MINUTES OF WINTER MEETING OF THE NATIONAL INSULATION MANUFACTURERS ASSOCIATION

New York, N. Y. January 9, 1962

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Cadwalader, Wickersham & Taft — B. M. Walls
Legal Counsel

Sumner Rider & Associates — J. Baer
Publicity Counsel — O. Shaftel
E. Davis

National Insulation Mfrs. Assn. — J. M. Barnhart
R. C. Parlett

APPROVAL OF MINUTES

A motion was made, seconded and passed

That the Minutes of the Meeting of September 11, 1961, as bulletined by the Association office be approved.

PUBLICITY COMMITTEE REPORT

Chairman J. C. Affleck reported as follows:

At its last meeting, on October 31, the Publicity Committee's main problem was to lay out a program of maximum coverage in the light of a reduced budget. Attending were Messrs. George Medinnus, Owens-Corning Fiberglas Corp., S. C. Bogar, Baldwin-Ehret-Hill, Vince McKinnon (for Cooke) of Johns-Manville Sales Corp., your Chairman, and Messrs. Rider, Baer and Shaftel of the agency.

It was agreed that the basic publicity program must be continued as the basis of all activity; that direct mail promotion would be curtailed because of budgetary limitations, but that a partial substitute would be achieved by member companies distributing materials which we would supply to them. These materials would include reprints of published articles, news releases, booklets and promotional pieces.

In continuing the distribution of the Economic Thickness Manual, a further step would be the follow-up of purchasers of the Manual to find what value they have derived from the book, in the form of increased economy or efficiency. We have heard favorable comments on the book from engineers in various government service departments who received copies on the occasion of their meeting with our NIMA Technical Committee. It would be especially interesting to get some official federal recognition of our Manual. Our goal should be to see that every worthwhile specifier, contractor and user of our insulations is equipped with the Manual and knows how to use it effectively.

PUBLICITY COMMITTEE REPORT (cont'd.)

Another subject of future activity that came under discussion, and will require some serious thinking, is our relations with the Insulation - Distributor-Contractors National Association. This group and the eight regional contractor groups would, we are led to believe, welcome some kind of joint activity, and we think that a formal presentation on the theory and significance of economic thickness, to be given at contractor meetings by Mr. Barnhart, may well have a healthy effect on specification procedures.

Last year's direct mail program was carried out as planned, and has already shown solid results in orders for the Economic Thickness Manual. The details will be covered in John Baer's report for Sumner Rider & Associates. John Baer will now give us a report on our accomplishments to date and our future plans.

Mr. J. Baer exhibited slides depicting the accomplishments of 1961 and the program that is expected to be undertaken for 1962.

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I should like to again underline John's remarks about the IDCNA and the regional groups. I respectfully submit that the Executive Committee might at this meeting lay down a policy to guide your Public Relations Committee in this matter. A positive policy would broaden our sphere of service, and certainly impress upon an important group the existence and usefulness of our association. We would like to know whether you agree with our proposals for action in our relationship with the IDCNA and whether we can proceed to carry them out within our budget. There is one other item - our inventory of Manuals is now 100 units. We would like authorization to purchase 1000 copies at a cost of $1820.00 or $1.82 each. We propose to pay for them out of the profits from the sale to date of our initial inventory. We would like to use the balance of these profits to promote the new Cold Study Manual when it is published.

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Following discussion a motion was made, seconded and passed

> That 1000 additional copies of the Economic Thickness Manual be printed at a total cost of approximately $1820.00, and further
>
> That the membership shall be polled as to the number of copies of the Manual they desire, and the number determined so shall be added to the 1000 copies to determine the final amount printed. The cost of the Manuals to the membership shall be $3.00 each.

PUBLICITY COMMITTEE REPORT (cont'd.)

The membership agreed that the economic thickness concept be presented at the IDCNA regional meetings. The publicity counsel will contact the regional headquarters for scheduling. The publicity counsel will prepare the presentation within the next sixty days and send it to the membership for review.

TRAFFIC COMMITTEE REPORT

Chairman H. B. Reaves reported as follows:

A joint meeting of the Traffic Committee of the National Insulation Manufacturers Association and the National Mineral Wool Association was held at the Belmont Plaza Hotel, New York, N. Y., beginning at 9:30 A.M. November 9, 1961. The following were in attendance:

Mr. Jules Ermle	Wood Conversion Company
Mr. W. D. Brown	Wood Conversion Company
Mr. G. A. Crath	Ruberoid Company
Mr. A. J. Wallner	Johns-Manville Sales Corp.
Mr. L. F. Fronstet	National Gypsum Company
Mr. J. J. Horrigan	Owens-Corning Fiberglas Corp.
Mr. A. C. Pecora	Pittsburgh Plate Glass Company
Mr. K. L. Sodergren	Gustin-Bacon Mfg. Company
Mr. D. R. Vandermyde	U. S. Gypsum Company
Mr. J. H. Barnhart	NIMA
Mr. H. B. Reaves, Jr.	Pittsburgh Plate Glass Co.

The Traffic Committee has been presented some very knotty problems, each of which could seriously affect the transportation costs of our members in 1962. Former Chairman A. L. Kreamelmeyer reported to you last September that the Committee has been attempting to secure reductions in rates within Western Trunk Line Territory for distances up to 700 miles. The carriers have repeatedly denied this proposal, and we have been attempting to have the matter set for public hearing so we may present our views more thoroughly. We secured time for a public hearing in December, but it was postponed at the last minute until tomorrow, January 10, in Chicago. A number of the Traffic Committee members are meeting this evening in Chicago for our presentation tomorrow morning.

Following our joint meeting on November 9 the entire Committee appeared before the National Classification Board hearing in New York and opposed the Board's proposal to increase various mineral wool items up to Class 300. This would have the effect of tripling the freight rates on many of the commodities manufactured by members of this Association. At this

TRAFFIC COMMITTEE REPORT (cont'd.)

hearing we were able to determine the reasons for the carriers attempt to effect such a drastic increase, and are happy to report that we were able to postpone consideration of this proposal until this Spring, and even then we have every reason to believe that the proposal as worded will be denied. It is quite possible that certain light density items will take a slight increase, but should that occur, such an increase should not become effective until next Fall.

Later that afternoon our Committee appeared before the rail classification board and opposed an increase in ratings they had placed on their docket. While this particular proposal was in line with adjustments already incorporated in the motor carrier classification, our principal purpose in appearing before this group was to review rail classification practices and attempt to prevent their proposing increases similar to that we had just opposed before the motor carrier board. Railroad LCL service has deteriorated, particularly within Official Territory, to a point where it is almost non-existent; and it is the Traffic Committee's position that the classification committee should leave the ratings alone if they have no intention of offering a transportation service.

While our Traffic Committee is meeting tonight in Chicago, as previously stated, it will not be our purpose to cover any outstanding subjects other than our presentation before the Western Trunk Line Committee tomorrow. However, we will hold a meeting of the Traffic Committee next week in New York City in connection with a meeting with the Official Territory lines special committee to investigate carload rates on insulating material within that territory. At this moment we have no idea what the carriers have in mind, but if they propose an increase in rates, you can rest assured that your Committee will oppose it. On the other hand, I am sure that the Committee will gladly accept any reductions the carriers propose to offer.

We are extremely extremely fortunate in having well-qualified representatives on this Committee, and it is a sincere pleasure to be associated with such an active and dedicated group of gentlemen. The Association may rest assured that the Traffic Committee will continue a policy of securing for our industry effective transportation at the lowest possible cost.

MARKETING RESEARCH COMMITTEE REPORT

In Chairman J. E. Robarge's absence, Mr. H. Gruber reported as follows:

MARKETING RESEARCH COMMITTEE REPORT (cont'd.)

In line with the objectives of the Marketing Research Committee of the NIMA to provide the association's membership with quantitative and qualitative market data on existing and anticipated products and uses, the committee has classified end use markets for thermal insulating materials.

