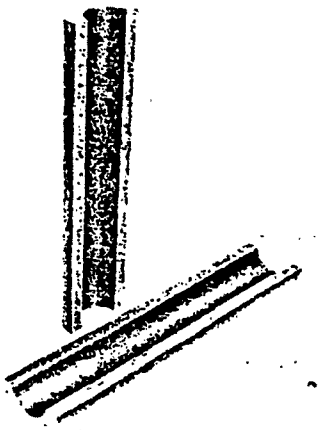
PLAINTIFF'S EXHIBIT

CHV-580

TYPE: Pipe Covering

TEMPERATURE: to 1200° F.

EAGLE-PICHER epitherm 1200



Description: Eagle-Picher EPITHERM 1200 is a molded pipe insulation composed of high temperature mineral fiber bonded together with heat resistant organic binder for all standard nominal pipe sizes up to 24" in diameter. Long, interlaced fibers are coated uniformly with binder and precision molded in 3-ft. long half sections for ease of application. The fibers are oriented parallel to the direction of the pipe to provide high insulating efficiency and high compressive strength.

Uses: Eagle-Picher EPITHERM 1200 Pipe Insulation is designed to insulate heated piping operating at temperatures up to 1200°F. EPITHERM is especially recommended for use in the power generation and process industries.

Advantages:

Thermal Efficiency: EPITHERM 1200 has a superior "K" Factor compared to other existing types of pipe insulations.

Asbestos-Free: EPITHERM 1200 is a completely asbestos-free molded pipe insulation.

Handleability: This pipe insulation is produced from long, interlaced mineral fibers and molded in 3-ft. sections for ease of handling. Being resilient, it will withstand normal mechanical abuse and equipment vibration. Due to the unique physical make-up of the product, breakage in transit or at the jobsite is minimal.

Installation: This light weight, tough, precision molded covering can be applied with minimum effort at reduced installation cost. The insulation can be easily cut with regular applicator's tools in the field to form mitered sections for insulating flanges and valves. On steam and electrical traced lines, the covering can be installed in the same manner generally followed for other rigid type pipe insulation.

High Temperature Stability: EPITHERM 1200 does not shrink, warp, degrade or oxidize at elevated temperatures. As the insulation retains resiliency at the maximum service temperature limit, it absorbs the expansion and contraction of the pipe, thus eliminating open air gaps at the longitudinal and circumferential joints. Being a fibrous insulation, the covering withstands extreme thermal shock without cracking or loss of thermal efficiency.

Corrosion: The pH value of the material is approximately neutral, therefore, it does not cause or accelerate corrosion on metallic pipes.

Stress Corrosion: EPITHERM 1200 can be manufactured to meet Specification MIL-I-24244 (Ships) for application on austenitic stainless steel.

Moisture Resistant: This pipe insulation will resist mildew, mold or bacteria attack.

Acoustical Efficiency: Having excellent sound absorption properties, the product is highly recommended to control noise generated by mecahnical equipment and air movement in the pipe.

Nesting Sizes: EPITHERM 1200 is manufactured in accordance with the Simplified Dimensional Standards to allow nesting sizes for multi-layer applications.

EAGLE PICHER *Superglas*® INSULATION

EAGLE-PICHER
epitherm 1200

Physical Properties:

Service Temperature	to 1200°F.
Density	Nominal 10 lbs./cu. ft.
Moisture Absorption	Nil
Water Absorption	None
Corrosion	Does not cause or accelerate
Fire Resistance	Incombustible
Linear Shrinkage at 1200°F.	None
pH	Approximately Neutral
Compressive Strength*	
At 5% Deformation	620 lbs./sq. ft.
10% Deformation	690 lbs./sq. ft.
Breaking Strength	23.25 lbs.
Modulus of Rupture	33.5 lbs./sq. in.

* Based on 2" thickness of board.
Average values obtained in accordance with accepted test methods.

Thermal Conductivity:

Mean Temperature °F.	"K" BTU-in./hr./ sq. ft./°F.
100	.215
200	.250
300	.300
400	.365
500	.440
600	.510

Standard Sizes:

Length	36"
Pipe Size	½" to 24"
Thickness	1", 1½" and 2"**

Pipe Size	Thickness
½", ¾"	1", 1½"
1", 1¼", 1½", 2", 2½" 3", 3½", 4", 4½", 5", 6"	1", 1½", 2"
7", 8", 9", 10", 11", 12", 14" 15", 16", 17", 18", 19", 20", 21", 22", 23", 24"	1½", 2"

**Pipe Insulation wall thickness is manufactured to fit double and triple layer nesting as specified in ASTM Recommended Practice C585-68.

