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MINUTES
of the
TECHNICAL & RESEARCH COMMITTEE MEETING
Glass Section
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
Sandusky, Ohio **July 27 & 28, 1960**

Chairman M. W. Keyes called the meeting to order with the following in attendance:

M. W. Keyes, Chairman
C. E. Ernst
W. Gubar
D. E. Morganroth
E. C. Shuman
R. C. Parlett
J. M. Barnhart

Pittsburgh Plate Glass Company
Johns-Manville Sales Corp.
Gustin-Bacon Mfg. Company
Owens-Corning Fiberglas Corp.
Owens-Corning Fiberglas Corp.
National Insulation Mfrs. Assn.
National Insulation Mfrs. Assn.

STANDARD FACINGS

The list dated 6/22/60 was discussed and was revised in accordance to the attachment.

The Committee agreed that at some later date foil-scrim reinforced Vinyl should replace the .004" vinyl (al. pigmented) that is now on the list.

It was agreed that performance standards should be added to the list for all the standard facings and should include:

- | | |
|--------------------------------|---|
| 1. Weight | 9. Molded Resistance |
| 2. Thickness | 10. Immersion Test |
| 3. Tensile Strength | 11. Odor Resistance |
| 4. Tear Strength | 12. Use Temperature Limits |
| 5. Burst Strength | 13. Dimensional Stability |
| 6. Moisture Vapor Transmission | 14. Vermin Statement |
| 7. Flame Spread Resistance | 15. Statement of Composition |
| 8. Corrosion Resistance | 16. Description of Laminating
Adhesive |

The Committee desires to ask the Board of Directors whether they would be in favor of the use of an NIMA label on end products that would conform

STANDARD FACINGS(cont'd).

to NIMA "Standards" that would be devised.

The Committee also desires from the Board of Directors clarification as to whether insulation used in certain wall construction, roof insulation, building insulation (for apartments, hotels, motels, etc.) other than for use in private dwellings comes under the scope of activities of NIMA.

FRICION & EROSION FACTORS FOR DUCT LINING MATERIALS

It was agreed that a method of test for the determination of erosion of these products will be developed.

Walter Gubar will send results of the tests on friction factors to NIMA for distribution to Committee members.

REQUIREMENTS FOR AIR DUCTS (Underwriters' Laboratory Subject #181)

The Committee will be balloted to determine whether they wish to pool their comments on this report.

GOVERNMENT INDUSTRIES COMMITTEE

The Committee again reiterated its desire to form a Government Industries Committee and pointed out the following:

1. The object of the meetings would be to provide the government specification writers and engineers with prompt, informal answers to their questions and to relieve them of the ponderous operation of getting out circular letters and waiting, sometimes indefinitely, for replies.
2. As a means of providing information by the meeting and bringing NIMA immediately in touch with the need for information, a tie line to the NIMA New York office should be established or else authorization given to the individuals in question to make collect phone calls. Should personal calls in Washington be necessary in addition to the meetings or as a result of the telephone requests for information, NIMA personnel would make such calls if the subject concerned more than one company's product. It appears that government people particularly like to refer matters to associations. However, if the request involves only one company, the request would be turned over to the Washington representative of this concern.

GOVERNMENT INDUSTRIES COMMITTEE (cont'd.)

3. The meetings should be held, to start with, every two months and then the interval extended or shortened depending on the situation as it develops. An interval of several months is likely to be so long that the objects of the meetings would not be served.
4. The activities of NIMA would be for the benefit of the industry particularly with respect to specifications, regulations, etc. the direct contact with government people would be confined to areas in which collective representation is beneficial and would in no way encroach on the work of Washington representatives of the various companies.

The National Academy of Sciences should have different treatment and handling than the government specifications writers and engineers. The latter group is not interested in more data, does not have time to interpret it, and much prefers us to provide suggested specifications or material which can be directly used in specifications or recommendations. One or two of the specification writers would even be glad to write the NIMA name into the specifications if NIMA would provide a standard or a specification which they could apply directly in their specifications or standards.

This whole field seems to be a ripe opportunity and any delay at this time will only encourage these people to turn in some other direction. Now, however, we have their attention and we should not allow any time to pass before taking advantage of the situation.

The Thermal Insulation Society is attempting to compile a handbook. Other organizations have attempted it, and some have actually gotten out some kind of compilation. It appears, however, that the NIMA support should be placed behind the ASHRAE Guide and Data Book inasmuch as that is the most highly regarded publication and inasmuch as there is already material of a suitable nature in it and inasmuch as that organization has been working for several years on an application chapter to supplement the existing material. There is danger of giving information to a group and having them use it in a manner which would confuse rather than clarify the question of how to select and apply thermal insulations. With ASHRAE, the NIMA Secretary, as well as industry representatives are members of the Committee and can have a hand in guiding the use to which the information is put.

