

FILE NAME: Johns-Manville (JMA)

DATE: 1968-1977

DOC#: JMA393

DOCUMENT DESCRIPTION: Weatherproofing Jackets - Letters &
Product Literature

November 26, 1968

Thorpe Products Company
P. O. Box 33399
Houston, Texas 77033

Attention: Mr. M. P. Proctor

Re: Diamond-Shamrock, Inc.
Asbestos Fibers

Gentlemen:

The information in your letter of November 4, 1968 was transmitted to our Environmental Control Department for reply. This letter referred to the types of fibers used in the following insulation materials:

Thermobestos
Superex
No. 352 Cement
Insulkote ST
Insulkote ET
DC Flexstone

We have received the following reply which we discussed November 8, 1968:

"As discussed in our phone conversation Friday, November 8, 1968, none of the materials listed in your letter contain crocidolite (blue) asbestos fiber. The asbestos fiber in all of these products is chrysotile. In addition, Superex does contain some amosite asbestos fiber.

"Neither I nor our Asbestos Fiber Research Department is familiar with the fiber referred to as "LTU".

/s/ E. M. Fenner"

If you have additional information on the LTU that we can trace it, we shall be happy to do so.

Yours very truly,

B. L. Ross
Insulation Engineer

cc: M. C. Parmley - Houston
E. M. Fenner - Manville Research
H. M. Ball - GHQ
W. P. Raines - GHQ
T. W. Stockton - Houston
J. M. Sharratt - Houston
File

BLR/bg

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JM - 83

Houston Office
November 7, 1968

E. M. Fenner - Finderne

cc: M. C. Paraley - Houston
H. M. Ball - DHQ
W. P. Raines - GHQ
C. E. Ernst - DEQ
J. A. Campbell, Jr. - DHQ
T. W. Stockton - Houston
J. M. Sharratt - Houston
File

THORPE PRODUCTS COMPANY - HOUSTON, TEXAS
ASBESTOS FIBERS - DIAMOND SHAMROCK, INC.

Attached is a copy of Thorpe's November 4, 1968, letter requesting information in regard to the types of fibers used in the following insulation materials:

Thermobestos

Superex

No. 352 Cement

Insulkote ST

Insulkote ET

D C Flexstone

Please advise if you are familiar with the "LTU" referred to, and the types of fibers used in the insulations listed.

B. L. Ross

BLR/bg

Note to C. E. Ernst and J. A. Campbell: Please disregard my letter of November 6, 1968, same subject. It should have been directed to E. M. Fenner. BLR

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THORPE PRODUCTS COMPANY
DIVISION OF J T THORPE COMPANY

DISTRIBUTORS OF INDUSTRIAL INSULATION
P. O. BOX 33399 MI 4.2391 HOUSTON, TEXAS 77033

November 4, 1968

RECEIVED NOV 5 1968

Johns Manville Sales Corporation
P. O. Box 255
Houston, Texas 77001

Attention: Mr. Bob Ross
District Engineer

Subject: Diamond-Shamrock, Inc.
Asbestos Fibers

The above firm has requested information in regard to the types of asbestos fibers used in insulation materials which we furnish to them.

It seems that they are concerned about health hazards of such fibers as LTU and Crocidolite.

Please let us know what type of fibres J-M is currently using as well as any information you may have in regard to this problem.

THORPE PRODUCTS COMPANY

M. P. Proctor

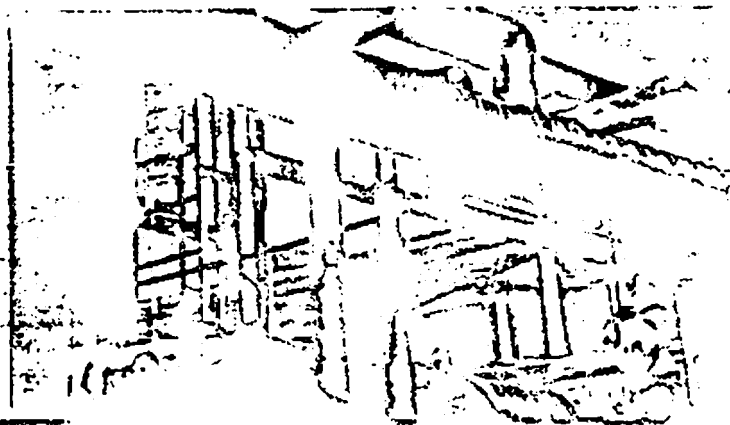
MPP:pb

Handwritten notes:
Diamond-Shamrock
Superior
3-12
ST. ET
DC Telephone

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and for
outdoor pipes

Specify



Johns-Manville

FLEXSTONE

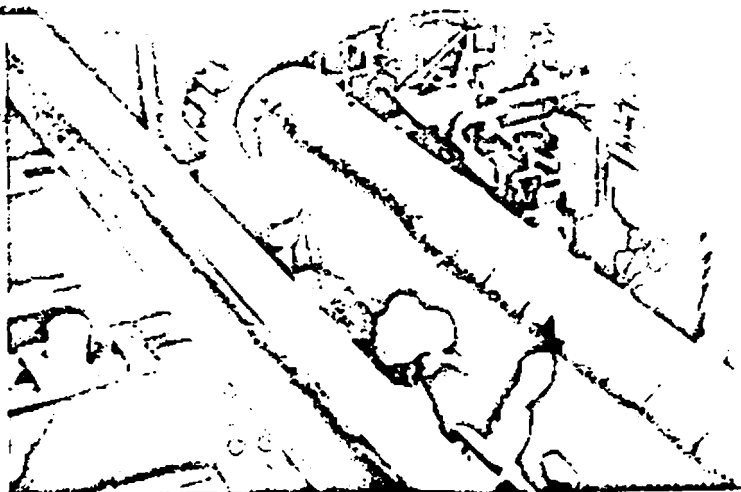
OR

**WEATHER-
JACKET**

FIRETARD

J-M DOUBLE COATED FLEXSTONE

is a rugged, heavy duty, weatherproofing jacket especially recommended for the protection of insulation on outdoor pipes and small diameter cylindrical vessels. It is composed of asphalt-saturated asbestos felt coated with a mineral-filled asphalt. Correctly designed for long life, Double Coated Flexstone jackets will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36 in. wide, each roll containing 108 sq ft and weighing 50 lbs.



