



insulation newsletter

PUBLISHED BY NATIONAL INSULATION MANUFACTURERS ASSOCIATION, INC



441 Lexington Ave., New York, N.Y. 10017 / Executive Secretary: J. M. Barnhart

August, 1968

Vol. 3, No. 2



Participants who attended the latest regional Health Safety program pose on the lawn of the Public House, Sturbridge, Mass. The program, sponsored by the NIMA Education and Legislation Committee, was attended by members of the North Eastern Insulation Contractors Association and the New York State Insulation Association. T. R. Brodie was Health and Safety chairman for NICA; E. L. Kline represented NYICA.

Health Safety Practices Listed In Two New NIMA Booklets

Two pocket-sized booklets covering recommended health safety practices for handling thermal insulation products have been issued by NIMA. The booklets are intended for use by contractors, applicators and distributors' supervisory personnel.

The contents of *Recommended Health Safety Practices for Handling and Applying Thermal Insulation Products Containing Asbestos* are:

- Housekeeping
- Pipe and Block Insulation
- Cements
- Spraying of Thermal Insulation
- Stripping of Thermal Insulation
- Respiratory Equipment

The contents of *Recommended Health Safety Practices for Handling and Applying Thermal Insulation Products Containing Mineral Fibers* are:

- Housekeeping
- Physical Contact with Mineral Fibers
- Exposure to Excessive Mineral Fiber Dusts
- Respiratory Equipment

For copies of either booklet, write to:
Executive Secretary
National Insulation Manufacturers Association
441 Lexington Avenue
New York, New York 10017

Contractor Enthusiasm Prompts Second Round Of Regional Meetings on Health and Safety

The Health Safety programs presented last year to the eight regional associations of insulation contractors by the NIMA Education and Legislation Committee proved so valuable the contractor groups enthusiastically asked for repeat performances this year.

The Education and Legislation Committee, together with T. R. Brodie, vice president of Insulation Distributor Contractors National Association, already has appeared before five regional associations this year. It is scheduled to meet with the remaining three groups in the fall.

Intended to serve as a forum for the presentation of factual information on health, safety, legislation, workmen's compensation and other subjects, the Health Safety program follows a prescribed format at each meeting. Highlights of the program are:

- Contractors are advised of the current status of health and safety activities pertinent to their business.
- Legislative action is discussed with particular emphasis on details of the proposed Federal Occupational Health and Safety Act of 1968.
- Contractors are given copies of two booklets recently issued by NIMA: "Recommended Health Safety Practices for Handling and Applying Thermal Insulation Products Containing Asbestos" and "Recommended Health Safety Practices for Handling and Applying Thermal Insulation Products Containing Mineral Fibers." The contents of both booklets are reviewed.
- The merits of proposed pre-employment and periodic physical examination programs on a cooperative employer-employee basis are discussed.
- There is a discussion of litigation including preparation of a workmen's compensation case, record keeping and disposition of a case.
- Two papers concerning medical research information are distributed and discussed. One paper relates to asbestos and the other to mineral fibers.
- T. R. Brodie, of IDCNA, explains to each regional group why it is important that the activities of IDCNA and NIMA be coordinated through effective communications at the regional as well as at the national level. He urges those regions that have not already done so to establish their own regional Health and Safety Committee.
- The meetings close with a question and answer period. According to those who have attended several sessions, contractor interest has been so intense that this final session usually takes considerably more time than any other.

The Health Safety program was prepared for NIMA by Cliff Sheckler, John Vyverberg, Harry Meier and Ed Edwards, members of the Education and Legislation Committee, and Jack Barnhart, executive secretary.

Seven Presentations For Eight Regions

By request, NIMA's Health Safety program is being repeated at the meetings of all eight regional insulation contractors. This is the schedule of 1968 meetings already held and still pending:

Midwest Insulation Contractors Association, Kansas City, Mo., May 8.

Presiding: C. C. Johnson

Health & Safety Chairman: R. Plugge

Central States Insulation Contractors Association, French Lick, Ind., May 16.

Presiding: D. Huffman

Health Safety Chairman: Gordon Harrison

South West Insulation Contractors Association, Biloxi, Miss., May 23.

Presiding: C. E. Foster

Health & Safety Chairman: J. Chambers

Northeastern Insulation Contractors Association and New York State Insulation Contractors Association, joint meeting, Sturbridge, Mass., June 5.

