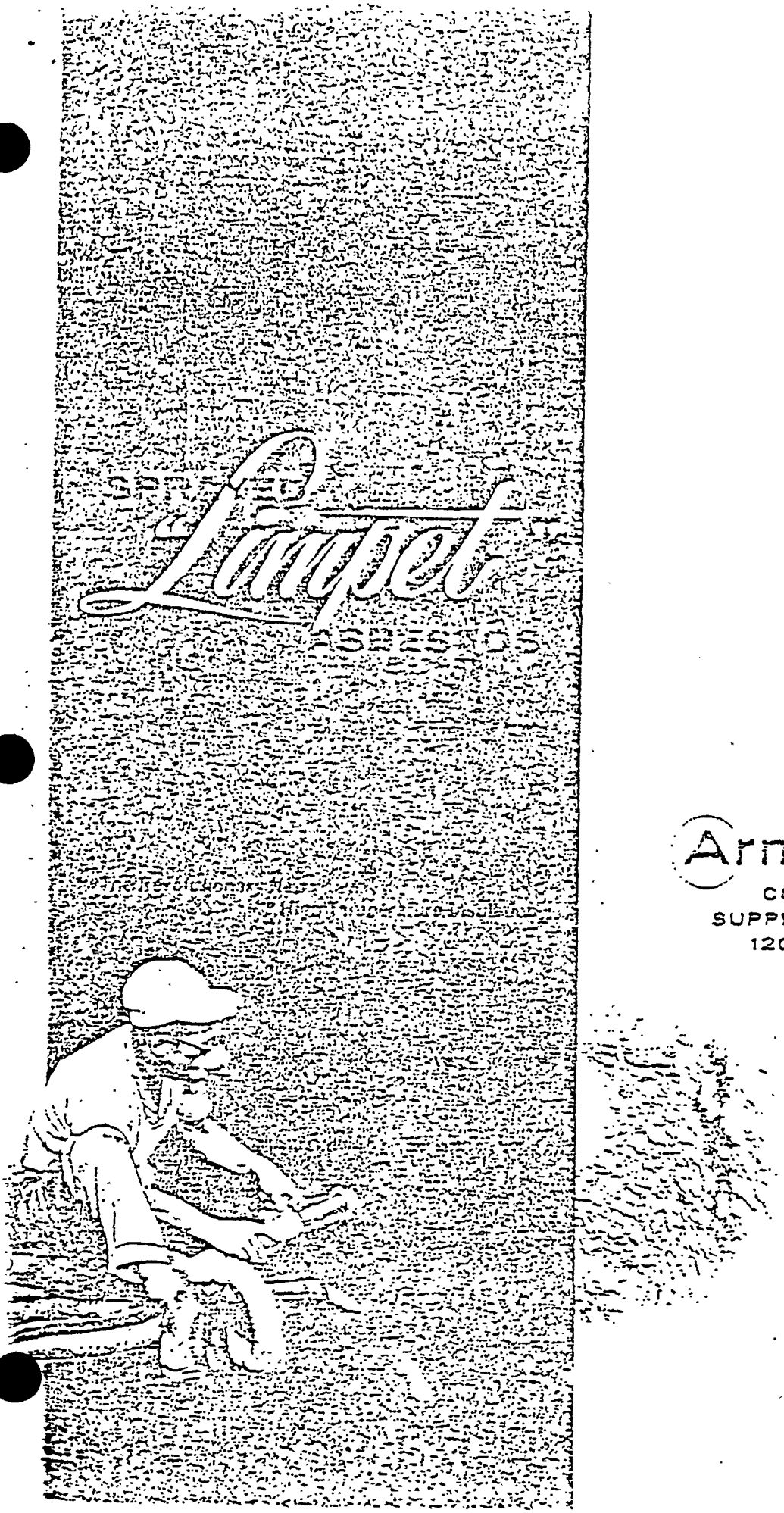
PLAINTIFF'S
EXHIBIT
SMF-154

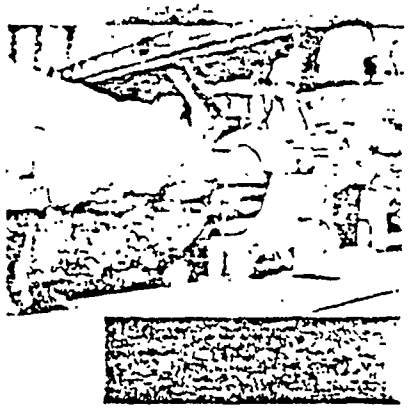


Armstrong
CONTRACTING AND
SUPPLY CORPORATION
120 North Lime Street
Lancaster, Pa.