J-M ASBESTOS FIRETARD is a weatherproofing jacket designed for use where resistance to the spread of fire is of primary importance. Firetard is a lamination of heavy asphalt-saturated asbestos felt and plain asbestos felt, and affords excellent insulation protection. Because the unsaturated asbestos is incombustible, it prevents flame from traveling along the surface of an insulated pipe line. Recommended for weatherproofing outdoor pipes and small diameter vessels wherever fire hazards are present. Supplied in rolls 32 in. wide, each roll containing 108 sq ft and weighing 55 lbs.

Johns-Manville

22 EAST 40TH STREET, NEW YORK 16, N. Y.

• OFFICES IN ALL LARGE CITIES

CANADIAN JOHNS-MANVILLE COMPANY, LTD.
Montreal • Ottawa • Toronto • Winnipeg • Vancouver

JOHNS-MANVILLE INTERNATIONAL CORPORATION
New York • London • Buenos Aires

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THORPE PRODUCTS COMPANY
DIVISION OF J T THORPE COMPANY

DISTRIBUTORS OF INDUSTRIAL INSULATION
P. O. BOX 13399 MI 4-2391 HOUSTON, TEXAS 77033

November 4, 1968

RECEIVED NOV 5 1968

Johns Manville Sales Corporation
P. O. Box 255
Houston, Texas 77001

Attention: Mr. Bob Ross
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It seems that they are concerned about health hazards of such fibers as LTU and Crocidolite.

Please let us know what type of fibres J-M is currently using as well as any information you may have in regard to this problem.

THORPE PRODUCTS COMPANY

H. P. Proctor

MPP:pb

Handwritten notes:
Thompson
3/2
ST. ET
DC Houston

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Houston Office
November 7, 1968

E. M. Fenner - Finderne

cc: M. C. Parmley - Houston
H. M. Ball - DHQ
W. P. Raines - GHQ
C. E. Ernst - DHQ
J. A. Campbell, Jr. - DHQ
T. W. Stockton - Houston
J. M. Sharratt - Houston
File

THORPE PRODUCTS COMPANY - HOUSTON, TEXAS
ASBESTOS FIBERS - DIAMOND SHAMROCK, INC.

Attached is a copy of Thorpe's November 4, 1968, letter requesting information in regard to the types of fibers used in the following insulation materials:

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Superex

No. 352 Cement

Insulkote ST

Insulkote ET

D C Flexstone

Please advise if you are familiar with the "LTU" referred to, and the types of fibers used in the insulations listed.

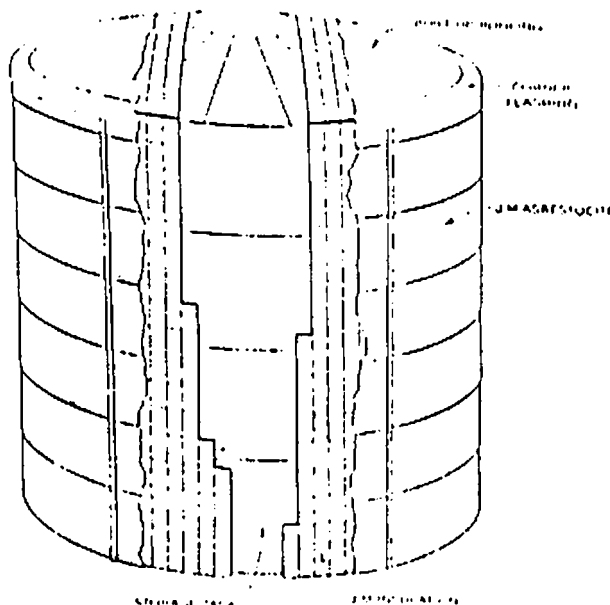
B. L. Ross

BLR/bg

Note to C. E. Ernst and J. A. Campbell: Please disregard my letter of November 6, 1968, same subject. It should have been directed to E. M. Fenner. BLR

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J-M WEATHERPROOFING AND ACCESSORY MATERIALS



Johns-Manville Asbestocite casing was developed by J-M Engineers especially for the weather protection of insulation on outdoor tanks and vessels.

***ASBESTOCITE SHEETS**—Strong, flexible sheets with a smooth, hard surface, formed under high pressure from asbestos fiber and cement. An incombustible finish, or casing, of large Asbestocite sheets can be quickly and easily applied over insulation on tanks or vessels.

***INSULKOTE ET**—A durable, black, weather-proof, troweled-in-place coating for outdoor insulation, made from asphalt emulsion containing asbestos fiber and fillers. Applied over incombustible insulation, it does not transmit a flame. Coverage, approximately 55 sq ft per 100 lb for 1/4 in. (1/8 in. dried) thickness.

***INSULKOTE ST**—For sealing, flashing and coating insulation and roofing felt surfaces. It is a tough, elastic, asbestos fiber, filler and solvent asphalt coating with minimum drying shrinkage. Applied by troweling in place. Coverage, approximately 100 sq ft per 80 lb for 1/8 in. thickness.

DOUBLE COATED FLEXSTONE*—A heavy asphalt-saturated and coated asbestos felt for weather-proof jackets on pipe insulation. Weight, approximately 50 lb per square (108 sq ft).

ASBESTOS FIRETARD JACKET—Made especially for fire-hazard areas, from saturated and unsaturated asbestos felts. Firetard weatherproof jacket will not carry flame or support combustion. Weight, approximately 55 lb per square (108 sq ft).

WATERPROOFING FABRIC—An asphalt-saturated woven fabric, used as a membrane for outdoor flashing and linings.

NO. 50 ASBESTOS WATERPROOFING FELT (PLAIN)—An asphalt-saturated asbestos felt for jacketing lagging insulation on low temperature pipe. Weight, approximately 32 lb per square (108 sq ft).