Presiding: NICA: W. B. Wilkes

Health & Safety Chairman: T. R. Brodie

Presiding, NYSICA: D. Dederick

Health & Safety Chairman: B. L. Kime

Associated Asbestos Contractors of the Southeastern States, Waynesville, N. C., October 21-22.

Presiding: G. W. Vogt, Jr.

Health & Safety Chairman: R. T. Dean

Associated Insulation Contractors of the Western States, Lake Tahoe, Calif., October 23-25.

Presiding: D. Bradshaw

Health & Safety Chairman:

K. M. McCaffrey

Middle Atlantic Insulation Contractors Association, Morgantown, W. Va., time to be announced.

Presiding: W. H. Morris

Health & Safety Chairman: W. H. Shippe

Housekeeping Procedures Important Phase of Any Safety Program

An organized housekeeping program should be maintained in all areas and on all operations at all times when working with insulation products containing asbestos or mineral fibers.

Loose materials, scrap and debris are major sources of airborne dust. When these are allowed to lie around the job or storage areas they can be trampled on, run over and tracked around. Much of the airborne contamination can be eliminated by exercising simple good housekeeping practices.

Specific standards and practices designed for providing safe, clean and orderly working conditions should be defined.

The keys to effective dust control and health protection are efficient supervision, systematic cleaning and day to day follow-up.

Use of Respiratory Equipment Should Follow Systematic Program

The designed efficiency and effectiveness of respiratory equipment is dependent upon proper care, cleaning and maintenance. Therefore, NIMA recommends

that a systematic program be set up to assure this is done.

Approved respiratory equipment should be used in all operations where dust control is not adequate.

Only U. S. Bureau of Mines-approved respiratory equipment is recommended for use with mineral fibers, silica and asbestos. Lists of currently approved respiratory equipment can be obtained from:

Bureau of Mines

U.S. Department of the Interior

Nineteenth and E Streets N.W.

Washington, D.C. 20240

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THERMAL INSULATION

MANUFACTURERS ASSOCIATION, INC.

7 KIRBY PLAZA

MT. KISCO, NEW YORK 10849

Economics of Insulation:

Insulation Costs Less Than Leaving a System Bare, System Analysis Shows

While comparing capital costs and operating savings for individual segments of a plant demonstrate the savings readily pay off the capital in the first year, an even more telling example of insulation's value is demonstrated when a whole system is examined.

The basis of the analysis of a complete system of vessels, pipes and flanges on the cost of the equipment required to deliver the required amount of steam for an uninsulated system compared to the cost of equipment and the cost of insulation. It is very apparent that the capital investment required from steam capacity to supply the bare surface loss is always more than the cost of insulation plus the required investment for steam capacity to supply the loss through the insulation.

For example, a system of 6 inch pipes operating at 400 F consists of 1000 feet of pipe, 100 pairs of flanges and 10 valves. With no insulation on the system capital investment in steam producing equipment to supply the steam losses would be for pipes—\$15,900; flanges—\$4,900; valves—\$1,450; for a total capital investment loss of \$22,340.

Optimum insulation thickness was determined by comparing the total capital costs for insulating the entire system (plus the capital investment to supply the heat loss) with 1, 1½, 2 and 2½ inch thick insulation layers. These total costs are: 1 inch—\$6,672; 1½ inch—\$7,276; 2 inch—\$8,080; 2½ inch—\$9,269. It was found

that the difference between the cost from 1 to 1½ inch thickness was \$604, but this difference would save \$160 of steam cost. The difference between 1½ and 2 inch thickness was \$804 and would save an additional \$122 annually. But the difference between 2 and 2½ inch thickness was \$1,189 and would save only \$64 additionally. Thus 2 inch was the optimum thickness.

Insulation on Pipe Returns 195% Every Year

The heat loss through a run of uninsulated 4 inch pipe carrying steam at 500 F causes steam pressures to drop 1.68 pounds every operating hour. But a capital investment of only \$3.55 in insulation can produce a return of 195% every year for every foot of pipe. The per foot cost of capital investment to supply steam used to make up heat loss in the uninsulated pipe would be \$16.78. At \$0.50 per mm of steam the cost of steam loss would be \$7.88 per year. Insulating the pipe with 2 inch thick insulation (the economic optimum thickness for that size pipe operating at that high temperature) would reduce the cost of the steam loss to only \$0.98 per foot to a year. Since two inch insulation costs \$3.55 per foot, the saving in steam production cost would be \$6.90 per foot per year. Therefore, even ignoring the capital investment to produce the steam, the \$3.55 initial investment in insulation returns 195% by the end of the first year, and it will produce an equal return for every year of the plant's operation.