These markets are to be studied relative to potentials for products made and reported by association members, competitive materials and new materials. Trends in market acceptance will be identified and evaluated with reference to both new construction and repair and maintenance applications. Wherever possible, forecasts of potentials will be made in both units and dollars.

Contributing to this effort, members will be asked to report annually shipments by identifiable end use markets and in physical units, thus indicating shares of market obtained by member companies. The details and procedure of reporting so as to insure confidentiality and legality of this program will be worked out by this committee with the Association secretary and with legal counsel. Annual reporting in terms of units, in addition to dollars offers a means of relating shipments to market potentials as a true share of market, as units discount variations in price and produce mix over a period of time. Such reporting in physical units will also permit the committee to relate industry shipments to total industry capacity, as developed from government and other independent sources, to end-use market requirements.

Initial assignments for committee study of end-use markets have been made as follows:

Process Industries - H. Gruber, K&M, Chairman
T. S. Bassett, Johns-Manville
J. P. Conway, Pittsburgh Plate Glass

Central Power Stations and Sub-Stations - S. J. Aires, Costin-Bacon, Chairman
R. F. Goeke, Baldwin-Ehret-Hill
J. E. Robarge, Owens-Corning

Reports, with market evaluation and recommendations for acceptance, will be submitted by December 31, 1962. Interim status reports, with recommendations as may be appropriate, will be made by April 30, 1962 and October 31, 1962.

Representing the committee, Mr. George Goll, Government Representative of Keasbey & Mattison and Mr. Gruber have established liaison with officials of the Business and Defense Services Administration and Bureau of the Census of the Department of Commerce, and are obtaining government cooperation in identifying, evaluating and projecting end use markets

MARKETING RESEARCH COMMITTEE REPORT (cont'd.)

for industrial insulations. In place of the present Census reporting of insulation materials containing asbestos - MC-32N - as merely pipe insulation - cellular and laminated, 85% magnesia, and others by dollar value of shipment - and block insulation (including sheet and lagging) - 85% magnesia, and others in thousands of board feet and dollar value of shipments - the Bureau of Census proposes to request of the Bureau of the Budget's committee on Statistical Reports authority and funds to collect data, as recommended by the Marketing Research Committee of the NIMA in the following categories, and beginning with the ;963 census: (List from letter of October 10, 1061 from Barnhart to Wildes).

In addition, an insulation category may be included encompassing foamed plastic pipe and block insulation, both including spray, now thrown in with all shipments of plastic products, including packaging, laminates and construction materials (MA-30D). Subsequently, it may be possible to add mineral wool - industrial and equipment insulation now collected and reported in Census form 32K; "Mineral Wool and Exfoliated Vermiculite" - to the categories listed above to give the membership a more complete reporting of all industrial insulations, and relate products by end-use markets served rather than by composition.

Other government and industry data will be useful in assisting the committee in its work of evaluating end-use markets in terms of association's skills and facilities, and in recommending courses of action to increase the association's share of present and future market and improve the return on its investment.

Minor modifications are proposed in the monthly reporting form to provide more meaningful information, with consistency among similar product groups.

To keep up to date on products made or marketed by members of the association, as well as by non-members, a list of trade names of industrial insulation products manufactured by association members and non-members' competitive products has been prepared for use by the committee. A special listing of plastic foam producers, some of which are present, and all of which are potential suppliers of foamed plastic industrial insulations, is being developed also. Copies are submitted for your reference.

The Committee will continue its work in developing and exploring potential markets and developing new end uses for products manufactured by the membership, and suggesting new products to serve its markets, and will report its progress to the Association. Comments and suggestions regarding its work are most welcome.

TECHNICAL & RESEARCH COMMITTEE REPORT

Mr. R. C. Parlett, Technical Advisor, reported on the activities of the Committee in accordance with the report attached hereto and made part of these Minutes.

ROCK & SLAG SECTION REPORT

Chairman P. L. Losse reported on the activities of the Committee in accordance with the report attached hereto and made part of these Minutes.

GLASS SECTION REPORT

Chairman C. E. Ernst reported on the activities of the Committee in accordance with the report attached hereto and made part of these Minutes.

MOLDED SECTION REPORT

Mr. R. C. Parlett reported on the activities of the Committee in accordance with the report attached hereto and made part of these Minutes.

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With respect to the Cold Study that is being conducted at West Virginia University, Mr. Barnhart is to contact the Univerisity and determine the reason for the slowdown in the study, and work with the Technical and Research Committee to get the information the University may desire.

The subject of export packaging was deferred to the Board of Directors meeting.

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A film relating to the government's policy on pricing restrictions was shown.

REMARKS OF LEGAL COUNSEL

After viewing with the members the A. M. A. motion picture of an interview with Attorney General Kennedy, Bradley Walls, legal counsel, addressed the meeting briefly. Mr. Walls noted some of the implications in the remarks of the Attorney General. He observed that the Civil Demand Bill which is pending before Congress would give the

Justice Department a powerful tool for detailed examination and investigation of private business. The safeguards of calling a grand jury and having subpoenas issued to produce documents and testimony might be abused by issuing a so-called 'Civil Demand' if this bill passes. Responding to Government investigations is expensive and time consuming and a plague of investigations made possible by the Civil Demand Bill may well be anticipated. Mr. Walls noted the Attorney General's accent on the evils of business and fraud on 'free enterprise as we see it.' Without denying that business fraud does occur, Mr. Walls urged the members to defend and speak out for vigorous competition in business and not to be stampeded by allegations of fraud. Silimarly Mr. Walls wondered whether 'free enterprise as we see it' means that the Justice Department favors small business and distrusts big business.

ADJOURNMENT

There being no further business

The meeting was adjourned.

Respectfully submitted

E. M. Barnhart

E. M. Barnhart

TECHNICAL & RESEARCH COMMITTEE REPORT

Since the September 11 NIMA Annual Meeting the activities of the Technical & Research Committee have included the following:

September 21 - T & R joint meeting of Rock & Slag and Glass Sections in New York.
September 21 - T & R Molded Section meeting in New York.
September 22 - T & R combined meeting of Rock & Slag, Glass and Molded Sections in New York.
September 24 - 27 - ASTM C-16 Committee Meeting, Williamsburg, Va.
October 23 - Mr. Barnhart delivered a talk on low temperature work before the Truck Trailers Association at the Coliseum, New York, N. Y.
October 26 - T & R Glass Section Meeting in Chicago, Ill.
November 30 - T & R Special Committee Meeting in New York on "A Common Method of Presentation of NIMA Insulation Thicknesses", agreed on basic factor to be used.
November 30 - Mr. Barnhart, on recommendation of the Magnesia manufacturers, wrote Mr. Harold Browning, Dept. of the Navy, that NIMA opposed the elimination of 85% Magnesium from Spec MIL-I-2781c as the Navy had proposed in their letter of October 10, for the purpose of simplifying their stocking.
December 4- Special Committee Meeting of Glass Section in Albany, N. Y., and decided with N. Y. State officials on a test project.
December 5 - Government T & R Committee held a 3rd meeting this year in Washington, D. C., with Government Engineers. Mr. Barnhart had perviously been advised by letter that BRAB have adopted the NIMA Economic Thickness Manual as a basis for insulation thicknesses in all Government agencies.
December 30 - T & R Special Committee on Conductivity Apparatus Calibration reported progress in that 3 out of the 4 participating laboratories have completed their second round of tests.

Detailed Minutes of meeting havw been issued and form a part of this Report. Chairmen Losse and Ernst will report later on the activities of their sections while I will report now as Chairman of the Government section on that meeting as well as other general subjects. In Mr. Hoopes' absence I will also report for him for the Molded Section.

GOVERNMENT T & R MEETING - DECEMBER 5 - WASHINGTON, D.C.