PRODUCT IDENTIFICATION

The Committee feels that some identification should be placed on all standard products. This is true especially on products used for duct insulation.

The rock, slag and glass manufacturers will be polled to determine their desires in this matter.

REVISIONS TO SPECIFICATIONS

1. Revisions to ASTM Specifications

- A. The revised specifications dated 6/22/6-, including ASTM C 262, ASTM C 263, ASTM C 280 and ASTM C 281, will be sent to the rock, slag and glass sections for comments.

2. Revisions to Military Specifications

- A. Military Specifications - Insulation Pipe Covering, Thermal Fibrous Glass (MIL-I-22344 (SHIPS))

The following changes were discussed and agreed upon:

Par 2.2 add ASTM C 390 - Sampling Preformed Thermal Insulation, Tentative Method of Test for.

- 3.1 Change to read "-----containing not more than 1.5 percent by weight of"
- 3.3.1 Change to read "...shall not exceed 0.0035 inch...."
- 3.2.1 Change to read "...in lengths of 3 or 6 feet of plus or minus 1/8 inch in length...."
- 3.2.3 Change to read "...furnished in nominal thicknesses of 1/2, 3/4, 1, 1-1/2, 2 inches according to the manufacturers standard sizes. ... plus or minus 3/32 inch in such manufacturers thickness...."
- 3.2.4 Change to read "The pipe covering shall have a density of 4.0 pounds per cubic foot. A tolerance of plus 0.50 or minus 1.00 pounds per cubic foot will be permitted. Except in sizes 1-1/2 pipe size by 1 inch in thickness and smaller, the density shall not exceed 6.50 pounds per cubic foot."

3.3 Change to read "...shall not exceed 0.60 percent and the Ph shall be not less than 7.5 nor more than 12.0 (see 4.4.4)."

3.5 No change, however, when comments are sent to the Bureau of Ships relative to this specification, it will be pointed out that it is felt that the fire resistance test as now written is not realistic, and that a new test method should be written. Remove jackets before test shall be added to the smolder test and fire resistance tests.

3.6 The "k" values will be as follows:

Mean Temp (°F)	"k"
25	0.23
50	0.24
75	0.25
100	0.26
200	0.31

3.8 Change to read "Since several requirements for this material are not easily defined by a numerical value, but affect the workmanship of a finished job, these products shall not have visible defects, that will adversely affect the service qualities."

4.2 Change to read "For purposes of sampling refer to ASTM Method C 390."

4.2.2 Delete

4.2.2.1 Delete

4.2.2.2 Delete

4.3 Change to read "For purposes of inspection refer to ASTM Method C 390."

4.3.1 Delete

4.3.2.1 Delete

4.4.2 Change to read "...on the basis of measuring one hundred fibers"

4.4.4 Test for Ph will be submitted by W. Gubar

4.4.5 Insert "hot probe test" (per Owens-Corning)

CRMC-SEG-000279

- 4.4.6.1 Change to read "A section of pipe covering for a 3 inch pipe size by 1-1/2 inch thick, 36 inches in length,"
- 4.4.7 Change to read "....cover for a 3 inch pipe and 1-1/2 inches thick...."
- 4.4.8 Change to read ".....to a temperature of 370°F for"
- 5.1 Point out packaging requirements are too stringent when writing to Bureau of Ships
- 6.1 (b) Change to read "....copper tube sizes, lengths, and thicknesses,"
- 6.2 Change to read "....fibrous glass fittings are also available as supplementary items."

This revised specification will be sent to the Committee for comments.

B. Military Specification - Insulation Felt, Thermal and Sound Absorbing Felt, Fibrous Glas, Flexible (MIL-I-22023 (Ships)

The following changes were discussed and agreed upon:

Change title to "Insulation Blanket, Thermal and Sound Absorbing Blanket Fibrous Glass, Flexible"

Change "Felt" to "Blanket" throughout the specification

Par 1.1 Change to read "...for thermal and acoustical control for use up to 400°F.

1.2 Delete "Nominal density 0.5 pound per cubic foot"

2.1 Add ASTM C-177 - Thermal Conductivity of Materials by Means of the Guarded Hot Plate

Add ASTM C 390 - Sampling Preformed Thermal Insulation

Add ASTM C 167 - Thickness and Density of Blanket or Batt-Type Thermal Insulating Materials

