

TECHNICAL & RESEARCH COMMITTEE REPORT

Since the fall meeting report the activities of this committee have covered the following:

ASTM C-16 Committee Meeting, September 28 - 30 at Pocono Manor, Pa. Material specifications prepared by NIMA T & R Committee were discussed and acted upon as follows: Approved by final letter ballot of C-16 were specifications on (1) Calcium Silicate Block, (2) Calcium Silicate Pipe Insulation, (3) Mineral Wool Block & Board for Low Temperatures, (4) Mineral Wool Hydraulic Setting Cement, (5) Magnesia Cement and (6) Diatomaceous Cement. Other NIMA prepared specifications were approved by subcommittees and sent to C-16 for final letter ballot action included (1) Mineral Wool Blanket & Felt for Low Temperatures, (2) Mineral Wool Blanket & Felt for High Temperatures (3) Mineral Wool Insulating Cement, (4) Asbestos Insulating Cement. A specification on Low Temperature Molded Mineral Wool Pipe Insulation was sent to subcommittee S-I for vote. A proposed first draft of specification on Expanded Polystrene Block was distributed to S-1 members. Specifications covering Methods of Test for Breaking Strength of Pipe Insulation, Drop and Impact Tests for Blocks, Corrosion of Steel by Wet Cement, and Sampling and Mixing Insulating Cement, are in various stages of consideration by sub-committees.

Sub-committee S-VIII on General Standards of Insulation has requested that standards or a recommended practice be established on insulation dimensions such as O. D. of pipe insulation for nesting purposes, also that squareness of ends and joints in mating pipe insulation sections and squareness of blocks be established. These properties are now being studied by the T & R Committee for this purpose.

T & R Committee Meetings were held in New York, October 27 Rock & Slag Section, October 28 Molded Section and October 29 glass Section. Detailed reports for each section will be given later by the respective chairmen. Further action on some projects common to all three sections would include the following - The Special Committee on Thermal Conductivity Calibration composed of the three T & R Section chairmen is working up a preliminary plan for these tests subject to modification when it is submitted to the participating laboratories.

National Bureau of Standards New Conductivity Test Apparatus - Mr. Barnhart wrote Henry Robinson o f the Bureau on November 12 asking whether there was any way in which NIMA could assist in furthering the work on this apparatus. He learned that Henry Robinson is on a 6 months leave of absence for his health which would seem to delay any action.

ASHRAE GUIDE - Chapter 32 - Table of Conductivities - Each of the three sections of T & R Committee have made recommendations for revisions of their class materials and Mr. Barnhart has received approval by questionnaires on about 90% of the 40 different materials and forms listed. The other materials are being held up until some members have made further tests. However, Mr. Barnhart has found that the revision will not be required for the next ASHRAE meeting which will allow further time to complete this work.

Explanatory Note to Accompany Heat Loss & Surface Temperature Tables - This note explaining the fallacy of surface temperatures, etc., was approved in general by the T & R Committee members. Two suggested additions, one explaining the need for surface temperature determinations where condensation may occur on low temperature insulations and the need for heat transfer coefficients in determining temperature drop in flues, ducts, etc., will be considered at the next T & R Meetings.

Corps of Engineers Spec & Test Requirements for Underground Conduits - Mr. Barnhart wrote to the Corps of Engineers on November 18 asking them to hold up the final draft of this specification until members had an opportunity to study it as there had been complaints from both insulation manufacturers and contractors regarding the specification particularly in the number of tests required at outside laboratories. The industry's comments on this specification is awaiting replies from the Association's members before it can be again discussed in Committee.

ASME Annual Meeting November 30 - December 4 at Atlantic City, N. J. - Mr. Parlett represented the Association. Several papers involving insulation of direct interest to NIMA members were heard, and copies are being secured for Association members. One of these papers was on the design and construction of Freeport Sulphur's 35,000 foot calcium silicate insulated under-water sulphur line. A large number of papers were presented on recent advances in boiler and power plant equipment design. Indicating advances in steam pressure and temperature were several papers on the research, design and testing of the 5,000 psi 1,200 F plant of the Philadelphia Electric Company.

ASHRAE New York Chapter Meeting - October 27 Talk by R. R. Voorhees of the Armstrong Cork Company on "Insulating With Plastics". This talk, illustrated with slides, reviewed a number of case histories where low temperature insulation of various kinds had apparently failed to prevent condensation due to incorrect design on the part of architects or engineers, because of placing of equipment design of structure, etc. Armstrong have had built for them according to their research's design a recording physchometer which they place in typical plants and buildings to gather continuous data on variations in temperature and humidity of spaces to be used as

a basis for future design of low temperature installations. At some future date when this data is assembled they will probably report it for general use. This appears to be an ambiticus and expensive program of field testing. After the technical talk, they presented Armaflex plastic tube insulation.

Data For Publicity Articles, Etc. - Messrs. Barnhart and Parlett had several conferences with Messrs. Baer and Shaftel in which technical information was furnished for future articles. Three articles for MILL & FACTORY, POWER and one on Time-Life Building were reviewed and suggestions offered. The article on the Pitfalls of Surface Temperature in Determining Insulation Thickness was the result of discussion in the last T & R Committee meeting in which the prevalence of surface temperature usage was shown by specifications of a large utility in which thicknesses were based on surface temperature rather than economics. Mr. Baer suggested the article be written. Since the Fall Meeting Mr. Barnhart assisted by Mr. Parlett have answered a number of technical inquiries received by the Association from consumers.

Respectfully submitted

R. C. Parlett, Chairman