This meeting was well attended by government engineers fro 11 agencies and 13 representatives of 9 NIMA member companies. The subject presented and discussed was the paper prepared by the Technical Advisor entitled 'A Guide or Criteria for Preparation of Thermal Insulation Specifications". Government engineers took an active part in the discussion and raised many questions regarding the wording of government specifications, variations in specification requirements between different government agencies, the need for uniform definitions, methods of test and correction of other inconsistancies. For the benefit of the government people a review of NIMA activities in the revision of ASTM specifications was given.

The entire list of Federal, Military and Maritime Insulation specifications were then reviewed and the status of each specification determined as to which was obsolete, being revised or in need of revision and various government departments agreed to speed up revision where such had been requested by NIMA or others. Other subjects of general nature allied to specifications were discussed or deferred for future meetings. A number of Government people expressed their opinions that this had been a most constructive meeting.

ASTM C-16 MEETING, SPETEMBER 24 - 27, WILLIAMSBURG, VA.

NIMA was represented by Mr. Barnhart and the writer who has recently joined as a (non-voting) member. A number of specifications presented by Mr. Barnhart for NIMA covering Magnesia, Amosite, Mineral Fiber, etc., were acted upon by the Committee or Subcommittee depending on the status of the revisions. Other specifications on Methods of Test and Practices for Pipe Fit and Trueness of Squareness of Pipe & Block are being actively worked upon by NIMA T & R members on the various ASTM Subcommittees of C-16. All of these specifications are first reviewed by *NIMA T & R Committee*.

It should be noted that the increase in the number of insulation products made it necessary for ASTM C-16 to confine the scope of Sub S-1 on Pipe & Block Insulations to product specifications only and assign Methods of Test for Pipe & Block Insulations to Committee T-8 on General Standards. ASTM Committee C-16 will continue to be of major importance to NIMA companies and warrants a continuance of individual company representatives on the many Subcommittees.

NIMA T & R COMMITTEE MEETING - SEPTEMBER 22

In this meeting of the combined sections it was decided that any "NIMA Recommended Practice" would be circulated to the T & R Committee for letter ballot before final adoption. Mr. Barnhart was asked to list all

Recommended Practices and send it to the Committee and Board of Directors. NIMA Recommended Practices completed at this meeting that will be sent to the Committee for letter ballot were (1) Method of Calculating Heat Losses (at this meeting the final factor needed was agreed upon namely to use the ASHRAE Guide Data Book heat loss curve for 8" pipe as the basis for an average surface resistance for round and flat surfaces), (2) Definitions Applicable to Thermal Insulation Material (at this meeting a list dated 8/9/61 was discussed and revised and will be sent out for letter ballot).

Other subjects acted upon at this meeting consisted of

(1) Mr. Barnhart reported that GSA had replied to an NIMA inquiry stating that GSA would publish a Federal Standard on Insulation Test Methods if NIMA would write it.

(2) Mr. Ernst reported on the meeting of the Steering Committee on the Economic Thickness Cold Study at West Virginia University. Mr. Barnhart reported that the Board of Directors had appointed a special committee of T & R to determine a common method of presenting the economic thickness table relating to the hot study already published. As previously reported this committee has agreed on the basic factors for a common method.

(3) Mr. Barnhart reviewed the surety bond situation and reported a meeting with the N. Y. State Architect was being considered in the near future - subject is now dead as surety bond is still required.

(4) The "Guide or Criteria for the Preparation of Insulation Specifications" prepared by the Technical Advisor was discussed and comments were requested by November 1, upon receipt of which it was decided that a copy be sent to the various Government Agencies. (this was done at the December 5 Government meeting and the copies also be sent to ASTM Committee on Philosophy of Specifications and to also write a publicity article around thecriteria. Mr. Barnhart is sending copies to the proper parties for these purposes.

REPORT FOR CHAIRMAN HOOPES OF MOLDED SECTION SEPTEMBER 21 MEETING

In reviewing the list of Federal & Military specs for revision or cancellation it was decided members needed more information so that in the future Mr. Barnhart agreed to notify members when the monthly supplement of the Federal & Military Index indicated revisions to an insulation spec. and to indicate on meeting agendas the status of NIMA activity in regard to NIMA recommended changes in specific specifications. It was also agreed any member company working with the Government or ASTM on a new product spec or revision of existing one should advise NIMS so the T & R

Committee's knowledge could be applied toward standardization.

Detailed revisions to be recommended in various specifications were reviewed and referred to members to follow. These included spec HH-I-561c Asbestos Pipe Insulation; MIL-I-0015091B Insulation Felt Thermal Asbestos Fiber; HH-I-551a Insulation Block & Pipe Covering Thermal Cellular Glass and ASTM C-312 Recommended practice for Clearance of Preformed Thermal Pipe Insulation.

Other matters pertaining to ASTM were the consideration of a further revision of proposed table for nesting sizes of tube insulation and further revision of proposed methods for measuring trueness and squareness of pipe and block insulations. These matters and the clearance of pipe insulation were all presented and discussed on September 26 by ASTM Sub-8 and further work is being done on them by that Committee, as previously noted under ASTM Meeting.

Respectfully submitted

R. C. Parlett, Chairman
Technical & Research Committee

ANNUAL REPORT 1961
ROCK & SLAG SECTION
TECHNICAL & RESEARCH COMMITTEE
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y. January 9, 1962

The Rock and Slag Section of the Technical & Research Committee, held three meetings in 1961. These meetings were in conjunction with those of the full committee held March 6, 1961, June 14, 1961 and September 21, 1961.

At each of these three meetings, the Rock and Slag Section met with the Glass Section to review five Federal Specifications with the view of consolidating them into two specifications and to enlarge their scope thru the inclusion of glass fiber materials that are not currently covered by these Federal Specifications. The specifications being reviewed are the following:

HH-I-542. Insulation, Felt, Thermal, Mineral Wool (for Low Temperature).
HH-I-552. Insulation Pipe Covering, Thermal, and Insulation Blanket, Thermal, Pipe Covering.
HH-I-562. Insulation, Thermal, Mineral Wool, Block or Board and Pipe Insulation (Molded Type).
HH-I-563. Insulation, Mineral Wool, Blanket, Felt, and Industrial-Batt (for Heated Surfaces).
HH-I-564. Insulation, Mineral Wool, Block and Board (for Heated Surfaces)

It is proposed that these five specifications be replaced by two specifications bearing the following titles:

Insulation, Thermal, Mineral Fiber (for Elevated Temperatures).

Insulation, Thermal, Mineral Fiber (for Low Temperatures).

As can be seen from these titles, the substitution of "Mineral Fiber" for the previous use of "Mineral Wool" follows the Association policy and enlarges the scope of each specification to include glass fiber materials. The first specification for mineral fiber insulation used at elevated temperatures covers the following forms, types and classes:

Form I - Block or Board - Rigid Materials

Type I - Inorganic - bonded - for use up to 1400 F.
Type II - Organic - Bonded - for use up to 700 F.
Type III - Organic - bonded - for use up to 400 F.

Form II - Blankets and Felts - Flexible and Semi-Rigid Materials

Type I - Metal-Mesh Covered Blankets
Class A - For use up to 1200 F.
Class B - For use up to 1000 F.
Type II - Resilient Flexible Blankets - for use up to 400 F.
Type III - Felt, Semi-Rigid - for use up to 400 F.
Type IV - Industrial Batt, Flexible - for use up to 1000 F.

Form III - Pipe Insulation

Type I - Molded - for use up to 370 F.
Type II - Blanket-Type
Class A - Metal-Mesh Covered - for use up to 1200 F.
Class B - Metal-Mesh Covered - for use up to 1000 F.
Class C - Resilient, Flexible - for use up to 700 F.

