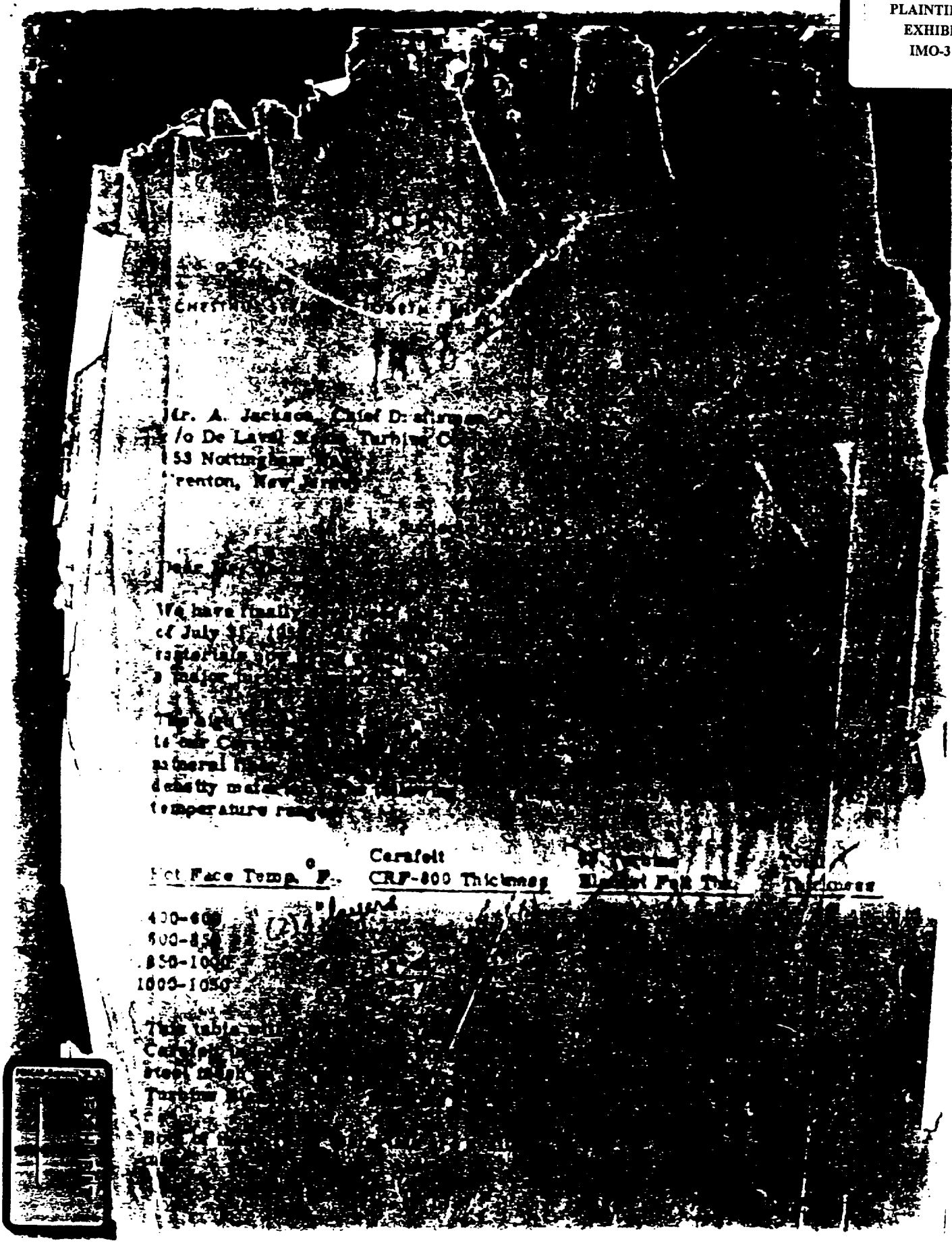
PLAINTIFF'S
EXHIBIT
IMO-31



CHESTNUT [illegible]

Mr. A. Jackson, Chief Draftsman
c/o De Laval Steam Turbine C[illegible]
53 Nottingham [illegible]
Trenton, New Jersey

Dear Mr. [illegible]

We have finally [illegible]
of July [illegible]
materials [illegible]
a major [illegible]

[illegible]
to our C[illegible]
mineral [illegible]
density mat[illegible]
temperature range [illegible]

Hot Face Temp. °F.	Cerafelt CRF-800 Thickness	[illegible] Thickness
400-600	[illegible]	[illegible]
600-850	[illegible]	[illegible]
850-1000	[illegible]	[illegible]
1000-1050	[illegible]	[illegible]

This table [illegible]
Cerafelt [illegible]
steel [illegible]
Turbine [illegible]
[illegible]
[illegible]

TX0117

The advantage of felted fillers such as these over the loose Amosite that you now purchase are easier fabrication, more uniform and efficient insulation, less total cost. Cera/felt is described in the attached brochure. The 8 lb. Turbine Blanket Felt is available in a standard size 24" X 48" X 2" thick. We are arranging to have samples of both of these materials forwarded to you for inspection.

Many thanks for your patience and interest. We look forward to discussing this with you in the near future.

Very truly yours,

W. C. Roth
Sales Representative

WCR:AG

TX0118

TO [illegible]

DE LAVAL TURBINE INC.
853 NOTTINGHAM WAY
TRENTON, N. J. 08602
PHONE: 609 - 587-5000

DATE 1-20-70

SUBJECT

Message

A [illegible] FROM EASTERN [illegible] CO. INC. WAS IN THE OTHER DAY TO DISCUSS THEIR ERCO-MAT [illegible] A.J.J. [illegible] AGREED THAT WE LOOK AT [illegible] EVALUATE [illegible] FOR [illegible] USE. I [illegible] COPIES OF [illegible] FOR [illegible]

THESE [illegible] US [illegible] MEETING [illegible] TECHNICAL [illegible] RECOMMENDATIONS OF [illegible] POSSIBLE USE BY US.