*Registered Johns-Manville Trade Mark.

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Weatherproofing Jackets

Asphalt Saturated Mineral Fiber Felts

DESCRIPTION: Johns-Manville Weatherproofing Jackets provide weather and fire protection for a wide range of hot and cold insulation applications. Made from asphalt impregnated and coated mineral fiber felts, the comprehensive line of J-M Weatherproofing Jackets is furnished in various thicknesses and weights.

AVAILABLE TYPES:

Double Coated Flexstone®. An asphalt saturated mineral fiber felt coated with a mineral-filled asphalt. A rugged, heavy duty weatherproofing jacket. Double Coated Flexstone will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36" wide, each roll containing 1 square and with a nominal weight of 50 lbs. per square.

Asbestos Firetard®. A lamination of heavy asphalt saturated mineral fiber felt and plain mineral felt, designed to provide excellent fire resistance and high insulating efficiency. Supplied in rolls 32" wide, each roll containing 1 square and with a nominal weight of 55 lbs. per square.

No. 50®. An asphalt saturated mineral fiber felt jacket designed for medium long life. Supplied in rolls 36" wide, each roll containing 2 squares and with a nominal weight of 60 lbs. per 2 square roll.

No. 7700. An asphalt saturated and coated mineral fiber felt with a smooth outer surface, designed to be given a field coating of asphalt. Supplied in rolls 36" wide, each roll containing 2 squares and with a nominal weight of 72 lbs. per 2 square roll.

No. 15-A®. A lightweight asphalt saturated mineral fiber finishing felt. Supplied in rolls 36" wide, each roll containing 4 squares and with a nominal weight of 60 lbs. per 3 square roll.

No. 45-A®. A heavy, long life asphalt saturated mineral fiber felt with a sand finish. Supplied in rolls 36" wide, each roll containing 1 square and with a nominal weight of 42.5 lbs. per square. One buttstrip per section will be supplied with No. 45-A jackets.



USES: J-M Weatherproofing Jackets are recommended for the protection of insulation on outdoor pipes and small diameter equipment. J-M Asbestos Firetard jacket is specifically recommended where resistance to the spread of fire is of primary importance.

ADVANTAGES:

Wide Jacket Selection. Six different jackets provide a choice to meet specific job requirements.

* Available in other sizes

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-Tradename "FLEXSTONE" registered in U.S.
on 10/09/17 #118,881
-Finished product specs. in folder

PRODUCT INFORMATION SHEET

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NAME: Weather Proofing Jacket

A/K/A: Double Coated Flexstone

PRODUCT DICTIONARY DESCRIPTION an asbestos-saturated asbestos felt coated with mineral-filled asphalt. Will not embrittle under prolonged exposure.

PHYSICAL CHARACTERISTICS: _____

INTENDED USES/APPLICATION: used for fire protection and weather proofing. an insulation protection on outdoor or underground pipes & small diameter equipment.

% ASBESTOS: Flexstone 35%

TYPE ASBESTOS: Chrysotile

OTHER INGREDIENTS: Asphalt

TYPE PACKAGING: finished product specification sheets in folder

DATES LABELLED: Flexstone 7/1/70

PLACES MANUFACTURED: Manville Plant

DATES MANUFACTURED: 1929 to present

SUBSTITUTE PRODUCTS: _____

STUDIES ON PRODUCT: SEE Report by Applied Research Laboratories
in folder

CROSS-REFERENCE: Flexstone and Asbestos Firetard Jacket (sample in folder)

J-M CONTACTS: (Most knowledgeable person) _____

Trade Names of 85% Magnesia and Related Products

PRODUCT	TRADE NAME	MANUFACTURER
85% Magnesia insulation	Carey 85% Magnesia Direct's 85% Magnesia J-M 85% Magnesia K & M "Featherweight" 85% Magnesia Pabon "Precision Molded" 85% Magnesia	The Philip Carey Manufacturing Company Direct Magnesia Manufacturing Company Johns-Manville Corporation Kearsley & Mattison Company The Parathine Companies, Inc.
chromaceous silica insulation	Hi-Temp Induro Supercex Hi-Temp Praso High Temperature	The Philip Carey Manufacturing Company Direct Magnesia Manufacturing Company Johns-Manville Corporation Kearsley & Mattison Company The Parathine Companies, Inc.
asphalt saturated asbestos roofing felts	White Top Asbestos Jacket (unsaturated on both sides) Black Top Asbestos Jacket (no asphalt coating) Asbestos Grapevine Finish Double-Sanded Asbestos (smooth sanded surface) Softly Coated Roofing Felt Minkote (coated with mica) Double Coated Fibstone Asbestos Fireard Jacket (unsaturated outer surface) K & M Softly Saturated Asbestos Jacket Asphalt Saturated Roofing Felt	The Philip Carey Manufacturing Company " " " " " " " " " " Direct Magnesia Manufacturing Company " " " " " Johns-Manville Corporation " " " " " Kearsley & Mattison Company The Parathine Companies, Inc.
asphalt and asbestos plaster coatings	Thermotex B Fibrock Insulrock Coverrock	The Philip Carey Manufacturing Company Direct Magnesia Manufacturing Company Johns-Manville Corporation The Parathine Companies, Inc.
ceMENTS	No. 403, insulating and finishing LF 20 Finishing Cement, long fiber, medium hard No. 100, hard finish P-K White Cement, roughing and finishing No. 150, insulating and finishing No. 105, neat hard finish No. 302, insulating and finishing No. 400, insulating and finishing No. 352, insulating and finishing Amphicem No. 2 Asbestos Cement K & M No. 152 Asbestos Finishing Cement Standard Asbestos Cement Finish Cement	The Philip Carey Manufacturing Company " " " " " Direct Magnesia Manufacturing Company " " " " " Johns-Manville Corporation " " " " " Kearsley & Mattison Company " " " " " The Parathine Companies, Inc.