The second proposed specification covers the following forms and types:

Form I - Block or Board - Rigid Materials

Type I - Organic Bonded - Load Bearing
Type II - Organic Bonded - Non-load Bearing

Form II - Blankets and Felts - Flexible and Semi-Rigid Materials

Type I - Resilient, Flexible Blankets
Type II - Felt, Semi-Rigid

Form III - Pipe Insulation

Type I - Molded

In each specification appropriate values are given for combustibility, alkalinity, thermal conductivity, temperature of use, density, compressive strength, breaking strength, linear shrinkage, standard sizes, and dimensional tolerances where ever applicable to the specific forms, types or classes. In these proposed specifications, definitions are given for "Rigid Materials, Semi-Rigid Materials and Flexible Materials".

At the present time, the final drafts of these proposed specifications are being revised by members of the Rock and Slag Section and of the Class Section.

In addition to the major undertaking given in detail above, the Rock and Slag Section prepared revisions to ASTM Specifications C-281, Mineral Fiber M lded Type Pipe Insulation, and C-392, Mineral Fiber Block or Board Insulation for Elevated Temperatures. The revisions to these specifications have been presented to ASTM C-16, Committee S-1 for letter ballot.

The members of the Section were given the opportunity to comment upon the proposed revisions to U. S. Department of Commerce, Maritime Administration Specification 32-MA-1b and to comment upon the proposed interim amendment to Federal Specification HH-I-562, Insulation, Thermal, Mineral Wool, Block or Board and Pipe Insulation.

Paul L. Losse, Chairman
Rock & Slag Section
NIMA, Technical & Research Com.

NIMA GLASS SECTION
REPORT FOR MEETING OF JANUARY 9, 1962

There has been one combined Technical Committee meeting since the Directors' meeting of September 11. At this meeting on September 21, the Glass Section in conjunction with the Rock & Slag Section did further work on revisions to Federal and ASTM specifications as reported in the Minutes.

On October 26 the Glass Section met in Chicago for further work on product identification, O.D. pipe insulation, performance, standards for facings, and revisions to MIL-I-22344, MIL-I-742A and MIL-I-22023, as reported in the Minutes.

In addition, and of primary importance, the Glass Section was charged with writing a specification for recommended thicknesses for the use of fibrous glass pipe insulation at low temperatures for presentation to the New York State Engineers.

The committee was able to complete a specification outline and agree on three standard conditions for thicknesses; namely, 90F and 90, 85 and 80% RH. Later in New York, committee members worked through several specification drafts before firming down a draft for presentation to New York State. This draft contained thicknesses based only on 90F and 90% RH as being safe for most of the State's service conditions.

As reported in the Minutes dated December 6, the specification was presented to the State personnel at a meeting in Albany on December 4. We had hoped at this time to present in addition to a letter from Wolff & Munier, Inc., relating the successful use of fibrous glass at low temperatures, a list of jobs compiled by the members. A partial list has since been submitted.

In general, the State group seemed to find the specification acceptable. However, Mr. Cloke, the Chief Mechanical Engineer, N.Y.S.D.P.W., insisted that hydraulic-setting cement fitting insulation be deleted from the specification. He requested that we supply additional thicknesses covering the range from 90F and 90% RH down to 90F and 70% RH. This request was fulfilled by submitting additional thicknesses in this range in 5% RH steps.

As it was not possible in this meeting for the State group to consider the specification in detail, we asked that they submit to us in writing their detailed comments so that we might revise the specification accordingly.

As yet these comments have not been received.

At the Directors' meeting on September 11, it was recommended that the Technical Committee determine a common method of presenting economic thickness tables relating to the elevated temperature manual. A committee of three appointed for this task established three industry categories and a set of basic conditions. However, in testing the conditions by the manual procedure, it was found that there was reason to question the table of B factors. Therefore, this was brought to the attention of West Virginia Univeristy by letter. We are still awaiting a reply.

Since the last meeting of the liasion committee on the low temperature study at West Virginia Univeristy, we have been advised that as soon as cost information has been received then work should resume shortly.

The special committee on Criteria for Prefabricated Duct Systems, Duct Liners and Duct Wrap completed this assignment by September 1 and submitted copies to the principals for consideration. In their letter of submittal the committee asked for direction as to what further action should be taken. To date no replies have been received.

C. E. ERNST

MINUTES
of the
PUBLICITY COMMITTEE MEETING
of the
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y. October 31, 1961

The meeting was held at Sumner Rider & Associates' office in New York, at 10:15 A.M., with the following in attendance:

J. C. Affleck, Chairman	Keasbey & Mattison Co.
Vince McKenna	Johns-Manville Sales Corp.
S. C. Bogar	Baldwin-Ehret-Hill, Inc.
G. R. Medinnus	Owens-Corning Fiberglas Corp.
Sumner Rider	Sumner Rider & Associates
J. Baer	Sumner Rider & Associates
O. Shaftel	Sumner Rider & Associates

Mr. J. M. Barnhart of NIMA was absent due to a death in his family.

The meeting was held to discuss the 1962 budget and activities that should be planned and executed in the months ahead.

1. Projects to be completed in 1961

(a) A letter signed by Pres. F. W. Muller and a single page enclosure describing the Economic Thickness concept and the availability of the NIMA Manual will be mailed in November to 500 top industrial corporation presidents, based on a FORTUNE Magazine list.

(b) A mailing promoting the Economic Thickness Manual will be sent in November to NIMA's mailing list of 11,000 plant engineers and other insulation prospects.

(c) Publicity on the Economic Thickness concept and Manual will be sent to 80 Engineering College magazines to reach student engineers, of long-range benefit. Engineering College professors who teach mechanical engineering and college librarians will be contacted by direct mail to solicit orders for the Economic Thickness Manual. It was recommended industry libraries be contacted by mail also.

2. Projects for 1962

(a) A plan is to be prepared on how we can promote Economic Thickness at regional meetings of the Insulation Distributor-Contractors National Association.

(b) It was agreed that we would strive to further promote Economic Thickness as a means of furthering sales of insulation and obtain as many case history stories as possible for publicizing.

(c) Preliminary planning is to be done for the publication and publicizing of the Economic Thickness Manual for low-temperature insulation when it is ready.

(d) As a substitute for direct mail, we propose to institute a program of providing member companies with reprints of publicity at cost, with suggestions of ways in which they can use such material in direct mail to their customers.

(e) Member companies will be asked for names of interested key persons within their organizations to whom we can distribute reports and samples of NIMA publicity releases.

3. *Re-examination of NIMA "Marketing" Objectives*

In order to plan effective publicity it is necessary for the Association to state its objectives. What, basically, is the Association trying to accomplish collectively, which, in turn will benefit all of its members?

After three years, it's time we took another look at our objectives. Whether they have changed in the light of experience; whether they are being aided or met by publicity. Then we can strengthen our approach to the problem.

Accordingly, we shall prepare a questionnaire and circulate it to NIMA Board members asking questions which will help this Committee and its publicity counsel focus attention on NIMA's present and future objectives, specifically. We hope to air the ideas at the January Meeting.

We plan to design the publicity program around the reaching of specific NIMA "Marketing" objectives.

4. The 1962 Publicity Budget

It was the Committee's consensus of opinion that we would operate on a budget of:

Fee - $21,000.
All Other Expenses - $6,000.
Total - $27,000.

There was a discussion with Sumner Rider on the subject of reducing the fee. Because of rising costs and the number of man-hours devoted to the NIMA account, Sumner could see no way of reducing the fee.

Respectfully submitted

J. C. Affleck

MINUTES
of
TRAFFIC COMMITTEE MEETING

A joint meeting of the Traffic Committees of the National Insulation Manufacturers Association and the National Mineral Wool Association was held at the Belmont Plaza, New York, N. Y., beginning at 9:30 A. M., November 9, 1961. The following were in attendance:

Jules Ermis	Wood Conversion Company
W. D. Brown	Wood Conversion Company
G. A. Crath	Ruberoid Company
A. J. Wallner	Johns-Manville Sales Corp.
L. F. Fronstet	National Gypsum Company
J. J. Horrigan	Owens-Corning Fiberglas Corp.
A. C. Pecora	Pittsburgh Plate Glass Co.
K. L. Sodergren	Gustin-Bacon Mfg. Co.
D. R. Vandermyde	U. S. Gypsum Company
J. M. Barnhart	NIMA
H. B. Reaves, Jr.	Pittsburgh Plate Glass Co.

