Asbesto-Sponge Felted Pipe Insulation

For temperatures to 700 F

Asbesto-Sponge* Felted Pipe Insulation is a most efficient commercial heat insulation for pipes conveying steam or fluids with temperatures up to 700 F.

It is especially designed to withstand, permanently and without disintegration, the high temperatures, as well as vibration and wear and tear, encountered in modern engineering practice.

The insulation is made of felts composed of asbestos fiber so combined to give a spongy laminated material. It is built up to the required thickness in laminations of approximately forty per inch of thickness, cemented together at intervals. For pipe insulation, these felts are wound one over the other until the desired thickness is obtained, the cylinder then being slit lengthwise to permit application.

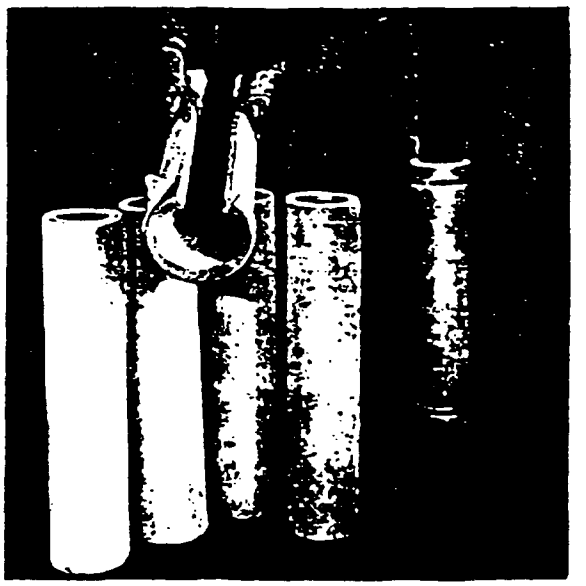
The principal advantage of Asbesto-Sponge Felted Pipe Insulation over other types lies in its excellent thermal characteristics and in the permanency with which it retains these characteristics in service. Soaking this insulating material in water and then drying it out again has practically no effect upon its structure or insulating value.

Its high insulating value is due to its construction, which contains many surface resistances greatly reducing the transfer of heat through the material.

Asbesto-Sponge Felted, being a fabricated insulation, has a higher cost than some other types of insulating material. However, the cost of pipe insulation for any job is but a small part of the installed first cost. Thus for installations where the pipe insulation must withstand rough service or mechanical abuse and still maintain its high insulating value, the increased service life provided by Asbesto-Sponge Felted very often indicates it to have the lowest cost per year.

The felted nature of Asbesto-Sponge Felted makes it flexible to a considerable extent, and the insulation before and after application will stand much abuse without becoming damaged. So constructed as to eliminate breakage in shipment, handling and after applying, it can be removed and replaced many times.

Asbesto-Sponge Felted Pipe Insulation is furnished in 3-foot sections, in single-layer thicknesses (unless otherwise specified) from 1" to 2½", to accurately fit any commercial size pipe. Thicknesses greater than



2½" are normally furnished in double-layer construction. The insulation is finished with a canvas jacket and furnished with lacquered metal bands for holding in place.

Being slit on but one side only, for pipe sizes 4" and larger, the heat leakage through joints is reduced to a minimum, and application is facilitated.

Asbesto-Sponge Felted can also be supplied in sections to fit straight runs of copper pipe or tubing of outside diameters from ⅜" to 6".

Asbesto-Sponge Felted is also furnished in sheet or block form in a number of convenient sizes as described in another data sheet.

Weatherproof Asbestos Jacket

Asbesto-Sponge Felted Pipe Insulation can be furnished with an integral weatherproof asbestos jacket attached at the factory.† This jacket is supplied with a 4" side-lap and with strips of felt, 7" wide, for a double circumferential wrap at the ends. The jacket is slit so that the pipe insulation can be applied in the regular manner. On horizontal pipe, the lap is turned downward to shed water. On vertical pipe, the lap should be sealed with Laptite (a J-M asphaltic cement). The side-laps of circumferential strips are made on the

* Reg. U. S. Pat. Off.