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JM 82



Johns-Manville
Sales Corporation

Ken-Caryl Ranch
Denver, Colorado 80217
(303) 979-1000

September 26, 1977

Mr. Peter Foreman
U S Department of Labor
Occupational Safety and Health
Administration
Leo W O'Brien Federal Building
Room 132
Clinton Avenue & No. Pearl Street
Albany, New York 12207

Dear Mr. Foreman:

On August 30 I wrote to inform you that I had been to Albany to take micro air samples for asbestos airborne fibers in Johns-Manville's firetard jacketing. The laboratory results have been returned to me and all samples were well below the present standard. I will give a description of the sampling situation and the exact results.

Three samples, numbers 1, 2 and 3, were taken in the Albany warehouse in the immediate area that the jacketing was stacked. The two warehouse workers were doing their normal work duties while the testing was in progress. Samples, numbers 4 and 5, were taken at the General Electric plant located in Waterfort. The pumps were secured to the workers with the filters positioned in their breathing zones. Operator wearing sample number 4 was working on the ground and removed the outside paper with a five inch knife. He continued to unroll the jacketing and cut it into strips of four feet. The strips were then hoisted by rope to the operator wearing sample number 5, who was working on a twelve foot scaffold. He secured the jacketing around THERMO-12 pipe insulation with copper wire.

The results of the tests are as follows:

<u>Sample Number</u>	<u>Test Results</u>
Number 1	.1 F/cc
Number 2	.1
Number 3	.1
Number 4	.1
Number 5	.01

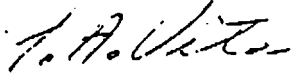
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Mr. Peter Foreman
September 26, 1977
Page 2

The existing standard for asbestos is 2.0 F/cc and our test results were well below the standard.

If you have any questions on the above, please call me in Denver at (303) 979-1000 Ext. 3200.

Yours very truly,



F A Vite
Manager, Health and Safety
Industrial Products Division, Contracts

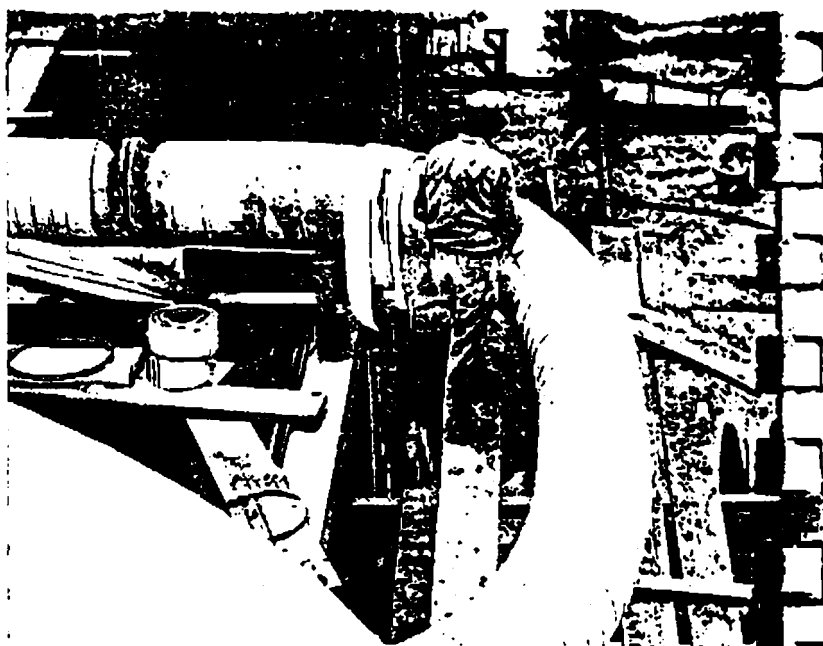
cc: W A Waller, Johns-Manville, Albany, N Y
P C Mottern, Johns-Manville, N. Pelham, N Y

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Johns-Manville

PRODUCT INFORMATION

type: Felt
temp limit: 250F



J-M WEATHERPROOFING JACKETS

DESCRIPTION: Johns-Manville produces a complete line of weatherproofing jackets for every hot and cold insulation requirement. Most are made from asbestos felts which are saturated and coated with asphalt. These jackets, in various thicknesses and weights, may be used for fire protection as well as weatherproofing purposes.

AVAILABLE TYPES:

Double Coated Flexstone® An asphalt-saturated asbestos felt coated with a mineral-filled asphalt. Designed for long life and extra heavy weatherproofing. Will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36 in. wide, each roll containing 1 square and weighing 50 lbs.

Asbestos Firetard® A weatherproofing jacket designed for use where resistance to the spread of fire is of primary importance. Firetard is a lamination of heavy asphalt-saturated felt and plain asbestos felt, and affords excellent insulation protection. Because the contained asbestos is non-combustible, it prevents flame from traveling along the surface of an insulated pipe line. Supplied in rolls 32 in. wide, each roll containing 1 square and weighing 55 lbs.

No. 50* An asphalt-saturated asbestos felt jacket designed for medium long life. Supplied in rolls 36 in. wide, each roll containing 2 squares and weighing 32 lbs per square.

No. 7700 An asphalt-saturated and coated asbestos felt with a smooth outer surface. Good weatherproofing jacket designed to be given a field coating of asphalt. Supplied in rolls 32 in. wide, each roll containing 2 squares weighing 35 lbs each.

No. 15-A* A lightweight asphalt-saturated asbestos finishing felt. Supplied in rolls 36 in. wide, each roll containing 3 squares and weighing 15 lbs per square.

White Surface Asbestos 3-ply asbestos felt consisting of two inner layers asphalt-saturated and one outer layer unsaturated. Features fire resistance and medium life. Supplied in rolls 32 in. wide, each roll containing 1 square and weighing 53 lbs.

No. 45-A* Asphalt-saturated asbestos felt with a sand finish. A heavy, long life weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and weighing 42 lbs.

No. 55-R* Asphalt-saturated and coated organic felt. Heavy weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and weighing 55 lbs.

No. 45-2* Asphalt-saturated and coated organic felt for medium long life weatherproofing protection. Supplied in rolls 36 in. wide, each roll containing 1 square and weighing 45 lbs.