SUBJECT 1 (NATIONAL CLASSIFICATION BOARD DOCKET 99, SUBJECT 72 AND DOCKET 101, SUBJECT 11

The proposal under Docket 101 supersedes that proposed in Docket 99, and if combined would have the effect of doubling, in some instances, and tripling, in others, the freight rates on many of our products, particularly those products manufactured of mineral wool. It was agreed to make our presentation to the classification board by opposing all aspects of the proposal, particularly any adjustment in the ratings on a density basis.

While making our presentation to the board, it was discovered that the proposal was placed on the docket as a result of complaints from short-haul carriers combined with the fact that some shippers had been describing insulation products on the bills of lading with descriptions subject to a 92-1/2 or 77-1/2 rating that carried a density of approximately 2 pounds. The board agreed to withhold action on this proposal if our shipper group would review these various complaints and arrive at some satisfactory conclusion for appropriate descriptions. The members of our committee in attendance gathered that we successfully opposed this proposal and if any increase is received at all during the coming year it will be directed toward products that should be increased to ratings no higher than Class 125. After the board furnishes their data to us we plan to hold a meeting for an appropriate

discussion and then arrange to meet with the board sometime after that. We doubt that our meeting with the board will occur before next spring.

SUBJECT II (RAIL CLASSIFICATION DOCKET 207, SUBJECT 152):

The rail classification committee proposed density ratings on insulating material, NOIBN, the same as how applicable in the motor classification. The majority of shippers are not affected by this proposal, but it is a copy of the motor classification, and could grow to include other insulating materials that would cause a serious increase in freight charges. Wood Conversion Company was the only company represented that would be affected by this proposal, and we suggested a specific listing of matted wood wool rather than the present description of insulating material, NOIBN. This would satisfy Wood Conversion and the Committee. It also appeared to satisfy the classification group, and we consider our presentation a satisfactory conclusion.

MISCELLANEOUS:

In a discussion at lunch it was felt that each of the companies represented on the committee should invite a representative of their Sales Department when the agenda carries any proposal of national importance. We feel that these representatives will learn a great deal from these meeting and result in a far greater understanding of transportation problems as they affect their respective companies.

Respectfully submitted

H. B. Reaves, Jr.
Chairman, Traffic Committee

MINUTES
of the
MARKETING RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
Washington, D. C. October 3, 1961

The meeting was called to order at 9:15 A. M. with the following in attendance:

J. E. Robarge, Chairman	Owens-Corning Fiberglas Corp.
S. J. Aires	Gustin-Bacon Manufacturing Co.
T. S. Bassett	Johns-Manville Sales Corp.
J. P. Conway	Pittsburgh Plate Glass Co.
H. Gruber	Keasbey & Mattison Company
G. Goll	Keasbey & Mattison Company
R. Loeffler	Pittsburgh Plate Glass Co.
J. M. Barnhart	NIMA

PRODUCT LIST OF TRADE NAMES

The list of product trade names was reviewed by Mr. Aires, and will be completed and distributed at the next Committee meeting.

MARKET END USE

Mr. J. Conway will revise the list in accordance with the discussion that took place and will be presented at the next Committee meeting.

The Committee is of the opinion that statistical reporting should be on this basis once a year.

PRODUCT DEFINITIONS

Mr. Barnhart reported that he will send the Committee of the list of product definitions that had been approved by the T & R Committee.

PHYSICAL UNITS

The Committee is of the opinion that the statistical reports should include physical units on a once a year basis.

JOINT INDUSTRY & GOVERNMENT REPORTING

Messrs. B. D. Kaplan and C. L. Gnam, of the Business and Defense Services Administration, and C. Wildes and K. Willis of the Bureau of Census were introduced to the Committee.

Discussion with representatives of the Bureau of Census revealed that they would be willing, within limitations, to modify the Census of Manufactures reporting forms pertaining to insulating materials.

Mr. B. Kaplan indicated that the Business and Defense Services Administration could make surveys for the industry at a cost dependent upon the scope of the project.

* * * * * *

A letter will be written to the Bureau of Census and the Business and Defense Services Administration outlining NIMA's thoughts with regard to modification of the Census of Manufactures Reports and the types of construction statistics program that might be desirable.

OTHER BUSINESS

It was agreed that the next meeting of the Committee will be on November 14, 1961 in New York, N. Y.

Included on the Agenda for the meeting will be:

1. Presentations for the NIMA January Meeting. Each Committee member is to prepare a presentation on the assignments they have been working on throughout the year.

2. Economic outlook for 1962. Each Committee member is to prepare such a report for collation at the meeting.

ADJOURNMENT

There being no further business, the meeting was adjourned.

Respectfully submitted

F. M. Barnhart

MINUTES
of the
MARKETING RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y. November 28, 1961

The meeting was called to order at 9:30 A. M. with the following in attendance:

J. E. Robarge, Chairman	Owens-Corning Fiberglas Corp.
J. P. Conway	Pittsburgh Plate Glass Company
H. Gruher	Keasbey & Mattison Company
J. M. Barnhart	NIMA

PRODUCT LIST OF TRADE NAMES

The list of product trade names has been completed and the NIMA office will make enough copies for distribution at the January 9, 1962 meeting.

MARKET END USE

The list of market end uses has been completed and is attached hereto.

The following assignments were made to prepare forecasts:

Process Industries
H. Gruher, Chairman
T. S. Bassett
J. P. Conway

Central Power Stations & Substations
S. J. Aires, Chairman
R. F. Goeke
J. E. Robarge

This assignment is to be completed by December 31, 1961.

PRODUCT DEFINITIONS

The list of product definitions has been completed and is attached hereto.

PHYSICAL UNITS

The list of physical units has been completed and is attached hereto.

ECONOMIC OUTLOOK FOR 1962

It was voted to eliminate this project at the present time, and reports for subsequent years will be worked on when related projects are completed.

ADJOURNMENT

There being no further business, the meeting was adjourned.

Respectfully submitted

J. M. Barnhart

11/28/61

NATIONAL INSULATION MANUFACTURERS ASSOCIATION

END USE MARKET CLASSIFICATIONS
FOR THERMAL INSULATING MATERIALS

1. Construction

(a) Manufacturing (including power plants, warehouses and appurtenant structures located on manufacturing sites) Primary Ferrous Metal Industries - Primary Non-Ferrous Metal Industires - Fabricated Metal Product Machinery - Equipment - Supplies - Lumber and Wood Working - Ordnance and Accessories - Other Mechanical Industry Buildings - Industrial Service Buildings - Precision Goods - Other Miscellaneous Mfg. Building - Rubber Products - Textile Products - Leather and Leather Products.

(b) Central Power Stations and Substations (excluding those attached to manufacturing) where insulation is applied at the site for apparatus used to generate power.

(c) Process Industries where site-applied insulation for hot or cold apparatus used directly in the manufacture and processing of goods to produce liquids, solids, hot or cold air, gas or steam and to transfer the same from point of origin to point of storage, sale or consumption. Includes: Chemical and Allied Products - Food and Kindred Products - Paper and Allied Products - Refineries - Other Process Industry Buildings.

(d) Cold Storage - as reported by F. W. Dodge Corporation. (excludes warehouses owned by manufacturing companies, if warehouse is on the site.)

(e) Commercial Buildings including Stores, Offices, Banks, Commercial Garages, Transportation Terminal Buildings, Hotels, Motels, Theaters and Amusement, Telephone, Telegraph, Radio and Television Stations, Public Administration, Post Office and Miscellaneous Public Buildings.