a 189

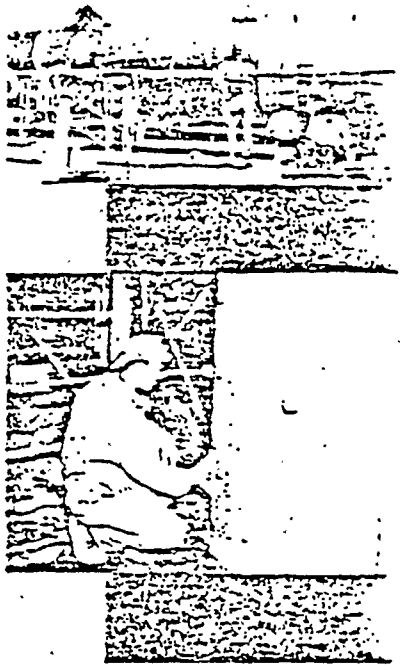
PRODUCT DESCRIPTION

Sprayed Limpet Asbestos is a scientific blend of carefully selected asbestos fibers and an inorganic binder. Packaged in a dry fibrous form, it is fed into a patented machine and sprayed in combination with finely atomized water to form a lightweight heat resistant seamless flexible coating. It will adhere to any clean surface and after application can be weatherproofed in the same manner as any other conventional block or blanket insulation. Limpet is produced in two types; white and blue. White Limpet, made of amosite asbestos, has a temperature limit of 700°F. Blue Limpet (slightly more expensive) is crocidolite asbestos and has a recommended temperature limit of 1350°F.



SPRAY PROCESS

The Sprayed Limpet Asbestos process of insulation consists of spraying dry asbestos fibers from the nozzle of a specially designed gun, in conjunction with a finely atomized mist of water. The water mixes with the asbestos fiber before it impinges on the surface being insulated, forming a semi-plastic coating. This Sprayed Limpet Asbestos coating is pressed to conform to the contour of the underlying structure. The coating dries out naturally and rapidly, without artificial heating, and serves to combine the important characteristics of efficiency and strength with durability and pleasing appearance.



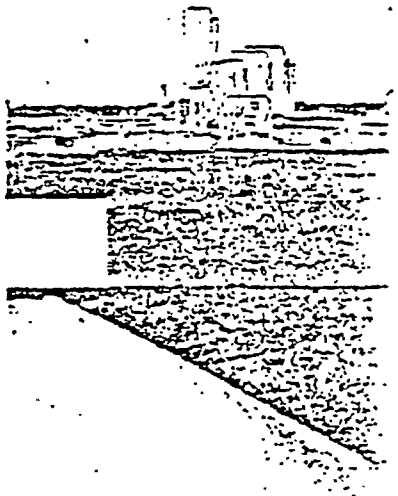
APPLICATION AND USES

Limpet has been successfully applied to steam and gas turbines, boilers, ductwork, rotary digestors, precipitators, fan housings, storage tanks, valves, tubeturns, piping (with a minimum diameter of 10 inches) and to many other pieces of equipment where insulation is normally required. While used primarily as thermal insulation for temperatures up to 1350°F Limpet simultaneously provides fire protection, noise reduction, condensation control and corrosion prevention.

ADVANTAGES

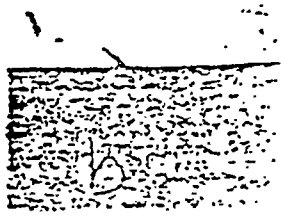
Because Limpet is sprayed on, it eliminates the necessity for cutting, fitting and pointing joints. It mechanizes the insulation process which to date involves hand application. In most instances it requires less reinforcing than conventional insulation and, in many cases, no reinforcing at all. The following table compares its features with other common types of insulation:

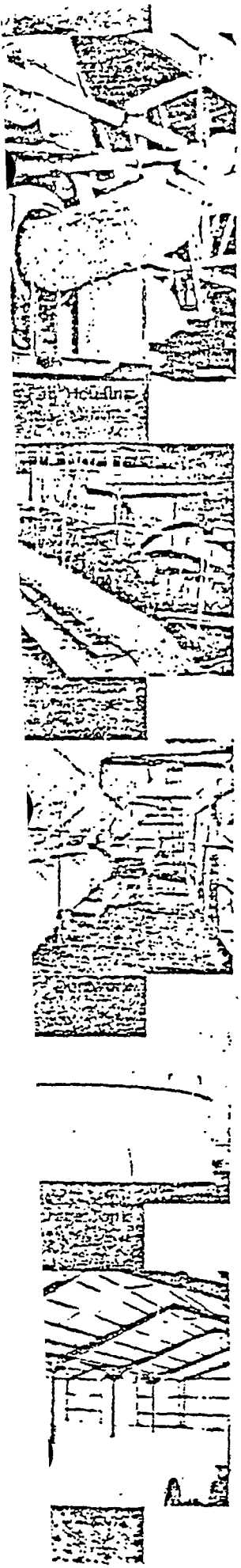
FEATURES	LIMPET	BLOCKS	BLANKETS	CEMENT
Good "K" Factor	x	x	x	x
Fast Application for large areas	x		x	
No cutting or fitting	x			x
Any thickness in one layer	x			
Fast drying	x	x	x	
Clean	x		x	
Perfect face contact on all shapes	x			x
Minimum reinforcement	x			
Easily patched	x			x
Resistance to vibration	x	x		
No joints	x			x
Machine applied	x			