No. 30-R* Asphalt-saturated organic felt for light weatherproofing protection. Supplied in rolls 36 in. wide, each roll containing 2 squares and weighing 30 lbs per square.

No. 15-R* Asphalt-saturated organic felt which gives very light protection against weather. Supplied in rolls 36 in. wide, each roll containing 4 squares and weighing 15 lbs per square. (Note: This felt when furnished by Pittsburg, Cal., plant comes in rolls containing 3 squares.)

*Available perforated.

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12/60

ACCESSORIES:

With all factory-applied jackets enough 16 gauge galvanized wire and J-M Laptite™ asphalt-plastic cement to seal joints will be furnished. In addition, a butt strip of the same jacket material, 7 in. wide and having the same circumferential length as the jacket, will also be supplied.

USES: Especially recommended for weather proofing insulated outdoor piping and small diameter equipment.

ADVANTAGES:

Wide Jacket Selection

Eleven different jackets give user a choice to meet every requirement.

Factory Applied

All J-M weatherproofing jackets can be furnished factory-applied thus eliminating the necessity of separate application at the job site.

COMPLIANCE WITH GOVERNMENT SPECS

No. 15-A perforated or unperforated complies with HH-F-185, Type I perforated, Class A and Type II plain, Class A.

No. 15-R complies with HH-F-191a, Type I.

No. 30-R complies with HH-F-191a, Type II.

No. 15-R (from Waukegan plant only) complies with HH-F-201, Type I.

FACTORY-APPLIED JACKETS FOR EVERY PURPOSE...

In addition to its line of weatherproofing jackets, Johns-Manville manufactures jacketing materials for every commercial and industrial purpose. These materials, which include kraft paper, canvas, asphalt felts, asbestos felts, and aluminum, can be furnished factory-applied to J-M Thermobestos calcium silicate pipe insulation. The felts, paper and canvas can also be factory-applied to J-M 85% Magnesite and J-M Superex-M pipe insulations. All can be supplied in roll form for large area protection or for field application.

SHORT FORM SPECIFICATIONS

WEATHERPROOFED OUTDOOR PIPING "All outdoor pipe insulation shall be finished with a weatherproof jacket of _____ (fill in name). All joints shall be lapped at least 3", horizontal joints lapping downward to shed water. Longitudinal laps on vertical pipe shall be sealed with J-M Laptite. All other joints shall be left unsealed.

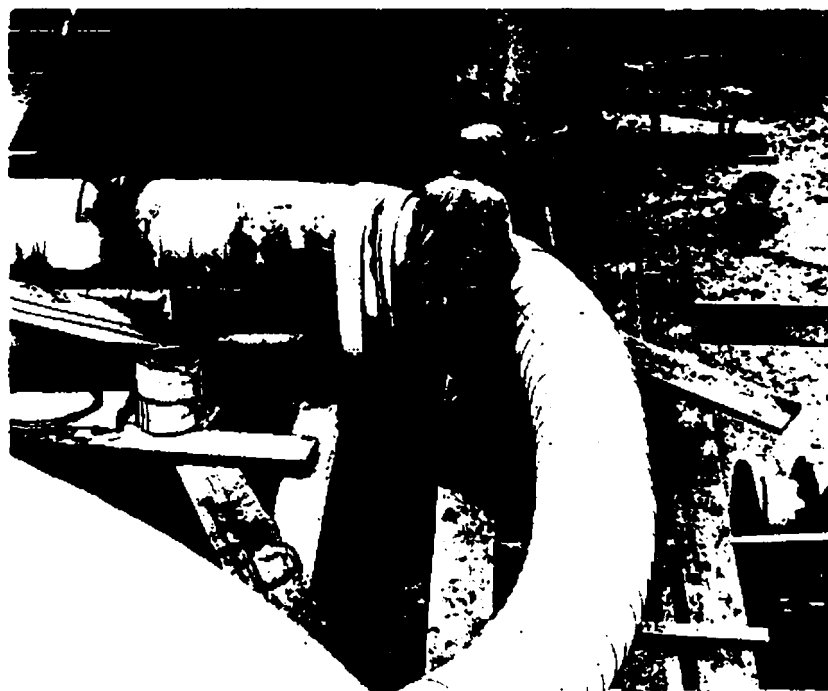
"The jacket shall be secured with loops of No. 16 galvanized wire applied on not greater than 4" centers, or 1/2" x 0.015" corrosion-resistant metal bands and clips applied on not greater than 6" centers, with one loop on each end lap, or two on each 7" butt strip."

WEATHERPROOFED FITTINGS "On pipe bends, fittings and flanges, the jacket shall lap about 4" over

the mastic-type weatherproofing." Note: See data sheet on J-M Insulkote™ weather protective coatings for specifications on bends, fittings and flanges.

FIRE PROTECTION "Where fire hazard must be considered due to the fact that flame may be carried along exposed piping when fire occurs adjacent to such lines, a fire-retarded weatherproof jacket of Asbestos Firetard shall be applied."

UNDERGROUND PIPING "All pipe insulation in underground tunnels or conduits shall be protected from water submersion with a No. 50 asbestos weatherproof felt, perforated. All joints shall be lapped about 1 1/2" and left unsealed. Longitudinal laps shall be located on top of pipe to permit ready escape of steam after submersion."



Johns-Manville

PRODUCT INFORMATION

type: Felt

temp limit: 250F

J-M WEATHERPROOFING JACKETS

■ **DESCRIPTION:** Johns-Manville produces a complete line of weatherproofing jackets for every hot and cold insulation requirement. Most are made from asbestos felts which are saturated and coated with asphalt. These jackets, in various thicknesses and weights, may be used for fire protection as well as weatherproofing purposes.

■ AVAILABLE TYPES:

Double Coated Flexstone® An asphalt-saturated asbestos felt coated with a mineral-filled asphalt. Designed for long life and extra heavy weatherproofing. Will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36 in. wide, each roll containing 1 square and weighing 50 lbs.