(f) Institutional Buildings includes Schools, Prisons, Hopsitals, Religious.

(g) Multiple Dwellings including Apartments, Dormitories, Barracks and Other Shelter.

(h) Other Construction including missile bases, navy yards, hangers and other.

II. Transportation

Where insulation products are used for preservation of the cargo or personal comfort and safety of passengers.

(a) Automotive
(b) Truck Trailer
(c) Railroad
(d) Marine
(e) Aircraft & Missiles
(f) Other

III. Manufactured Products

Products or equipment where the insulation is installed in the manufacturer's plant as an integral part of the product or equipment.

(a) Domestic Appliances or Equipment such as refrigerators, freezers, ranges, hot water heaters, furnaces, boilers, air conditioners, roasters, incinerators, etc., commonly used in the home.

(b) Commercial and Industrial Equipment is interpreted to include food display cases, ice cream freezer units, laundry presses, industrial dryers, heat treated ovens, boilers, furnaces, dairy sterilizers, etc., used in commercial or industrial establishments.

(c) Buildings including homes, commercial and industrial buildings which are insulated at the manufacturer's plant; such as curtain wall manufacturers, movable interior partitions, mobile homes, sandwich panel manufacturers, aluminum side manufacturers.

IV. Export

Insulation products for shipment outside the United States. (except exclusions noted below)

V. Other

NOTE - Exclusions

members will not report sale of insulation products for use in:

1. Building (home) insulation
2. Acoustical Insulation (including batts for metal pan and baffles)

Inclusions

Where end-use markets overlap, the major end use will rule; such as:

1. Plant and job site combined.
2. Maintenance and new construction combined.
3. Construction includes appurtenant buildings such as warehouse, power plants, etc.

11/28/61

NIMA
STATISTICAL REPORTING & PHYSICAL UNITS

PRODUCT GROUP A

(a) Pipe - Linear Feet
Up thru 3" d - IPS
Over 3" d thru 8" d - IPS
Over 8" d - IPS

(a) Block & Lagging - Board Feet

(c) Cement - pounds

PRODUCT GROUP B

(a) Loose & Granulated - Pounds

(b) Blocks & Boards - Board Feet

(c) Pipe - Linear Feet
Up thru 1-1/2" d - IPS
Over 1-1/2" d thru 3" d - IPS
Over 3" d thru 8" d - IPS
Over 8" d - IPS

(d) Cement - Pounds

(e) Blankets (flexible) - Pounds
Under 1 pcf
1 pcf to, but not including 2 pcf
2 pcf and over

(f) Metal-Reinforced Blankets - Pounds

(g) Felt - Pounds
4-1/4 pcf and under
Over 4-1/4 pcf

MINUTES
of the
TECHNICAL & RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y. September 22, 1961

The meeting was called to order at 9:30 with the following in attendance:

H. P. Hoopes, Chairman	Fibreboard Paper Products Corp.
W. Acker	Johns-Manville Sales Corp.
L. L. Collogne	Mundet Cork Corp.
D. Davis	The Ruberoid Company
C. Ernst	Johns-Manville Sales Corp.
W. Guhar	Gustin-Bacon Mfg. Company
P. L. Losse	The Eagle-Picher Company
R. F. McKee	Baldwin-Ehret-Hill, Inc.
V. L. Miller	Pittsburgh Corning Corp.
E. Ott	Keasbey & Mattison Company
K. M. Ritchie	Baldwin-Ehret-Hill, Inc.
R. L. Schneider	Owens-Corning Fiberglas Corp.
W. R. Seipt	Keasbey & Mattison Company
W. P. Sinclair	Union Asbestos & Rubber Company
R. C. Parlett	NIMA
J. M. Barnhart	NIMA

BASIS OF CALCULATING HEAT LOSSES

Previously, the Committee has agreed to the following pertaining to calculating heat losses:

1. Heat loss calculations should be based on an 80 F still air ambient temperature.

2. r_1 = outside radius of steel pipe according to standard pipe manufacturer's table.

3. $r_2 - r_1 = x$; where x is the insulation thickness as taken from MIL-I-2781C (Insulation Pipe Covering, Thermal).

Following discussion the Committee agreed that the heat loss curve that appears in the ASHRAE "Guide and Data Book" for 8 inch round pipe shall be used as a basis for determining the average surface resistances

BASES 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

* * * * *

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

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 know, 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-00150091B, 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

MINUTES
of the
TECHNICAL & RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y. September 21, 1961

Rock & Slag Section Glass Section

The meeting was called to order at 9:30 A. M. with the following in attendance:

C. E. Ernst, Chairman	Johns-Manville Sales Corp.
W. Anderson	Owens-Corning Fiberglas Corp.
W. Gubar	Gustin-Bacon Mfg. Company
P. L. Losse	The Eagle-Picher Company
K. M. Ritchie	Baldwin-Ehret-Hill, Inc.
J. M. Barnhart	NIMA

REVISIONS TO FEDERAL SPECIFICATIONS

The elevated temperature specification and low temperature specification were reviewed and will be revised in accordance with the comments received during discussion. The revised specifications will be circulated to the committee for comment.

REVISIONS TO ASTM SPECIFICATIONS

1. ASTM C 261 (Mineral Fiber Molded-Type Pipe Insulation) - This specification was reviewed and will be presented with revisions to ASTM C-16 Subcommittee S-I for letter ballot.

2. ASTM C 392 (Mineral Fiber Block or Board Insulation for Elevated Temperatures) - This specification was reviewed and will be presented to ASTM C-16, Subcommittee S-I for letter ballot.

OTHER BUSINESS

The Glass Section will hold a meeting in Chicago sometime in October in order to complete various items on their agenda.

ADJOURNMENT

There being no further business, the meeting was adjourned.

Respectfully submitted

J. M. Barnhart

MINUTES
of the
TECHNICAL & RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
Chicago, Ill. October 26, 1961

Glass Section

The meeting was called to order at 9:00 A. M. with the following in attendance:

C. E. Ernst, Chairman	Johns-Manville Sales Corp.
W. Gubar	Gustin-Bacon Mfg. Company
M. W. Keyes	Pittsburgh Plate Glass Co.
R. L. Schneider	Owens-Corning Fiberglas Corp.
J. M. Barnhart	NIMA

USE OF FIBROUS GLASS AT LOW TEMPERATURES

The Committee discussed and wrote in outline form a specification for the application of fibrous glass insulation at low temperatures.

Thickness recommendations were discussed and the following standard conditions were agreed upon:

1. 90 F & 90% R. H.
   90 F & 85% R. H.
   90 F & 80% R. H.

2. Surface resistance - $0.65 \frac{\text{Btu/sq ft/hr}}{\Delta T}$

3. "k" values - 0.20 at 25 F
   0.21 at 50 F
   0.22 at 75 F
   0.23 at 100 F
   0.29 at 200 F

Thickness tables, using the standard conditions, will be prepared and sent to the NIMA office not later than November 3, 1961, for correlation.

With regard to the NIMA test project that the glass manufacturers will underwrite to establish the practicability of the use of fibrous glass insulations on New York State jobs, the Committee recommends the following:

1. The total cost of the project is not to exceed $6,000, including the cost of removing the insulation that is now on the job.

2. The application of the insulation is to be as per the Committee's recommendations (industry specification).

3. Since Owens-Corning is to provide the insulation and inspection for the job, Owens-Corning shall choose the contractor.

4. The contractor shall submit a quotation on "cost plus not to exceed basis" for performing the work prior to starting the project.

5. Low density one-piece fibrous glass pipe insulation (approximately 3-1/2 pcf) shall be used on the project.

For presentation to New York State, in addition to the industry specification, each manufacturer is to prepare a list of low temperature jobs that have been completed within the last three years and are performing in a satisfactory manner.