3.1 Change to read "....containing not more than 1.5 percent by weight of nonfibrous....."

- 3.1.1 Change to read "....shall not exceed 0.00035 inch...."
- 3.2.1.1 Change to read "....in rolls, except where higher thickness and densities may require shipment in cut pieces in accordance with the manufacturers standard practice,...."
- 3.2.1.2 Change to read "....of the material shall be 24, 36, 48 or 72 inches...."
- 3.2.1.3 Change to read "....furnished in nominal thickness of 1/2 to 4 inches by 1/2 inch increments, as specified, except that Classes 4 & 5 shall have a maximum thickness of 2 inches (see 6.1)"
- 3.3 Change to read "....exceed 30 per cent by weight (see 4.4.4)".
- 3.4 Change to read "....exceed 0.60 percent and the PH shall be not less than 7.5 nor more than 12.0 (see 4.4.5)".
- 3.7 No change, however, when comments are sent to the Bureau of Ships relative to this specification, it will be pointed out that it is felt that the fire resistance test as now written is not realistic, and that a new method should be written. Remove jackets before test shall be added to the smolder test and fire resistance tests.
- 3.8.1 Thermal conductivity values will be changed to conform to existing ASTM specifications as follows:

Class	"k" at Mean Temp (°F)				
	25	50	75	100	200
Class 1	0.26	0.28	0.30	0.32	0.43
Class 2	0.24	0.26	0.28	0.30	0.39
Class 3	0.23	0.245	0.26	0.28	0.35
Class 4	0.22	0.23	0.24	0.25	0.31
Class 5	0.21	0.22	0.23	0.24	0.30

- 3.9.1 Change to read "There shall be not more than 0.59 percent by weight of the material"
- 3.9.2 A standard method of test to determine acoustic performance will be suggested. Test method to be investigated by C. E. Ernst
- 3.10 Change to read "Since several requirements for this material are not easily defined by a numerical value, but affect the workmanship of a finished job, these products shall not have visible defects that will adversely affect the service qualities".

- 4.2.1 Change to read "For purposes of sampling refer to ASTM Method C-390."
- 4.2.2 Delete
- 4.2.3 Delete
- 4.3 Change to read "For purposes of inspection refer to ASTM Method C-390."
- 4.3.1.2 Change to read "Each roll or package selected,...."
- 4.3.2 Delete
- 4.4.2 Change to read "....basis of measuring one hundred fibers,...."
- 4.4.3 Change to read "For purposes of measuring thickness refer to ASTM Method C 167".
- 4.4.4 Change to read "....material separated into small pieces to approximately 1000 F for 1 hr in an oven,...."
- 4.4.5 Test for Ph will be submitted by W. Gubar
- 4.4.6 Change to read "A piece of blanket 12 by 18 inches by 1 inch thick shall be cut 18 inches lengthwise with the blanket and bent on its 12 inch dimension over a 1/2 inch iron pipe size thru an angle...."
- 4.4.7 Insert "hot probe test " (per Owens-Corning)
- 4.4.8 To be reviewed
- 4.4.9 Change to read "...hot plate method as specified in ASTM C 177".
- 4.4.10 Change to read " A test specimen, which has been blown clean of surface particles,....for compliance with 3.9.1. "
- 4.4.11 To be reviewed by C. E. Ernst
- 5.2.1 Change to read "Rolls or packages...."

This revised specification will be sent to the Committee for comments.

3. Revisions to Federal Specifications

The Committee agreed that HH-I-562 and HH-I-542 should be revised and combined.

The Committee agreed that HH-I-564, HH-I-552 and HH-I-563 should be revised and combined.

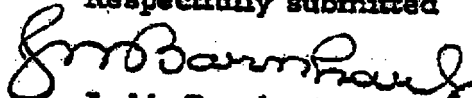
OD'S OF PIPE INSULATION

At the June 23, 1960, T & R Committee Meeting, it was recognized that there was a difference in the sizes listed on the draft of 2/24/60 between the fibrous glass pipe insulations and the rigid type pipe insulations. The draft of 7/7/60 was circulated, and the Glass Section will send comments to the NIMA office.

ADJOURNMENT

There being no further business, the meeting was adjourned.

Respectfully submitted


J. M. Barnhart

8/22/60

PROPOSED STANDARD FACINGS & WIDTHS
FOR
THERMAL INSULATION BLANKET

PRODUCT	Insulation Width - Inches				
	24	36	48	50	52
Facing Widths Due to Tabs - Inches					
.001" Aluminum Foil	no tabs	no tabs	no tabs	no tabs	no tabs
.002" Aluminum Foil *	2" tabs one side	2" tabs one side	2" tabs one side	2" tabs one side	2" tabs two sides
.004" Vinyl (Al. Pigmented)	"	"	"	"	"
Foil-Scrim Reinforced-Kraft *	"	"	"	"	"
(Flame Proofed Types)	"	"	"	"	"
Reinforced Duplex Kraft *	"	"	"	"	"
Duplex Laminated Kraft *	"	"	"	"	"
(30 - 30 - 30)	"	"	"	"	"
Aluminum Painted & Burnished Kraft	"	"	"	"	"

* Standard for industrial applications

CRMC-SEG-000284