Asbestos Firetard® A weatherproofing jacket designed for use where resistance to the spread of fire is of primary importance. Firetard is a lamination of heavy asphalt-saturated felt and plain asbestos felt, and affords excellent insulation protection. Because the unsaturated asbestos is incombustible, it prevents flame from traveling along the surface of an insulated pipe line. Supplied in rolls 32 in. wide, each roll containing 1 square and weighing 55 lbs.

No. 50* An asphalt-saturated asbestos felt jacket designed for medium long life. Supplied in rolls 36 in. wide, each roll containing 2 squares and weighing 32 lbs per square.

No. 7700 An asphalt-saturated and coated asbestos felt with a smooth outer surface. Good weatherproofing jacket designed to be given a field coating of asphalt. Supplied in rolls 32 in. wide, each roll containing 2 squares weighing 35 lbs each.

No. 15-A* A lightweight asphalt-saturated asbestos finishing felt. Supplied in rolls 36 in. wide, each roll containing 3 squares and weighing 15 lbs per square.

White Surface Asbestos 3-ply asbestos felt consisting of two inner layers asphalt-saturated and one outer layer unsaturated. Features fire resistance and medium life. Supplied in rolls 32 in. wide, each roll containing 1 square and weighing 53 lbs.

No. 45-A* Asphalt-saturated asbestos felt with a sand finish. A heavy, long life weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and weighing 42 lbs.

No. 55-R* Asphalt-saturated and coated organic felt. Heavy weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and weighing 55 lbs.

No. 45-R* Asphalt-saturated and coated organic felt for medium weatherproofing protection. Supplied in rolls 36 in. wide, each roll containing 1 square and weighing 45 lbs.

No. 30-R* Asphalt-saturated organic felt for light weatherproofing protection. Supplied in rolls 36 in. wide, each roll containing 2 squares and weighing 30 lbs per square.

No. 15-R* Asphalt-saturated organic felt which gives very light protection against weather. Supplied in rolls 36 in. wide, each roll containing 4 squares and weighing 15 lbs per square. (Note: This felt when furnished by Pittsburg, Cal., plant comes in rolls containing 3 squares.)

*Available perforated.

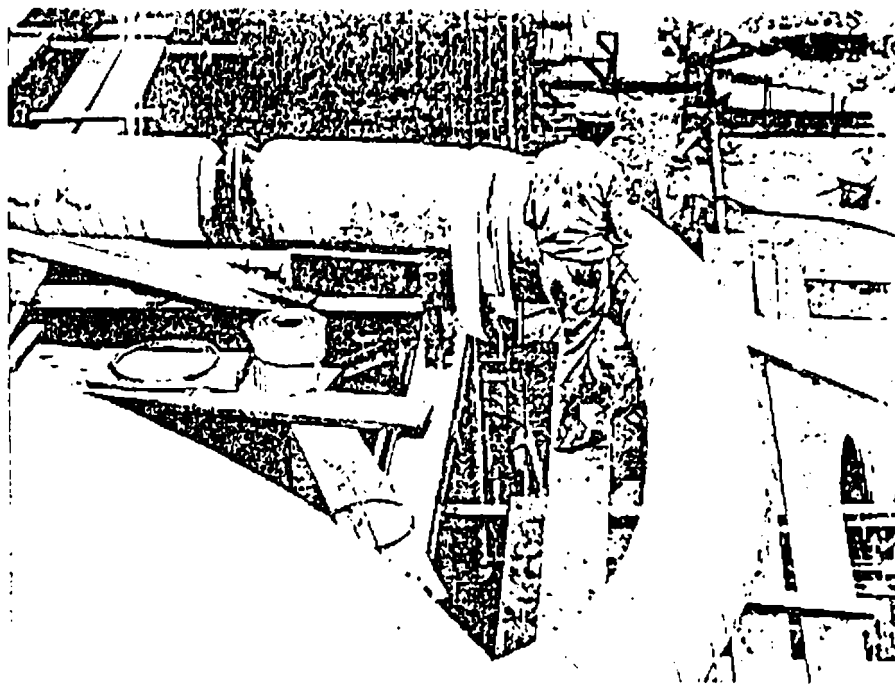
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JM - 83

Johns-Manville

PRODUCT INFORMATION

type: Felt

temp. limit: 250F



J-M WEATHERPROOFING JACKETS

DESCRIPTION: Johns-Manville produces a complete line of weatherproofing jackets for every hot and cold insulation requirement. They are made from asbestos felts which are saturated and coated with asphalt. These jackets, in various thicknesses and weights, may be used for fire protection as well as weatherproofing purposes.

AVAILABLE TYPES:

Double Coated Flexstone™ An asphalt-saturated asbestos felt coated with a mineral-filled asphalt. Designed for long life and extra heavy weatherproofing. Will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36 in. wide, each roll containing 1 square and with a nominal weight of 50 lbs. per square.

Asbestos Firetard™ A weatherproofing jacket designed for use where resistance to the spread of fire is of primary importance. Firetard is a lamination of heavy asphalt-saturated felt and plain asbestos felt, and affords excellent insulation protection. Because the unsaturated asbestos is incombustible, it prevents flame from traveling along the surface of an insulated pipe line. Supplied in rolls 32 in. wide, each roll containing 1 square and with a nominal weight of 55 lbs. per square.

No. 50* An asphalt-saturated asbestos felt jacket designed for medium long life. Supplied in rolls 36 in. wide, each roll containing 2 squares and with a nominal weight of 65 lbs. per 2 square roll.

No. 7700 An asphalt-saturated and coated asbestos felt with a smooth outer surface. Good weatherproofing jacket designed to be given a field coating of asphalt. Supplied in rolls 32 in. wide, each roll containing 2 squares and with a nominal weight of 70 lbs. per 2 square roll.

No. 15-A* A lightweight asphalt-saturated asbestos finishing felt. Supplied in rolls 36 in. wide, each roll containing 3 squares and with a nominal weight of 45 lbs. per 3 square roll.

No. 45-A* Asphalt-saturated asbestos felt with a sand finish. A heavy, long life weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and with a nominal weight of 42.5 lbs. per square.