Applicable Specifications:

Commercial Standard	CS-117
ASTM Spec.	C547-67
Federal Specs.	HH-I-558B, Form D, Type III, Class 12, 13
Military Specs.	MIL-I-2781D, Grade II, Class C, MIL-I-24244 (Ships)***

***Requires certification, chemical analysis and special handling.

EAGLE PICHER
Since 1843
Manufactured by
EAGLE-PICHER INDUSTRIES, INC.
Fibers Department
American Building Cincinnati, Ohio 45202

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Printed in U.S.A. A377

EAGLE-PICHER

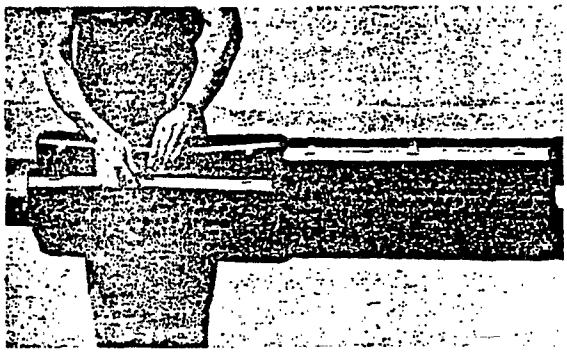
TAB-LOK

Applicable Specifications:

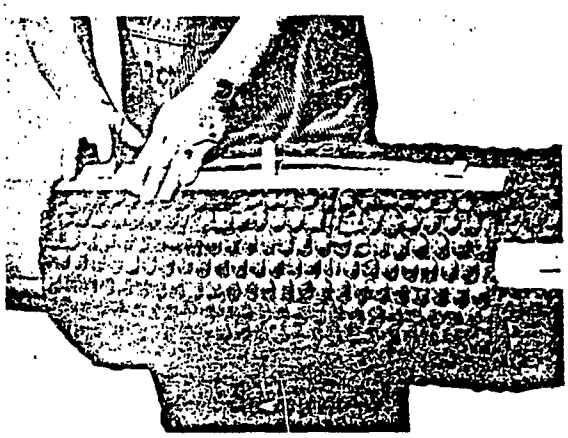
Federal: HH-I-558a, Form D, Type IV, Class 14 & 15
ASTM: C592-70, Class I & II
Commercial Standard: CS-117

Packaging:

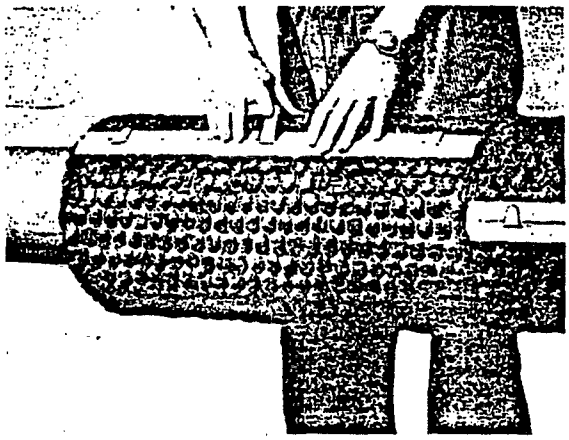
Shipped flat in cartons



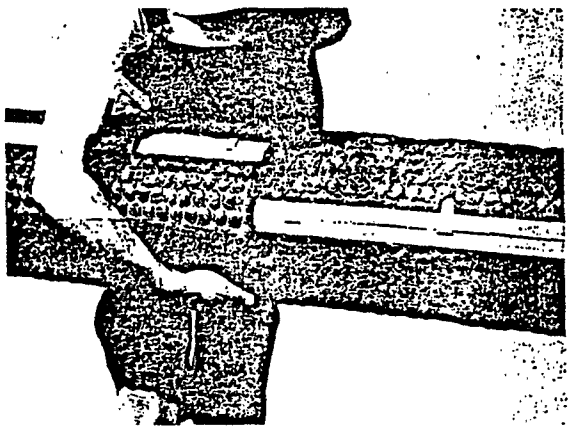
1. Since the center tab is longer than the two end tabs, it is slipped through the slot on the closure strip first and then bent over.



2. With the center tab holding the TAB-LOK Pipe Covering in place, the two end tabs are pulled through the slots and secured.



3. The center tab which had been serving a "holding action" is now pulled up tightly and bent over for maximum tightness.



