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DOCUMENT DESCRIPTION: Letter to DuPont Magazine Requesting
Samples of W.S. Libbey Co.'s High Temp Insulation Tapes

WHD/ug



January 18, 1979
17.48 General

W. S. Libbey Company
"DuPont Magazine" Offer
1 Mill Street
Lewiston, ME 04240

Gentlemen:

I would appreciate your sending me samples of W. S. Libbey Company's high temperature insulation tapes and cloth of 100 per cent "Nomex" aramid; also a descriptive folder listing properties, ASTM test data and available put-ups. An article describing these tapes and cloth appeared in a recent issue of "DuPont Magazine."

Very truly yours,

A handwritten signature in dark ink, appearing to read "W. M. Harrison". The signature is written in a cursive, flowing style.

W. M. Harrison
Chief of Environmental Engineering

*Mr. H. J. ...
as info. 1/29/79*

Insulation products
made of "Nomex" aramid fiber
offer industry an important new

Alternative to Asbestos

Shipbuilding is largest potential market for Libbey
tapes and cloth of "Nomex" aramid fiber. Insula-
tion properties are excellent and installers find
that it's easy to apply the tapes and cloth to the pipes.

Lewiston, Maine

For most of its 75 years, W. S. Libbey Company was a family-owned, old-line blanket mill in this typical New England mill town. Its wares reflected the tastes of its times, from Indian blankets and blankets bearing college or fraternity symbols to coverings for electric blankets. Then, about five years ago, following a fire that destroyed part of the mill, a major replacement and modernization of machinery, and the acquisition of a new management team, Libbey found a new opportunity and a new challenge.

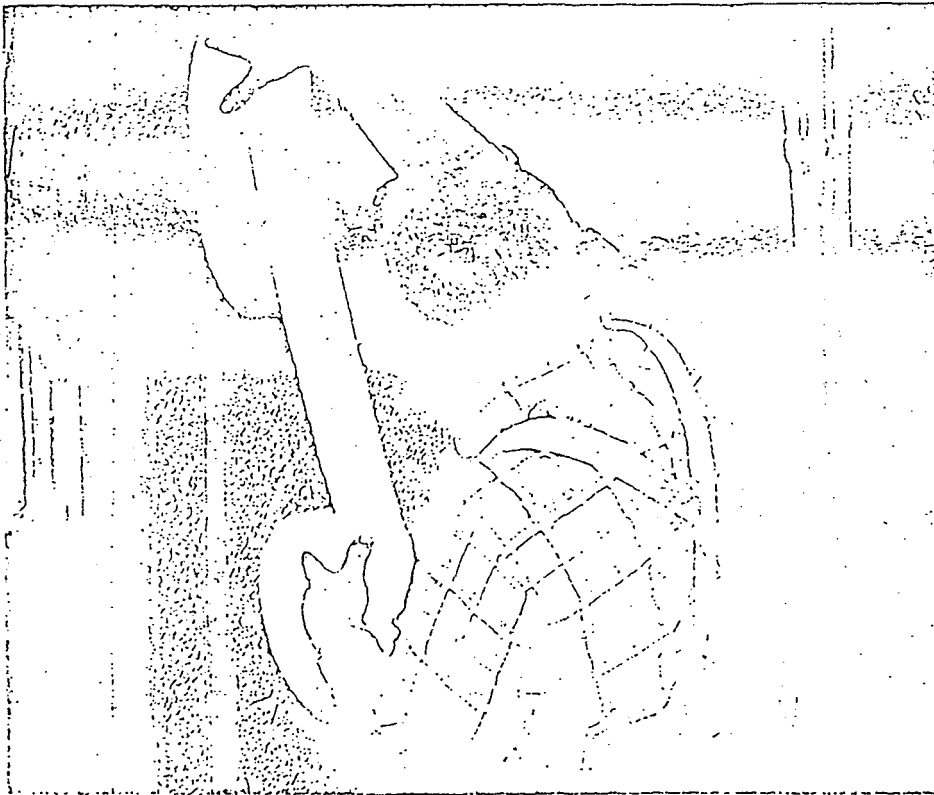
A key factor in the mill's change of direction is "Nomex" aramid, Du Pont's high-temperature-resistant fiber. Introduced commercially in 1963, "Nomex" has proved its flame and heat resistance worldwide in a variety of industrial and specialty applications—from protective clothing to filter bags.