**Available perforated.*

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JM - 83**

ACCESSORIES:

One buttstrip per section will be supplied with No. 45-A jackets. No wire or cement will be included.

USES: Especially recommended for weatherproofing insulated outdoor piping and small diameter equipment.

ADVANTAGES:

**Wide Jacket
Selection**

Six different jackets give user a choice to meet every requirement.

Factory Applied

No. 45-A weatherproofing jacket can be furnished factory-applied thus eliminating the necessity of separate application at the job site.

COMPLIANCE WITH GOVERNMENT SPECS

No. 15-A perforated or unperforated complies with III-F-185, Type I perforated, Class A and Type II plain, Class A.

SHORT FORM SPECIFICATIONS

WEATHERPROOFED OUTDOOR PIPING "All outdoor pipe insulation shall be finished with a weatherproof jacket of _____ (fill in name). All joints shall be lapped at least 3", horizontal joints lapping downward to shed water. Longitudinal laps on vertical pipe shall be sealed with J-M Laplite. All other joints shall be left unsealed.

"The jacket shall be secured with loops of No. 16 galvanized wire applied on not greater than 4" centers, or 1/2" x 0.015" corrosion-resistant metal bands and clips applied on not greater than 6" centers, with one loop on each end lap, or two on each 7" butt strip."

WEATHERPROOFED FITTINGS "On pipe bends, fittings and flanges, the jacket shall lap about 4" over

the mastic-type weatherproofing." Note: See data sheet on J-M Insulkote" weather protective coatings for specifications on bends, fittings and flanges.

FIRE PROTECTION "Where fire hazard must be considered due to the fact that flame may be carried along exposed piping when fire occurs adjacent to such lines, a fire-retarded weatherproof jacket of Asbestos Firetard shall be applied."

UNDERGROUND PIPING "All pipe insulation in underground tunnels or conduits shall be protected from water submersion with a No. 50 asbestos weatherproof felt, perforated. All joints shall be lapped about 1 1/2" and left unsealed. Longitudinal laps shall be located on top of pipe to permit ready escape of steam after submersion."



Johns-Manville

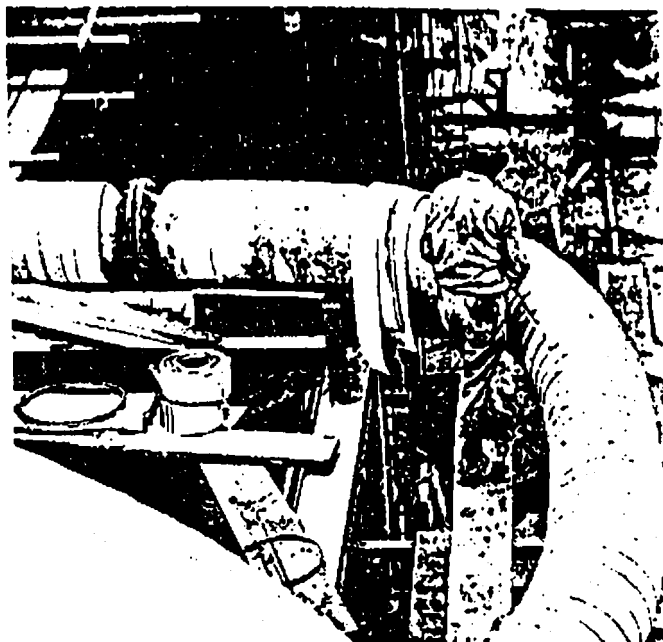
Greenwood Plaza • Denver, Colorado 80217

Sales Offices in Principal Cities

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JM - 83**

INSULATION SYSTEMS

TYPE: FELT
TEMP. LIMIT: 250F



J-M Weatherproofing Jackets

DESCRIPTION: Johns-Manville produces a complete line of weatherproofing jackets for every hot and cold insulation requirement. They are made from asbestos felts which are saturated and coated with asphalt. These jackets, in various thicknesses and weights, may be used for fire protection as well as weatherproofing purposes.

AVAILABLE TYPES:

Double Coated Flexstone* An asphalt-saturated asbestos felt coated with a mineral-filled asphalt. Designed for long life and extra heavy weatherproofing. Will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36 in. wide, each roll containing 1 square and with a nominal weight of 50 lbs. per square.

Asbestos Firetard* A weatherproofing jacket designed for use where resistance to the spread of fire is of primary importance. Firetard is a lamination of heavy asphalt-saturated felt and plain asbestos felt, and affords excellent insulation protection. Because the unsaturated

asbestos is incombustible, it prevents flame from traveling along the surface of an insulated pipe line. Supplied in rolls 32 in. wide, each roll containing 1 square and with a nominal weight of 55 lbs. per square.

No. 7700 An asphalt-saturated and coated asbestos felt with a smooth outer surface. Good weatherproofing jacket designed to be given a field coating of asphalt. Supplied in rolls 36 in. wide, each roll containing 2 squares and with a nominal weight of 72 lbs. per 2 square roll.

No. 45-A* Asphalt-saturated asbestos felt with a sand finish. A heavy, long life weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and with a nominal weight of 42.5 lbs. per square.

USES: Especially recommended for weather proofing insulated outdoor piping and small diameter equipment.

ADVANTAGES:

Wide Jacket Selection Four different jackets give user a choice to meet every requirement.

* Available perforated

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Weatherproofing Jackets Short Form Specifications

WEATHERPROOFED OUTDOOR PIPING "All outdoor pipe insulation shall be finished with a weatherproof jacket of _____ (fill in name). All joints shall be lapped at least 3" horizontal joints lapping downward to shed water. Longitudinal laps on vertical pipe shall be sealed with J-M Laptite. All other joints shall be left unsealed.

"The jacket shall be secured with loops of No. 16-galvanized wire applied on not greater than 4" centers, or ½" x 0.015" corrosion-resistant metal bands and clips applied on not greater than 6" centers, with one loop on each end lap, or two on each 7" butt strip."

WEATHERPROOFED FITTINGS "On pipe bends, fittings and flanges, the jacket shall lap about 4" over the mastic-type weatherproofing. Note:

See data sheet on J-M Insulkote* weather protective coatings for specifications on bends, fittings and flanges.