PLEASE COMMENT.

Jim Haldin
SIGNED

Reply

Yes we use Johns-Manville Cerafelt "CRF-800" SLB. Since Sept 1958. For Turbine "BLANKET" insulation. This give us 140°F Surface temp when using on 1050°F metal temperature @ 2" THICKNESS.

We need this 2" Thickness to "bend" over turbine case horizontal joint face & other turbine part areas.

"ERCO-MAT" needs 4" THICK which would be too "heavy" to contour to case profiles

DATE

SIGNED 1/21/70

P.S. I HAVE NO $ FIGURES TO COMPARE!

COPY FOR PERSON ADDRESSED

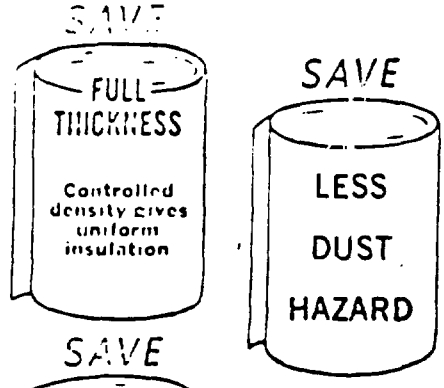
TX0119

from

EASTERN Refractories Co., Inc.

ERCO-MAT 1300

A LIGHTWEIGHT FLEXIBLE HIGH-TEMPERATURE INSULATION



THICKNESS RECOMMENDATIONS			
Temp. Range ° F.	ERCO-MAT 1300	Competitive Material	Savings
125 338	1"	1½"	½
339 388	1½"	2½"	1
389 500	2"	3	1"
501 750	2½"	3½"	1"
751 850	3"	4½"	1½"
851-950	4"	5"	1"
951-1050	4"	5"	1"

ERCO-MAT 1300 SAVES

- material costs
- labor
- waste
- storage space

AVAILABLE IN TWO THICKNESSES
½" and 1"

ERCO-MAT 1300 retains strength and thickness, is needled throughout . . . no binder or membrane to burn out. Sufficient body to withstand punishing vibration, abrasion and compression. Easily fitted to curved, flat or irregular surfaces and obstacles.

TX0120

DATA SHEET

ERCO-MAT 1300

HIGH TEMPERATURE FLEXIBLE INSULATION

PRODUCT: ERCO-MAT 1300 is a flexible, lightweight blanket for insulating high temperature equipment in the full range to 1300°F. The long glass fibers are needled throughout and contain no binder or membrane. The fiber reduces dust hazard. ERCO-MAT 1300 requires approximately ⅓ less material than other insulation specified for its uses because of lower thermal conductivity; will not compact or shake down under severe vibration or compression.

APPLICATION: ERCO-MAT 1300 withstands temperatures to 1300°F., is easily hand-cut or machined to be fitted to irregularly shaped equipment for removable pads or covers. Specified for turbines on military or merchant ships and utility power facilities — valve and flange covers — supercharger covers — pumps — exhaust pipes.

PHYSICAL PROPERTIES:

Thermal Conductivity

300°F 0.27 BTU in/hr ft² °F
500°F 0.41 BTU in/hr ft² °F
700°F 0.52 BTU in/hr ft² °F

Tensile Strength

Parallel to roll	13.8 psi
Across roll	15.3 psi

Tensile Strength (Ave.)

(After heating to 1200°F for 6 hours)

Parallel to roll	14.7 psi
Across roll	16.5 psi

Weight

6 ounces (±10%) per sq. ft. for ½" nominal thickness; 16 ounces (±10%) per sq. ft. for 1" nominal thickness.

Fineness of fiber

Average fiber diameter 0.00035 inch

Fusion Temperature

No fusion or melting at 1300°F

Alkalinity

0.00%

Stability

No physical change after being subjected to saturated steam at 225 lbs. for 16 hours.

Resistance to Vibration

Excellent

STANDARD SIZES:

ERCO-MAT 1300 is furnished in ½" and 1" thicknesses in rolls 60" wide by 25 and 15 yards long, respectively. If greater thickness is required, ERCO-MAT 1300 is easily applied in multi-layers.

SPECIFICATION COMPLIANCE:

Manufactured to conform to Military Specification MIL-I-16411C except for density.

TX0121

EASTERN REFRACTORIES CO., INC., Belmont, Mass. 02178

[illegible] 1 3 0 0

[illegible] PRICES

[illegible] - Rolls 60" wide - 375 sq. ft. per roll

1 to 19 rolls	$0.285 per sq. ft.
20 to 149 rolls	$0.27 per sq. ft.
150 rolls and over	$0.255 per sq. ft.

F. O. B. BELMONT, MASSACHUSETTS

1" Thickness - Rolls 60" wide - 225 sq. ft. per roll

1 to 19 rolls	$0.62 per sq. ft.
20 to 149 rolls	$0.59 per sq. ft.
150 rolls and over	$0.565 per sq. ft.

F. O. B. BELMONT, MASSACHUSETTS

[illegible] REFRACTORIES CO., INC.
[illegible] Road (P. O. Box 156)
[illegible], Massachusetts 02178
Tel. 617/[illegible]-0700

DATE: 4/1/[illegible]
SUPERSEDES: 12/[illegible]

TX0122