REINFORCING

Where Limpet encases equipment, and lies into itself, it is self-supporting. On large ducts, because of vibration and dead weight, Limpet insulation generally requires reinforcing on the bottom and sides. This reinforcing can take the form of welded pins and speed-washers or if the weatherproofing finish requires reinforcing, the imbedded hexagonal mesh or cloth may be satisfactory.





FINISHES

All conventional types of insulation finishes are compatible with and will perform satisfactorily over Limpet. Depending on service conditions and customer preference the most common of these are trowel and spray mastics, sheet metal, corrugated aluminum, hard cement finishes, etc.

PACKAGING AND PRODUCT DATA

Limpet LW.25—Packaged in 34 lb. bags. For high temperature insulation to 700° F (hot face). Also for condensation control, fireproofing, corrosion prevention and noise reduction.

Limpet LB. 5—Packaged in 70 lb. bags. For high temperature insulation to 1350° F (hot face).

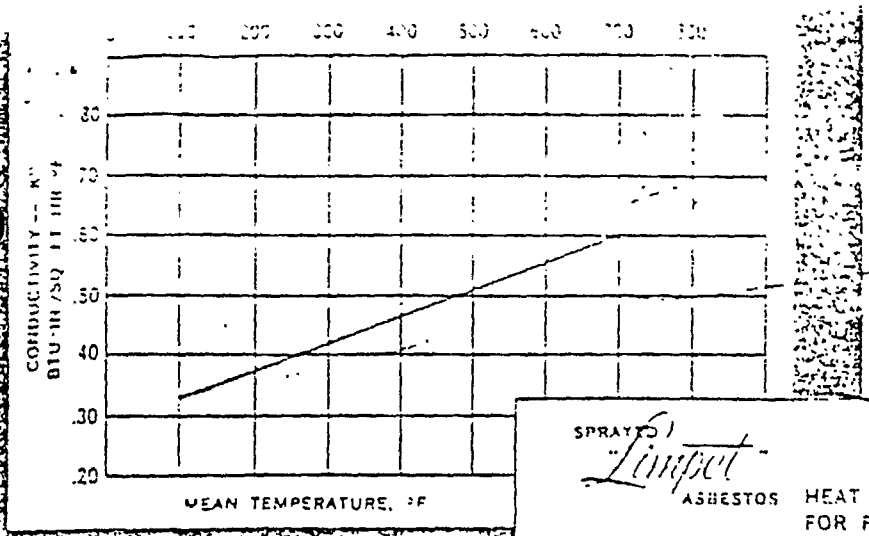
BD. 2 Cement—Packaged in 50 lb. bags. Trowellable, not sprayable. Used as hard finish over Limpet fiber or as a base for mastic weatherproofing.

CUSTOMER SERVICE

The sale of Limpet is confined to an installed basis due to the need for special patented equipment and highly skilled carefully trained personnel.
Specifications, Technical Service, backed by extensive practical experience, and Quotations are available from all of the Armstrong Contracting and Supply offices listed on the back of this folder. Licensed Limpet applicators are located in all principle countries. For assistance on foreign projects contact Lancaster.

PHYSICAL CHARACTERISTICS

Density (after spraying and drying)	8 to 12 lbs. cu. ft., average
Thermal Conductivity	0.33 Btu.-in. sq. ft.-hr.-°F @ 100 0.50 Btu.-in. sq. ft.-hr.-°F @ 500
Compressive Strength	5 lbs., sq. in. (25% compression)
Specific Heat	0.25
Alkalinity	pH value of 10
Drying	24 hours at 70°F, 60% R. H. and 2' of air per minute before application of mastic
Curing	Reaches 90% of ultimate strength in seven days
Setting time	2 to 3 hours, depending on temperature, humidity, and air movement
Expansion and contraction	The expansion and contraction of any cycling metal surface is absorbed and nullified by the fibrous nature of the coating
Combustability	Completely incombustible
Corrosion	Inhibits corrosion of steel
Resistance to acids	Gives sacrificial protection against acid vapors and splashes, but is not recommended for continuous exposure to liquid acid conditions
Resistance to caustics	Good
Resistance to solvents	Completely resistant to all solvents
Weatherability	Inherently resistant to ravaging effects of weather such as rain, snow, freezing temperatures, etc.
Vibration Resistance	Good
Hardness	Average penetration, 3 mm.
General	Will not mildew, crack or rot and will not sustain rodents or vermin



SPRAYED "Limpet" ASBESTOS

HEAT TRANSMISSION FOR FLAT AND LARGE DIAMETER CURVED SURFACES

S T — Surface Temperature.
H L — Heat Loss.

