PLAINTIFF'S EXHIBIT CRA-46

W.O. 429

ER: 731

CRANE CO.

ENGINEERING PURCHASE SPECIFICATION
ENGINEERING DIVISION

August 26, 1957
Engineering Purchase Specification No. WO-429

"CRANITE" SHEET PACKING

1 - SCOPE

These specifications cover compressed asbestos composition sheet packing known as "Cranite" which is suitable for use as a gasket material on a wide variety of liquids and gases encountered in pressure-piping system.

NOTE: The name "Cranite" is registered in the United States Patent Office.

2 - DETAIL REQUIREMENTS

(a) Packing shall be suitable for use on steam, water, oil, air, acids, ammonia, alkali, gasoline, gases and for temperatures up to 750 degrees F.

(b) Sheets shall have a yellow tinted color, practically parallel smooth surfaces, uniform hardness and density. They shall be pliable, resilient and suitable for gaskets to prevent the leakage of fluids on pressure joints.

(c) Material shall be suitable for cutting into gaskets using steel rule dies, without sticking to or causing unreasonable wear on dies.

(d) The finished sheet shall not be graphited or otherwise coated.

(e) Sheets 1/32" or more in thickness shall be cross-laminated, i.e., the plies are at right angles to each other.

(f) The finished sheets shall be free from solvents used in the process of manufacture.

(g) Every square foot of packing shall be plainly marked on one surface only in accordance with Crane Co. drawing. All marking shall be in Crane Orange. Color sample for base and drawings for marking to be obtained from Crane Co.

(h) Packing shall not deteriorate with age while in stock for a period of 5 years and shall not cause objectionable corrosion of finished metal surfaces with which it is in contact.

3 - MATERIAL

(a) Packing shall consist basically of 75 to 85% Crysotile asbestos, the balance consisting of a natural rubber binder and inert fillers properly mixed, assembled and processed to produce a sheet which meets the requirements specified herein.

(b) Packing which manufacturer proposes to furnish to these specifications must have the approval of the Underwriters' Laboratory (Underwriters' of Fire Underwriters), Chicago, Illinois, for use of gaskets on hazardous liquids.

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003408

"CRANITE" SHEET PACKING

4 - DIMENSIONS

Dimensions of sheets shall be as specified on purchase order, and thickness shall be within the following tolerances:

THICKNESS	TOLERANCES
1/64"	±.003"
1/32"	±.003"
1/16"	±.006"
3/32"	±.009"
1/8"	±.012"
3/16"	±.012"
1/4"	±.012"

5 - PHYSICAL PROPERTIES

Tensile Strength

When tested in accordance with procedures outlined in ASTM Spec. D733 the packing shall have a tensile strength of 4,500 pounds per square inch minimum in any direction.

Compression Strength

When cured for one hour at 212°F the packing shall have a compression strength of 46,000 pounds per square inch minimum.

Weight Loss on Exposure to High Temperature

Three specimens from each shipment shall be held at a temperature of 900 F for a period of 24 hours, then cooled to room temperature in a dessicator. The weight loss shall not exceed 13%.

6 - CERTIFICATION

Vendor shall furnish 2 copies of a certificate of quality with each shipment stating that material complies with the minimum requirements of this specification.

7 - WORKMANSHIP

Packing shall be free from imperfections and any injurious foreign particles.

8 - WEIGHT

The weights of the finished packing shall conform to the following:

THICKNESS	POUNDS PER SQUARE YARD MINIMUM	MAXIMUM
1/64"	1.00	1.3
1/32"	2.2	2.7
1/16"	4.4	5.4
3/32"	6.6	8.1
1/8"	8.8	10.8
3/16"	13.2	16.2
1/4"	17.6	21.5

003409

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"CRANITE" SHEET PACKING

9 - PATENTS
Seller agrees to indemnify and hold harmless and protect buyer, its affiliated and subsidary companies, successors, assigns, customers and users of its products, from and against all loss, damages, liabilities, claims, demands (including attorney's fees) and suits at law or equity for actual or alledged infringements of any patents, trademarks or corresponding rights to the materials or articles called for hereby.

10 - INSPECTION (BY CRANE CO.)
Each shipment of material received shall be inspected by the Inspection and Metallurgical Departments for compliance with these specifications, and approved before releasing to the shop for use.

11 - REJECTION
Crane Co. reserves the right to reject any portion or all material purchased to these specifications which fails to conform to the requirements specified herein or which is found to have injurious defects during fabrication.

12 - PACKING FOR SHIPMENT
All material shall be suitably protected against damage during shipment and ordinary handling.

All material shall be properly separated by size and order number.

Sheets shall be packed in suitable containers so they can be handled conveniently at destination, and the weight of each package shall not exceed that specified on purchase order.

Each container shall be marked to designate:

Size and thickness of sheet

Engineering Purchase Specification number

Name of manufacturer

Purchase Order number

Net weight.

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003410