† Called "Train Pipe Covering" in railroad work

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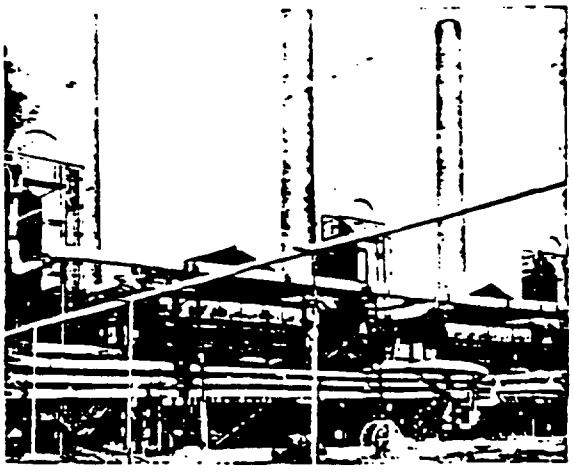
opposite side from the jacket lap and are turned downward on horizontal piping to shed water. On vertical piping, the circumferential strip should be sealed to the upper section with Laptite. No. 16 AWG Copperweld or galvanized wire loops are applied over the jacket on not more than 4" centers. Two loops of the same wire secure each circumferential strip. The wire, together with hot-dipped galvanized staples and Laptite, is furnished with the insulation.

Permeable Asbestos Jacket**

For use where subjected to water submersion, Asbesto-Sponge Felted can be furnished with a permeable jacket of wire-inserted asbestos cloth. This permits the escape of steam from the pipe insulation without disruption of the finish.

The jacket, which is attached to the pipe insulation, is provided with a 4" circumferential lap at one end, and two 4" laps over the longitudinal joint. When the insulation is applied, the longitudinal laps are held together, folded double and sewn to the jacket, as is the end lap. Copper wire or wire-inserted asbestos cord is used for stitching, together with hot-dipped galvanized staples and No. 16 AWG copperweld or galvanized wire for holding the insulation on 4" centers.

** U. S. Patent No. 2,023,985.



Asbesto-Sponge Felted Pipe Insulation withstands severe weathering on outdoor lines as well as the vibration and shock of mechanical impact

Recommended Thicknesses in inches*

Nominal pipe size, inches	Temperature of pipe—F					
	100 to 199	200 to 299	300 to 399	400 to 499	500 to 599	600 to 699
1½ & under	1	1	1	1½	1½	2
2	1	1	1½	1½	2	2
2½	1	1	1½	2	2	2
3	1	1	1½	2	2	2½
3½	1	1½	1½	2	2	2½
4	1	1½	1½	2	2½	2½
4½	1	1½	2	2	2½	2½
5	1	1½	2	2	2½	3
6	1	1½	2	2½	2½	3
7	1	1½	2	2½	2½	3
8	1	1½	2	2½	3	3
9	1	1½	2	2½	3	3½
10	1	2	2½	2½	3	3½
11	1	2	2½	3	3	3½
12	1	2	2½	3	3	3½
14 & over	1½	2	2½	3	3½	3½

* Recommended thicknesses are optimum thicknesses calculated on an *economic* basis for heat conservation under average operating conditions and assure adequate temperature control. Unusual conditions may warrant the use of other thicknesses.

Approximate Weight in Pounds per Standard 3-foot Section, Unpacked

Insulation thickness, inches	Nominal Pipe Size, Inches																	
	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
1	3.81	4.25	4.79	5.51	5.98	6.96	7.72	9.29	10.3	11.4	12.4	13.6	15.8	17.8	19.9	22.0	24.3	28.4
1½	7.24	7.91	8.73	9.80	10.6	12.0	13.3	15.5	17.0	18.6	20.2	21.9	25.2	28.3	31.4	34.5	37.9	44.2
2	11.8	12.6	13.7	15.1	16.1	18.1	19.8	22.7	24.8	26.9	28.9	31.2	35.7	39.8	43.9	48.0	52.7	60.9
2½	17.3	18.3	19.7	21.5	22.7	25.2	27.5	31.0	33.6	36.1	38.7	41.6	47.1	52.3	57.5	62.6	68.4	78.8
3	23.8	25.1	26.7	28.9	30.4	33.3	36.1	40.3	43.4	46.5	49.6	53.1	59.6	65.9	72.0	78.3	85.2	97.6

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