Mr. Barnhart is to attempt to obtain a list of other jobs from engineers that have successfully used fibrous glass on low temperature applications.

PRODUCT IDENTIFICATION

The Committee agreed that the following is to be established to identify flexible blanket insulations:

1. 3 slash lines - 1/2 pcf to, but not including 3/4 pcf material, nominal density

   2 slash lines - 3/4 pcf to, but not including 1 pcf material, nominal density.

   1 slash line - 1 pcf to, but not including 1-1/4 pcf material, nominal density.

2. The series of slash lines (on the diagonal) shall be placed every three feet along the length of the blanket and shall be placed 24" apart along the width of the blanket (i.e. on the 12", 36" and 60" mark on a 72" width blanket). Both sides of the blanket shall be marked.

PRODUCT IDENTIFICATION (cont'd.)

3. The fine fibered material shall be identified by marking in a blue color.

The textile fibered material shall be identified by marking in a green color.

O D's OF FIBROUS GLASS PIPE INSULATION

The Table, dated 7/7/61, was discussed and will be sent to the Committee for approval by letter ballot.

PERFORMANCE STANDARDS FOR FACINGS

This standard has not as yet been completed but will be discussed at the next meeting.

REVISIONS TO MILITARY SPECIFICATIONS

Revisions to MIL-I-22344, MIL-I-742A and MIL-I-22023 were discussed and changes to the drafts were made. The revised drafts will be circulated at the Committee for perusal.

A round robin testing program was agreed upon in order to calibrate the Micronaire instrument used for determining fiber diameter. Mr. Gubar will send approximately 10 grams of known diameter material to each Committee member for this purpose.

DUCT LINER SPECIFICATION

Mr. Ernst will send a preliminary draft of the proposed specification to the Committee members for perusal.

ADJOURNMENT

There being no further business, the meeting was adjourned.

Respectfully submitted

J. M. Barnhart

MEETING
of the
SPECIAL COMMITTEE ON FIBROUS GLASS PRODUCTS
of the
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
New York, N. Y. October 17, 1961

The meeting was called to order at 9:30 A. M. with the following in attendance:

F. W. Muller, Chairman	Gustin-Bacon Mfg. Company
M. W. Burleson	Johns-Manville Sales Corp.
C. E. Ernst	Johns-Manville Sales Corp.
M. W. Keyes	Pittsburgh Plate Glass Company
R. A. McLaughlin	Pittsburgh Plate Glass Company
R. L. Schneider	Owens-Corning Fiberglas Corp.
John Vyverberg	Owens-Corning Fiberglas Corp.
J. M. Barnhart	NIMA

The purpose of the meeting was to discuss the use of fibrous glass products at low temperatures, the New York State Standard Specification relating to insulating products at low temperatures and the New York State Surety Bond.

SURETY BOND

The surety bond that is in effect in New York State on work wherein thermal insulating materials are specified was disucussed. It was deemed that the surety bond was an indictment of the contractors and thermal insulating products. It was agreed that NIMA should oppose this action by the State and attempts should be made, through meetings with the State Architect, to alleviate the situation.

STATE ARCHITECT'S STANDARD SPECIFICATION

It is understood that New York State is attempting to oppose the use of fibrous glass products for use at temperatures below 34 F, due to several job failures that have occurred. It has been shown that the failures cited were due to improper workmanship and failure to specify and apply the vapor barrier properly, and that improper thicknesses of the product were specified or applied.

STATE ARCHITECT'S STANDARD SPECIFICATION (cont'd.)

The Glass Section of the NIMA Technical & Research Committee is scheduled to meet in Chicago, Ill., on October 26, 1961, and this subject will be placed on the Agenda for the meeting including the following items:

1. Use of fibrous glass products at low temperatures (including proper application procedures and the use of proper vapor barriers).

2. Thickness of fibrous glass products to prevent condensation at ambient conditions of 90 F and 90% R.H.

3. Prepare for presentation to the New York State Architect a positive recommendation of the industry wherein the use of fibrous glass can be shown to perform satisfactory at low temperatures (including thicknesses, proper application and use of vapor barriers).

It was agreed that NIMA would attempt to sponsor a test project on a State job for the purpose of demonstrating that the use of fibrous glass products at low temperatures is successful, providing proper workmanship and application procedures are followed. The cost of the project is to be borne by the fibrous glass manufacturers.

OTHER BUSINESS

A joint glass industry advertising program relating to prefabricated duct systems and other products was agreed to be a beneficial project and will be explored further with the NIMA Executive Committee.

ADJOURNMENT

There being no further business, the meeting was adjourned.

Respectfully submitted

J. M. Barnhart

Present at an informal meeting between representatives of NIMA and the New York State Department of Public Works to discuss the use of fibrous glass insulation at low temperatures were the following:

D. Cloke - Chief Mechanical Engineer
J. V. Borst - Asst. Mechanical Const. Engineer
E. W. Grennon, Sr., - Mechanical Specification Writer
F. S. Hungerford - Division of Architecture
J. J. Burke - Division of Architecture
V. A. Marino, Jr. - Division of Architecture
C. Hamlin, Jr. - Division of Architecture
L. J. Hannon, Jr. - Division of Architecture
C. F. Murphy - NYSDPW
A. M. Buff - NYSDPW
M. J. Brennan - NYSDPW
A. Petrochi - NYSDPW
Herb Jones - Rome State School Chief Engineer
P. J. Ryan - Willard State Hospital Chief Engineer
J. Vyverberg -- Owens-Corning Fiberglas Corp.
E. J. Rayner - Owens-Corning Fiberglas Corp.
R. L. Schneider - Owens-Corning Fiberglas Corp.
J. M. Barnhart - NIMA

SURETY BOND

Mr. D. Cloke stated that the surety bond now in effect in New York State on jobs wherein thermal insulating materials are specified would not under any circumstances be dropped. The bond would retain the 5 year clause, although it was intimated that perhaps the bond period may be relaxed to a 3 year period sometime in the future. Consideration would not be given to including an arbitration clause into the surety bond clause.

It was pointed out that the surety bond clause is presently being written as an addendum to job specifications.

USE OF FIBROUS GLASS AT LOW TEMPERATURES

Mr. D. Cloke was asked whether any temperature limitations were placed on the use of fibrous glass insulations, and he replied that fibrous glass would not be considered for use below 34 F. Mr. A. Petrochi stated that fibrous glass was ruled out of use on refrigeration jobs below 34 F and also including domestic cold water and mechanically chilled water lines.

NEW YORK STATE ARCHITECT'S STANDARD SPECIFICATIONS

Mr. J. M. Barnhart stated that the NIMA Technical & Research Committee (Glass Section) was scheduled to meet in Chicago, Ill., on October 26, 1961, and included on the Agenda will be to write an industry recommended practice on the use, application, workmanship, thicknesses, etc., of fibrous glass at low temperatures. Those present stated that they would welcome such a document. The document will be presented to Mr. D. Cloke when completed.

It was then explained to those present that NIMA would, in order to demonstrate the practicability of the use of fibrous glass at low temperatures, sponsor a test project on a State job that failed. The cost would be borne by NIMA. The Willard State Hospital, in the Rochester area, was picked by Mr. D. Cloke as the test project site. Mr. Barnhart was asked to write to Mr. Cloke outlining in detail the scope of the work NIMA was willing to do.

* * * * * *

The State representatives present agreed, that fibrous glass per se was a good product, from a technical viewpoint. We heard no one imply that it was not. There were however, comments of a negative nature pertaining to the application of the product, i.e. it was a "prima donna" product and required specification application techniques, the contractor didn't like to use the product, the applicator didn't like to get his hands dirty applying the gunk, etc., all in my opinion, nitpicking. It was generally admitted that the fault was with the contractor and the fact the State could not inspect each job adequately inasmuch as there were not enough inspectors to do so.