FIRE PROTECTION "Where fire hazard must be considered due to the fact that flame may be carried along exposed piping when fire occurs adjacent to such lines, a fire-retarded weatherproof jacket of Asbestos Firetard shall be applied."

UNDERGROUND PIPING "All pipe insulation in underground tunnels or conduits shall be protected from water submersion with a No. 45A asbestos weatherproof felt, perforated. All joints shall be lapped about 1½" and left unsealed. Longitudinal laps shall be located on top of pipe to permit ready escape of steam after submersion."

For information on other J-M Thermal Insulations and Systems, Write the Johns-Manville Insulation Center, Drawer 17L, Denver, Colorado 80217 or Call (303) 770-1000 Ext. 3111.



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Weatherproofing Jackets

Asphalt Saturated Mineral Fiber Felts

DESCRIPTION: Johns-Manville Weatherproofing Jackets provide weather and fire protection for a wide range of hot and cold insulation applications. Made from asphalt impregnated and coated mineral fiber felts, the comprehensive line of J-M Weatherproofing Jackets is furnished in various thicknesses and weights.

AVAILABLE TYPES:

Double Coated Flexstone*. An asphalt saturated mineral fiber felt coated with a mineral-filled asphalt. A rugged, heavy duty weatherproofing jacket. Double Coated Flexstone will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36" wide, each roll containing 1 square and with a nominal weight of 50 lbs. per square.

Asbestos Firetard*. A lamination of heavy asphalt saturated mineral fiber felt and plain mineral felt, designed to provide excellent fire resistance and high insulating efficiency. Supplied in rolls 32" wide, each roll containing 1 square and with a nominal weight of 55 lbs. per square.

No. 50*. An asphalt saturated mineral fiber felt jacket designed for medium long life. Supplied in rolls 36" wide, each roll containing 2 squares and with a nominal weight of 60 lbs. per 2 square roll.

No. 7700. An asphalt saturated and coated mineral fiber felt with a smooth outer surface, designed to be given a field coating of asphalt. Supplied in rolls 36" wide, each roll containing 2 squares and with a nominal weight of 72 lbs. per 2 square roll.

No. 15-A*. A lightweight asphalt saturated mineral fiber finishing felt. Supplied in rolls 36" wide each roll containing 4 squares and with a nominal weight of 60 lbs. per 3 square roll.

No. 45-A*. A heavy, long life asphalt saturated mineral fiber felt with a sand finish. Supplied in rolls 36" wide, each roll containing 1 square and with a nominal weight of 42.5 lbs. per square. One buttstrip per section will be supplied with No. 45-A jackets.



USES: J-M Weatherproofing Jackets are recommended for the protection of insulation on outdoor pipes and small diameter equipment. J-M Asbestos Firetard jacket is specifically recommended where resistance to the spread of fire is of primary importance.

ADVANTAGES:

Wide Jacket Selection. Six different jackets provide a choice to meet specific job requirements.

**Available perforated*

**PRODUCED
JM - 83**

INSULATION SYSTEMS

TYPE: FELT
TEMP. LIMIT: 250F



J-M Weatherproofing Jackets

DESCRIPTION: Johns-Manville produces a complete line of weatherproofing jackets for every hot and cold insulation requirement. They are made from asbestos felts which are saturated and coated with asphalt. These jackets, in various thicknesses and weights, may be used for fire protection as well as weatherproofing purposes.

AVAILABLE TYPES:

Double Coated Flexstone* An asphalt-saturated asbestos felt coated with a mineral-filled asphalt. Designed for long life and extra heavy weatherproofing. Will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36 in. wide, each roll containing 1 square and with a nominal weight of 50 lbs. per square.

Asbestos Firetard* A weatherproofing jacket designed for use where resistance to the spread of fire is of primary importance. Firetard is a lamination of heavy asphalt-saturated felt and plain asbestos felt, and affords excellent insulation protection. Because the unsaturated

asbestos is incombustible, it prevents flame from traveling along the surface of an insulated pipe line. Supplied in rolls 32 in. wide, each roll containing 1 square and with a nominal weight of 55 lbs. per square.

No. 7700 An asphalt-saturated and coated asbestos felt with a smooth outer surface. Good weatherproofing jacket designed to be given a field coating of asphalt. Supplied in rolls 36 in. wide, each roll containing 2 squares and with a nominal weight of 72 lbs. per 2 square roll.

No. 45-A* Asphalt-saturated asbestos felt with a sand finish. A heavy, long life weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and with a nominal weight of 42.5 lbs. per square.

USES: Especially recommended for weather proofing insulated outdoor piping and small diameter equipment.

ADVANTAGES:

Wide Jacket Selection Four different jackets give user a choice to meet every requirement.

* Available perforated

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November 26, 1968

Thorpe Products Company
P. O. Box 33399
Houston, Texas 77033

Attention: Mr. M. P. Proctor

Re: Diamond-Shamrock, Inc.
Asbestos Fibers

Gentlemen:

The information in your letter of November 4, 1968 was transmitted to our Environmental Control Department for reply. This letter referred to the types of fibers used in the following insulation materials:

Thermobestos
Superex
No. 352 Cement
Insulkote ST
Insulkote ET
DC Flexstone

We have received the following reply which we discussed November 8, 1968:

"As discussed in our phone conversation Friday, November 8, 1968, none of the materials listed in your letter contain crocidolite (blue) asbestos fiber. The asbestos fiber in all of these products is chrysotile. In addition, Superex does contain some amosite asbestos fiber.

"Neither I nor our Asbestos Fiber Research Department is familiar with the fiber referred to as "LTU".

/s/ E. M. Fenner"

If you have additional information on the LTU that we can trace it, we shall be happy to do so.

Yours very truly,

B. L. Ross
Insulation Engineer

BLR/bg

cc: M. C. Parmley - Houston
E. M. Fenner - Manville Research
H. M. Ball - GHQ
W. P. Raines - GHQ
T. W. Stockton - Houston
J. M. Sharratt - Houston
File

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