. Seipt to confirm this after checking). Change Conductivity at 800 F of Class 3 to 0.78 and Class 4 to 0.80. These values are considered to be more consistant with current production.

MIL-I-2781c dated 2/15/60 Insulation Pipe Covering Thermal - Errors (apparently typographical) require correction. Table II Thickness of 3-1/2" pipe size by nominal 3-1/2 thick should be 3-27/32" actual thickness. Pipe size 14" and larger and nominal 5" thick should be 4-15/16" actual thickness.

Table III Type II change density to 26 pcf.

Par. 3.4.2 Table I under Diameter tolerances of 1, 1-1/4 and 1-1/2 inch pipe sizes should be changed in the plus tolerance to 3/64 recommended by one manufacturer. The whole table which is new and not previously reviewed by NIMA members should be studied and recommendations sent to Mr. Barnhart as early as possible.

Par. 4.4 Inspection - Mr. Wingerter agreed to study this section and make recommendations to the Committee.

Par. 4.4.2.1 Possible Test Failure - This calls for density, hardness and modulous of rupture tests with no designation of the laboratory in which it must be tested. While composition, stability, thermal k, abrasion and heating loss & shrinkage specified to be made (At Government laboratory) Whereas 4.2 states Qualification Tests shall be conducted by a laboratory designated by the Bureau of Ships" but does not state this must be a Government laboratory - what is intended?

HH-I-523a dated 5/23/52 Insulation Block Pipe Covering & Cement Thermal Calcium Silicate (For temperatures to 1200F) - Revise Table II showing actual thicknesses for various nominal thicknesses to conform exactly to Table II Thickness in MIL-I-2781c including Note under Table and making corrections in typographical errors on 3-1/2" pipe size x 3-1/2" nominal thickness to read 3-27/32 for the actual thickness listed and pipe sizes 14" and larger 5" thick to read 4-15/16" for the actual thickness. (Table II in present HH-I-523 only goes up to 2-1/2" nominal thickness but it is desirable to have it revised as in 2781c up to and including 5" thick since it is NIMA's aim to have all Government specifications read the same so that ultimately one single specification for one type of insulation i.e. the Federal will be used by all services).

Par. 3.3.1.2.1 Thickness Tolerance - Change as in 2781c to read "A tolerance of plus 1/8 inch or minus 1/16 inch in actual thickness shown in Table II will be permitted.

Par. 2.2 Omit all reference to Commercial Standard CS 131 substitute "All tests shall be made in accordance with ASTM methods as listed in 4.3

Par. 3.2.1 Change to read "----sections 36 inches long and 6 or 12 inches wide".

Par. 3.2.2 Table I - Revise Physical Properties where necessary to conform to recent NIMA approved revisions in ASTM Spec C 345-54 which lowered the conductivity.

Par. 4.3.1 - Density - Change method of test to read "in accordance with ASTM C 303.

Par. 4.3.2 Thermal Conductivity - Change method of test to read "in accordance with ASTM C-177 or C-335 whichever is applicable.

Par. 4.3.3 Compressive Strength - Change "-----shall be determined in accordance with ASTM Method C-165 for dry strength for compressive strength after emersion. Saturate a test specimen conforming to Section 4 of Method C 165 and then test in accordance with Method C 165, Report the wet strength as a percentage of the dry strength".

Par. 4.3.6 Change to read "Heating loss and shrinkage shall be determined in accordance with test method ASTM C 356.

Par. 4.3.7 - Change to read "-----shall be determined in accordance with test method ASTM C166.

HH-I-00500 dated 5/24/56 Insulating Cements, Thermal. Only type I, II and V are in the province of this section and where recommended for the following revisions, it being understood that a separate specification will be written for each type in the future.

(Type I) 85% Magnesia Thermal Insulating Cement - Revise entirely to conform with newly issued ASTM C-193-59T in all respects including "Scope", "Physical Properties", etc., with the exception that "Composition" Par. 2 will be revised to read as follows. "The cement shall be composed predominately, by weight of basic hydrated magnesium carbonate and combined with asbestos fiber". (The percentage requirements to be eliminated as well as the "Composition" requirement (chemical analysis) under "Method of Testing" Par. 5 of ASTM C 193-59T.

(Type II) Asbestos Thermal Insulating Cement - Revise entirely to conform in all respects properties, wording, etc., to recently proposed revised ASTM C-194.

(Type V) Diatomaceous Silica Thermal Insulating Cement - Revise entirely to conform to recently issued C197-59T.

(Type IV) - Expanded or Exfoliated Vermiculite Thermal Insulating Cement - Revise entirely to conform with recently issued ASTM C 196-59T.

MIL-C-2908A - 3/29/60 Cements, Finishing, Insulation - Type I - Asbestos which could be of interest to this Section of NIMA was reviewed and found satisfactory. (Type II is a mineral fiber cement in the province of the Rock & Slag Section).

MIL-P-2886 Plaster, Magnesia - Mr. Gaches offered to determine under what specification the Navy purchased magnesia cement to find whether it required revision.

HH-I-551a Insulating Block & Pipe Covering, Thermal, Cellular Glass -

Mr. Miller advised this specification is in Washington for revision to add the higher temperature material class i.e. foamed silica. The T & R Committee recommended that the specification be revised eliminating all Tables recommending various thickness for different temperature conditions as these are actually in a sense application specifications. Also the detailed description of the Guarded Hot Plate Method of Test for Conductivity should be eliminated and reference to ASTM Method C-177 and C-335 used - again to conform to other Federal specification forms.

HH-I-554 Insulation Thermal, Magnesia Block, Pipe & Tubing - Revision of this specification requested NIMA in letter of July 1, 1959 to W. Thomasson G.S.A. was after a follow up letter September 18 acknowledged and stated it would be issued as NIMA recommended. It is felt a strong follow up letter should be sent as Mr. Thomasson has retired and his successor may do better on the many specifications we are revising if it is pointed out that NIMA Committee spends much time and effort in bringing these specifications up to date and we hope in the future it will not take a whole year to have them issued - when in the mean time any Government purchases would have to be made on obsolete specifications.

Corps of Engineer Guide Specification Heat Distributing System - CE 301.21 Draft August 12, 1959 - Since no reply has been received from the Corps of Engineers on NIMA letter of June 1 in which we outlined in six pages the Committee's recommendations for revision, no further action by the Committee was necessary.

ASTM Dimension Standards - Nesting Pipe Sizes and Dimensional Tolerances of Block and Pipe Insulation - This subject was discussed at considerable length preparatory to the next days, meeting and conclusions arrived at the following day are reported in the Minutes of the combined Session.

Respectfully submitted

R. C. Parlett Sec. Protem
E. C. Shuman, Chairman