About two years ago, W. S. Libbey Co.

decided to develop a line of high-temperature-resistant specialty products, made with "Nomex", for industrial markets. "Our initial commitment was based on the properties of 'Nomex'," says Herschel Sternlieb, vice president, marketing and sales, for Libbey. "Then we realized that current concern over the health hazards inherent in asbestos gave us an opportunity to respond to an important industrial need for a safer insulation product. Our mill equipment is modern, and unusual—extremely well-suited to the processing of 'Nomex'. And, being a small mill, we can work with our customers to meet their special needs."

The sense of smallness is lost on the visitor who climbs five long flights of stairs and views huge rooms filled with textile machinery and some 250 employees turning out Libbey products. "We know the capability of every piece of equipment in the mill and how to get the best out of each," says Sternlieb. "We really feel 'Nomex' and Libbey were made for each other."

Currently, Libbey's single largest market for products of "Nomex" is in hot air filtration fabrics used in industrial bag houses to prevent pollution. However, Sternlieb and marketing manager Bill Graham feel that the company's future lies in its thermal insulating tapes and cloths as replacements for asbestos in industrial pipe and duct applications. "The health hazards posed by asbestos have created a need for a safe and effective substitute," Graham explains. "We



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(Du Pont's magazine)

pel that our tapes and cloth made of 100 percent 'Nomex' provide the best answer to this need. They perform well at temperatures up to 600°F (316°C) and have excellent chemical, mechanical and abrasion resistance. They're lightweight and easy to apply over bare pipe or solid thermal insulation, even around odd shapes."

Among industrial users of Libbey tape and cloth of "Nomex" is Westinghouse Electric Corporation's Large Motor Division in Buffalo, N.Y., where DC motors and generators ranging from one horsepower to 1,500 hp (0.75 to 1,119 kilowatts) are made. Until about three years ago, woven asbestos was used to provide electrical insulation in the construction of field cores and armatures for DC machines. "A corporate program was started in 1976 to phase out our use of asbestos because of the health hazard to employees," says materials engineer Gene Barry.

"Since there were at least 11 major applications where we had been using asbestos—each with different requirements—we had to evaluate a large variety of materials as replacements," he continues. "As a result, we've eliminated about 83 percent of our asbestos applications and will get rid of the rest as soon as we can. Right now, we're trying to get MSHA (Mine Safety and Health Administration, U.S. Dept. of Labor) to change its specifications to permit the use of 'Nomex' instead of asbestos."

Barry feels there's no such thing as a universal insulator. "The Libbey tapes

and cloth of 'Nomex' are good, very good; easy to use and reliable. But fiber glass is good, too, for certain jobs. We use both materials, individually and in combination, depending on the equipment in which they'll be used and the environment in which they'll operate."

Bill Cassada, industrial foreman at General Electric Company's service shop in St. Louis, Mo., also has found "Nomex" to be an excellent replacement for hazardous asbestos. In this repair facility for heavy industrial equipment—such as motors, transformers and generators—brazing and tungsten inert gas welding are common repair practices.

"In replacing a pole face bar on a DC motor or generator, for example," Cassada says, "we want to keep the molten metal from getting on the insulators. So we cover the insulators with Libbey's tape made of 'Nomex'. We also use the tape on larger armatures between the risers on a large commutator where it's welded to the conductor to keep excessive heat from going back into the windings. We previously tried heavy cotton stay-binding and fiber glass fabrics as heat guards in these applications, but the cotton burned and the binders in the fiber glass broke down. 'Nomex' does the job. We're exploring other ways of using it in the few applications where

we haven't yet found an adequate replacement for asbestos. We recently started using Libbey's welding blankets. They're made of a double layer of 'Nomex' with aluminum foil in between, and used to hold slag and prevent roll-off that might harm people and machinery."

Libbey's Sternlieb sees the biggest potential market, and the greatest marketing challenge, for his company's products in the shipbuilding industry. "The advantages of 'Nomex' over fiber glass



Installers of lagging cloth on pipes and fittings prefer Libbey tapes and cloth of "Nomex" because they handle like canvas and can be torn to fit, which they find is faster and easier than using scissors.

seem obvious to us," he says candidly. "But we're caught between shipyards saying they can't use our products until the Navy specifies them, and the Navy saying they can't change the specs until shipbuilders complain about the way they're written. We hope that evaluations now being made by a number of shipyards will result in the specs being altered to permit the use of 'Nomex'. It would be in everyone's best interests."

