PLAINTIFF'S
EXHIBIT
KN-364

BALDWIN-EHRET-HILL

Lem-Foam



A new solution to low temperature insulation problems

APPLICATION SPECIFICATIONS



BALDWIN-EHRET-HILL Gem-Foam

I. Scope of Specification

a. This specification covers the Gem-Foam application procedure for low temperature conditions.

II. Materials

a. Insulation for piping, fittings and valves shall be Gem-Foam polyurethane rigid foam insulation, nominal 3 pound density, with a minimum 90% closed cell content. Moisture vapor transmission shall not exceed a 4 perm maximum.

b. Compressive strength of the polyurethane rigid foam insulation shall not be less than 50 psi at 75F.

c. Materials shall be furnished either as pipe half sections 36 inches in length or in block form.

d. Accessory materials shall include the following—
1. low temperature vapor barrier mastic
2. open weave glass fabric
3. plastic sealer
4. flashing compound
5. stainless steel bands and seals
6. stainless steel wire

III. Application

a. Piping

All piping shall have been tested prior to application of insulation and shall be free of defects, and be wiped clean of dirt and foreign matter, and shall be thoroughly dry.

Pipe insulation shall be fitted snugly to the pipe, staggering joints. All joints shall be securely sealed with a suitable plastic sealer. Secure the insulation firmly in place with either stainless steel bands or with stainless steel wire.

Wire or bands shall be applied on 9" centers.

All voids, cracks or rough edges shall be filled or smoothed to insure a tight finish.

b. Pipe Hangers

Where pipe hangers are attached directly to the pipe, the hanger rod shall be insulated not less than 12 inches from the surface of the adjacent pipe insulation, and completely sealed.

Where pipe hangers are attached over the insulation, protective saddles shall be furnished at each contact point.

c. Piping Insulation

Finish—all insulated piping shall be finished with a coat of suitable vapor barrier mastic in accordance with manufacturer's recommendations. Apply open weave glass fabric, embedded in the first mastic coating. Apply a second mastic coating over the glass fabric.

NOTE: Alternative finishing systems may be used to meet special requirements for weather protection, industrial atmospheres, etc.

d. Fitting Insulation

All fittings (welded, screwed, flanged) are to be insulated with fabricated covers made on the job site from molded sectional pipe insulation and/or block insulation, and/or foamed in place with B-E-H Gemfil. Fittings are to be equal in thickness to adjacent pipe insulation.

IV. In all applications all pipes subject to moisture penetration should be carefully sealed off with flashing compound.

STANDARD SIZES

Gem-Foam is made in 36" half sections to fit standard iron pipe sizes from ½" to 16", in dimensional standard wall thicknesses of ¾", 1", 1½", 2", 2½". Also in copper tubing sizes ⅜" and above.

GENERAL RECOMMENDATIONS FOR THICKNESS

100 F to	40 F =	¾" Thickness
40 F to	−10 F =	1" Thickness
−10 F to	−60 F =	1½" Thickness
−60 F to	−160 F =	2" Thickness
−160 F to	−250 F =	2½" Thickness
−250 F to	−350 F =	3" Thickness
−350 F	=	3½" Thickness

For proper design recommendations and application instructions on Gem-Foam block insulation and Gemfil, foam-in-place insulation, contact nearest B-E-H Sales Office or local B-E-H representative.

BALDWIN-EHRET-HILL

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BALDWIN-EHRET-HILL, INC., TRENTON, N. J.

DATA SHEET

Product: Baldwin-Ehret-Hill Gem Foam Pipe and Block Insulation

Description: Baldwin-Ehret-Hill Gem Foam is a rigid polyurethane foam formed as a mass of closed cells containing entrapped inert gas. It is available as pipe half sections in 36" lengths. (A companion product "Gemfil", a product for foaming in place, is available for use on valves and fittings.) Block available in standard sizes and thicknesses.

Uses: For insulating low temperature pipe lines where preformed sectional covering is required. Especially suited for process piping in chemical and petroleum plants.

Features: Low "K" factor - low permeability - non-capillary - dimensionally stable. High compressive, flexural and tensile strength. Flame retardant - self extinguishing. Lightweight - pleasant to handle - non-irritating, non-abrasive, non-toxic. Tough - resists breakage in shipping and handling. Resistant to thermal and mechanical shock. Excellent resistance to chemicals and fumes. Will not rot nor sustain vermin or fungus. May be installed without special tools - may be applied with common joint mastics. Offers savings in materials, labor and accessories.

Technical Data:

Temperature range --
For continuous service..... Minus absolute zero (-460°F) ..... to plus 250°F
For intermittent service or steam out..... Plus 278°F

Density ... 3 pounds per cubic foot

Sizes IPS	Dimensional Thickness
1/2"	.... 3/4"*, 1"*, 1-1/2"+, 2"+, 2-1/2"+
3/4"	.... 3/4"*, 1"*, 1-1/2"+, 2"+, 2-1/2"+
1", 1-1/4"	.... 3/4"*, 1"*, 1-1/2"+, 2"+, 2-1/2"+
1-1/2", 2", 2-1/2", 3", 3-1/2"	.... 3/4"*, 1"*, 1-1/2"+, 2"+, 2-1/2"+
4", 4-1/2", 5", 6"	.... 3/4"*, 1"*, 1-1/2"+, 2"+, 2-1/2"+
7", 8", 9", 10"	.... 1"*, 1-1/2"+, 2"+, 2-1/2"+
11", 12", 14"	.... 1"*, 1-1/2"+, 2"+
16", 18"	.... 1-1/2"+, 2"+
20", 22", 24"	.... 2"+

* Actual thickness
\+ Having an O.D. of [illegible]"
18" IPS and above is furnished in four segments

Thermal Conductivity --

Mean Temp.	K
0 F	0.12
70 F	0.178
150 F	0.25

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