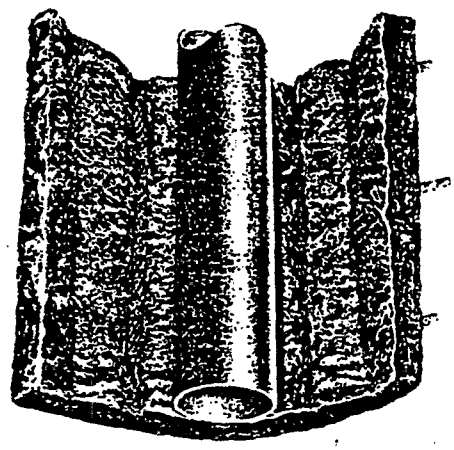
4. A section of pipe TAB-LOK insulated; note the staggered way closure strips are arranged to permit close abutment and to prevent voids.

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TYPE: Pipe Covering
TEMPERATURE: to 1400°F.

EAGLE-PICHER
TAB-LOK



Description: Eagle-Picher Tab-Lok Pipe Covering is fabricated by securing high temperature mineral fibers between metal fabrics. The patented "TAB-LOK" closures are secured to the ends of the outside metal fabric and promote fast installation of the covering around the pipe. The interior metal fabric is applied in strips to offer necessary relief when the covering is wrapped around the pipe.

Uses: Eagle-Picher Tab-Lok is recommended for application on piping or other cylindrical vessels operating at temperatures up to 1400°F. Typical examples are super heated steam lines, furnace duct work and heat exchangers.

Advantages:

Installation: Tab-Lok closure allows quick attachment and snug fit of the covering.

Warehousing: Tab-Lok Pipe Insulation is shipped and stored flat to minimize transportation and in-plant costs.

Vibration: High temperature fiber will not break down or settle under normal vibration at maximum service temperature.

"Joint Free": Resilient fiber core permits close adjustment of adjoining sections to form essentially a joint free construction.

Physical Properties:

Service Temperature . . . . . To 1400°F.*
Density . . . . . Nominal 8 lbs./cu. ft.
Fire Resistance . . . . . Incombustible
Moisture Absorption . . . . . Nil
Corrosion . . . . . Does not cause or accelerate

*Stainless or Monel metal mesh recommended above 1200°F.

Thermal Conductivity:

Mean Temperature	"K"-Btu-in./hr./sq. ft./°F.
200°F	0.260
400°F.	0.385
600°F.	0.560

Standard Sizes:

Length: 2 Lineal Feet
Pipe Diameter: 3" to 30"
Thickness:

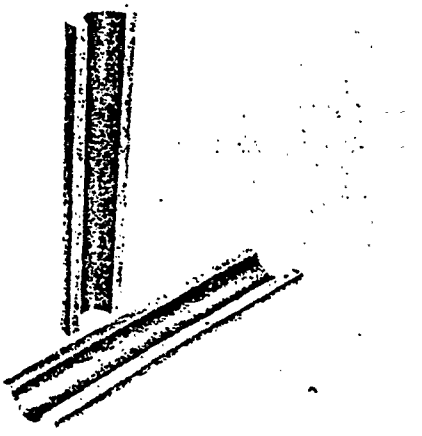
Pipe Size	Available Thickness
3"	1"-1½"-2"-2½" * * *
3½"	1"-1½"-2"-2½" * * *
4"	1"-1½"-2"-2½" * * *
5"	1"-1½"-2"-2½" * * *
6"	1"-1½"-2"-2½"-3" * *
8"	1"-1½"-2"-2½"-3"-3½"-4"
10"	1"-1½"-2"-2½"-3"-3½"-4"
12"	1"-1½"-2"-2½"-3"-3½"-4"
14"	1"-1½"-2"-2½"-3"-3½"-4"
16"	1"-1½"-2"-2½"-3"-3½"-4"
18"	1"-1½"-2"-2½"-3"-3½"-4"
20"	1"-1½"-2"-2½"-3"-3½"-4"
22" and Over	1"-1½"-2"-2½"-3"-3½"-4"

*Use double layer application.

EAGLE PICHER *Superglas*® INSULATION

TYPE: Pipe Covering
TEMPERATURE: to 1200° F.

EAGLE-PICHER
epitherm 1200



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Uses: Eagle-Picher EPITHERM 1200 Pipe Insulation is designed to insulate heated piping operating at temperatures up to 1200°F. EPITHERM is especially recommended for use in the power generation and process industries.

Advantages:

Thermal Efficiency: EPITHERM 1200 has a superior "K" Factor compared to other existing types of pipe insulations.

Asbestos-Free: EPITHERM 1200 is a completely asbestos-free molded pipe insulation.

Handleability: This pipe insulation is produced from long, interlaced mineral fibers and molded in 3-ft. sections for ease of handling. Being resilient, it will withstand normal mechanical abuse and equipment vibration. Due to the unique physical make-up of the product, breakage in transit or at the jobsite is minimal.

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EAGLE PICHER *Superglas*® INSULATION