Better Than Fiber Glass

Warren K. Watters, manager of Reilly-Benton Co., New Orleans, agrees. His company distributes insulation materials to the marine and industrial markets and operates a contract installation department to serve them. "Since the Navy virtually banned the use of asbestos in shipbuilding, fiber glass has become widely used. But it has limitations which make it less than the best substitute. It abrades, and when it's painted over, it loses flexibility, becomes brittle and cracks readily. Those things don't happen with 'Nomex'."

Libbey tapes and cloth made of "Nomex" are easier for installers to work with, Watters adds. "Most veteran installers like to use an 8-ounce (227-gram) canvas for lagging—covering pipes and fittings. And they like lagging cloth made of 'Nomex' because it looks and handles like canvas. They even can tear it like canvas, which is faster than using scissors. And Libbey tape is easier to apply, especially around odd-shaped bends and joints because—unlike fiber glass—it's

stretchable. It also has more loft, or bulk, which increases insulating value."

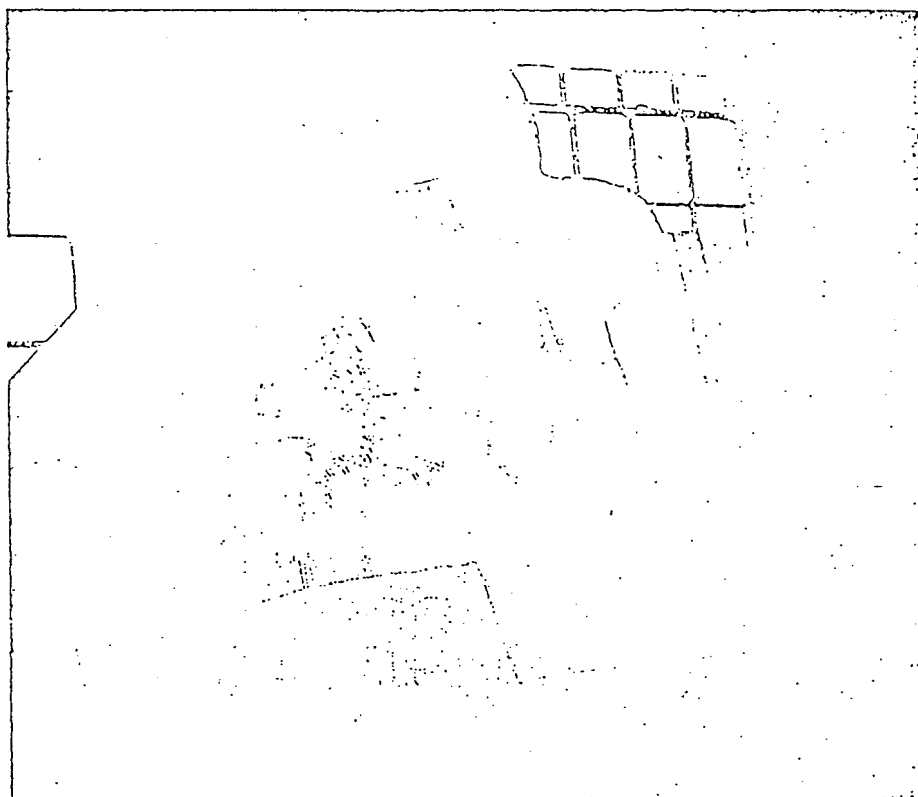
About 95 percent of shipbuilding insulation requirements can be met by "Nomex", according to Libbey's Sternlieb. "I find it inconceivable that the Navy won't rewrite specifications to permit its use," he says. "So do shipbuilders who have evaluated our tapes and cloth. Sure, 'Nomex' costs more than fiber glass, but it delivers greater value."

Libbey marketing manager Bill Graham reports that shipbuilders he has visited recently show a growing desire to have the specifications changed. "Many of them flatly state that fiber glass isn't working out well for them," he says. "Because of the difficulties of working with it, some shipyards have to pay union workers an additional 45 cents an hour. That's a heavy premium; it more than offsets the higher cost of 'Nomex'. All in

all, it's becoming evident that many shipyards are looking for a better alternative—and we're betting that they will find it in 'Nomex'."

If Graham is right, Libbey's commitment to "Nomex" should pay off handsomely. In slightly more than a year, the company's use of "Nomex" in insulation products has increased at the rate of 30 percent each month. Says Hersch Sternlieb: "For those products alone, we forecast sales to top \$100,000 a month in the coming year. And for a small textile mill, that's not bad."

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Libbey also makes welding blankets, using a double layer of "Nomex" with aluminum foil in between, as a substitute for asbestos to hold slag and prevent roll-off that might harm both people and machinery.