The basic problem can be condensed to the contractor, application and workmanship.

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Several suggestions were made to NIMA to consider at the meeting in Chicago, Ill., namely, the manufacture of a higher density product now being used, the vapor barrier should be one of higher mechanical strength, a recommendation relative to sealing joints.

Respectfully submitted

J. M. Barnhart

December 6, 1961

TO THE BOARD OF DIRECTORS

A meeting was held in Albany, New York, on December 4, 1961, for the purpose of discussing the test project at the Willard State Hospital that NIMA has undertaken with the State of New York. This project had been suggested to demonstrate the practicability of the use of fibrous glas thermal insulation at low temperatures and will be underwritten by the fibrous glass manufacturers.

The following were present at the meeting:

D. Cloke	Chief Mechanical Engineer, NYSDPW
A. Petrechi	NYSDPW
J. Herbek	NYSDPW
P. Dwyer	NYSDPW
R. L. Schneider	NIMA Technical Committee
C. E. Ernst	NIMA Technical Committee
J. M. Barnhart	NIMA

USE OF FIBROUS GLASS AT LOW TEMPERATURES

Mr. D. Cloke was asked to clarify the current specification as to the use of fibrous glass on New York State jobs and he stated that the product, at the present time, is being specified for use only on cold water piping. It has been barred for any other use.

Mr. Cloke was also asked whether he would be receptive to the idea of NIMA holding a seminar for New York State inspectors on the subject of thermal insulation for cold use. He stated that many of these had been held, however, he thought that this type of project could be of benefit and was in favor of it.

PRESENTATION

NIMA presented to Mr. Cloke a specification entitled "NIMA Recommended Specification for Application of Fibrous Glass Pipe Insulation at Low Temperatures (New York State)". It was brought to the attention of those present that the specification was for use for the Willard State Hospital test project only, and that at a later date when certain testing projects had been completed (perm ratings on mastics and jackets) the specification could, if they desired, be used for New York State-wide use.

The specification, it was pointed out, does not differ materially from the New York State specification now in use. Following discussion Mr. Cloke asked that NIMA provide him with thickness recommendations for the conditions of 90F, 80% R.H. and 90F, 70% R.H. as he would like to compare them with the NIMA recommendations of 90 F, 90% R.H. that appear in the specification. (It is believed that the State will accept a compromise thickness recommendation for their specifications somewhere between the 90F, 70% R.H. now in their specs and 90 F, 90% R.H. that NIMA has recommended. The possibility exists that a range of dry bulb temperatures and relative humidities with corresponding thicknesses will be written into the New York State specifications).

At Mr. Cloke's insistence the hydraulic-setting cement fitting insulation will be deleted from the specification inasmuch as he thought that the contractors would not allow the cement to dry before applying the lagging adhesive or vapor barrier mastic over the cement.

A letter from Wolff & Munier, Inc., was shown to Mr. Cloke relating the successful use of fibrous glass pipe insulation at low temperatures.

The list of jobs will be sent to the NYSDPW at a later date.

The specification is to be revised incorporating the removal of the hydraulic-setting cement fitting insulation and the inclusion of thickness recommendations at 90F, 80% R.H. and 90F, 70% R.H.

After discussion of the test project at the Willard State Hospital, the following was ascertained:

1. The NYSDPW will let NIMA know when the job is to be started. They indicated sometime after the first of the year.

2. The NYSDPW would like a detailed report as to the progress of the work.

3. NIMA is to be responsible for the inspection of the work, as well as a representative of the company whose materials are to be used on the job.

4. The NYSDPW will review in detail the specification NIMA submitted and let us know of any comments they have.

Mr. Cloke was asked what length of time after the test project was completed would be necessary to determine that fibrous glass would be written back into the State specifications. He replied that it would be a minimum of 6 months to one year.

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Several times during the meeting it was reiterated by the NYSDPW that fibrous glass was a good product, but that the manufacturers had no control over the insulation contractor, and therefore application techniques that are recommended by the manufacturer are being abused by the contractor.

It seemed that the atmosphere with the NYSDPW was more cordial and they seemed to be receptive to suggestions and ideas. It is believed that the fibrous glass materials have a very good change of being written back into the New York State Specifications.

Respectfully submitted

J. M. Barnhart

cc: Mr. R. C. Parlett
Glass Section, T & R Committee

MINUTES
of the
GOVERNMENT TECHNICAL & RESEARCH COMMITTEE MEETING
NATIONAL INSULATION MANUFACTURERS ASSOCIATION
Washington, D. C. December 5, 1961

The meeting was called to order at 10:00 A. M. with the following in attendance:

R. C. Parlett, Chairman	NIMA
W. E. Miller	Pittsburgh Corning Corp.
Burt Tower	Johns-Manville Sales Corp.
R. L. Strickland	Gustin-Bacon Mfg. Company
K. M. Ritchie	Baldwin-Ehret-Hill, Inc.
S. K. Heard	Owens-Corning Fiberglas Corp.
P. L. Losse	The Eagle-Picher Company
George Goll	Keasbey & Mattison Co.
C. E. Ernst	Johns-Manville Sales Corp.
W. P. Sinclair	Union Asbestos & Rubber Co.
J. A. Goodrich	The Eagle-Picher Company
A. Kincaid	Owens-Corning Fiberglas Corp.
J. M. Barnhart	NIMA
E. L. Broggini	Office of Chief of Engineers
A. L. Graul	Bureau of Yards & Docks
W. T. Thomasson	General Services Administration
J. H. Chilcote	Bureau of Ships
R. P. Seith	Bureau of Ships
M. D. Roderick	Bureau of Ships
J. W. Ford	Coast Guard
W. M. Lawall	Coast Guard
A. Farinacci	Maritime Administration
F. J. Powell	Bureau of Standards
R. E. Foote	Maritime Administration
C. F. Kuhne	Maritime Administration
A. M. LeCompte	Maritime Administration
L. P. Clark	Building Research Advisory Board
N. Levy	Public Housing Administration
S. Cole	Bureau of Standards
W. Y. Loux	General Services Administration
J. S. King	Veterans Administration

Ray parlett reviewed purpose of NIMA, that being to report on activities of NIMA Technical & Research Committee "Guide or Criteria for the Preparation of Thermal Insulation Specifications", published by NIMA was distributed to all those in attendance for consideration and discussion at this meeting.

Existing thermal insulation specifications were grouped in four classifications, namely:

1. "Material" specifications
2. "Test Methods for Properties of Materials" specifications
3. "Project" specifications
4. "Guide" specifications

Each classification was defined and discussed in detail. Comments were invited during the presentation.

Topics of discussion and classification concerned were as follows:

I. Material

1. Why the contradicting information regarding permeance? Such as "Volume by weight" and/or "% by volume". Why not consistent and uniform means of stati ng all properties?

2. Why not a chart indicating effect of moisture on "C" of each insulation material?

3. Why such broad terms as "Semi-rigid"?

II. Test Methods

1. Why cant test methods for particular physical properties be standardized to a greater degree?

2. Bureau of Standards method of testing for effect of moisture on efficiency of insulation was discussed.

III. "Project Specifications"

1. The necessity of uniformity in definitions of all phases in this classification of specifications.

2. It was again reported that NIMA is working on a "Glossary of Terms".

IV. "Guide Specifications"

1. Why the variance in Government agency guide specifications for same materials on like applications?

V. Subjects of general nature discussed:

1. BRAB preparing report on physical properties and technical characteristics of insulation materials.
2. Why doesn't NIMA participate on cold side?
3. Would it be advisable to incorporate Military and Federal specs.
4. Discussion of progress regarding Index to ASTM specifcations for industrial insulation.
5. It was suggested that this topic should be discussed at next meeting, "Fire & Smoke Properties of Insulation and/or Finish".

There being no further business the meeting was adjourned.

Respectfully submitted

Wallace E. Miller