Expressed in Btu per square foot per hour, based on 80°F ambient still air temperature.)

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Colored blocks indicate optimum thickness based on heat conservation under most operating conditions.

WARRANTY

Armstrong Contracting and Supply Corporation warrants the satisfactory performance of Sprayed "Limpet" Asbestos when applied by Armstrong Contracting and Supply Corporation and in accordance with Armstrong's recommended specifications. This warranty shall be valid for a period of twelve months following the date on which application is completed.

OFFICE LOCATIONS

Atlanta, Ga.
Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Buffalo, N. Y.
Charleston, W. Va.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Columbus, Ohio
Dallas, Tex.
Denver, Colo.
Detroit, Mich.
Elizabeth, N. J.
Harrisburg, Pa.
Hartford, Conn.
Carolina, P. R.
Houston, Tex.
Indianapolis, Ind.
Jacksonville, Fla.
Kansas City, Mo.
Los Angeles, Calif.
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Spokane, Wash.
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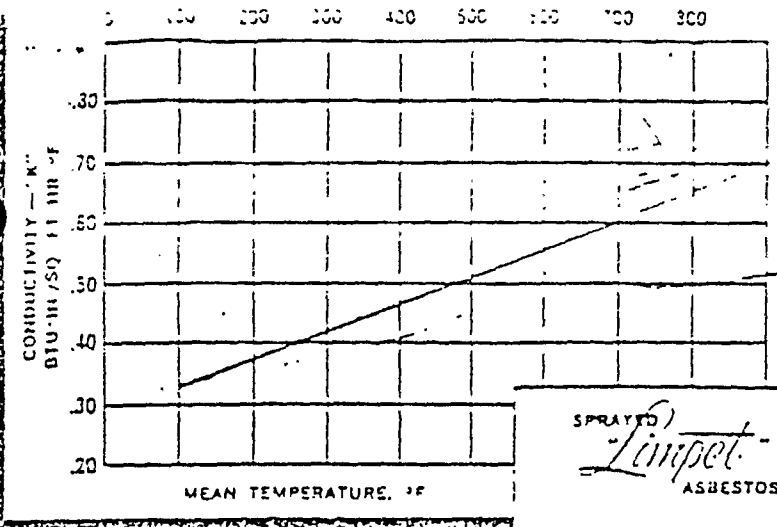
CONTRACTING AND SUPPLY CORPORATION



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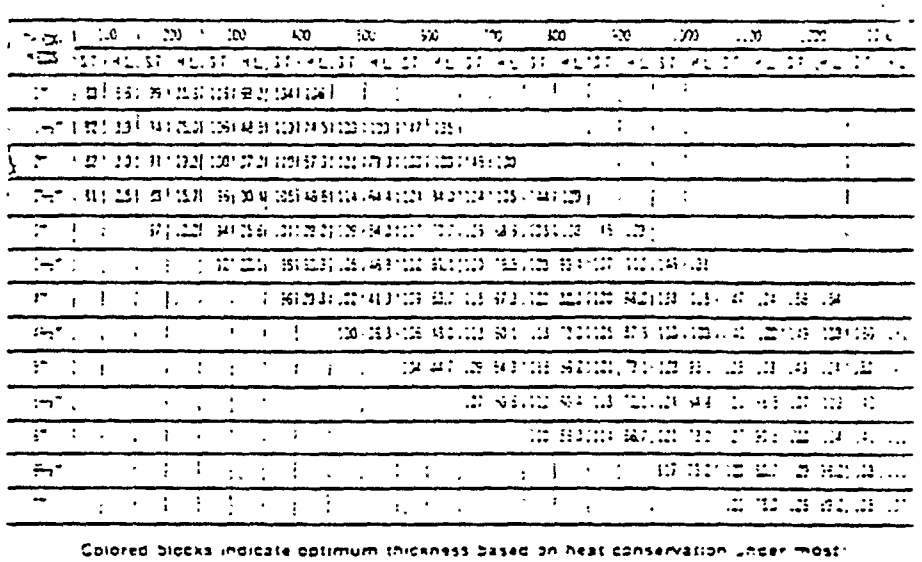

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