PLAINTIFF'S EXHIBIT
WH-811

PROCESS SPECIFICATION
MAKING AND ATTACHING GLASS-FILLED ASBESTOS CLOTH COVERED THERMAL INSULATING BLANKETS

60-03-59

SUB. DATE	NO.
8-1-48	2
4-27-49	3
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GENERAL: This specification covers the making and attaching of glass-filled asbestos cloth-covered thermal insulating blankets, mattresses or bags for steam turbines.

CAUTION CLAUSE: DO NOT BREATHE DUST FROM FIBERGLAS OR ASBESTOS. AVOID CONTACT OF FIBERGLAS OR ASBESTOS WITH THE SKIN. WORKERS HANDLING FIBERGLAS OR ASBESTOS MUST BE PROVIDED WITH AND USE A WELL VENTILATED ROOM, AND BLANKET FILLING OPERATIONS MUST BE CONDUCTED UNDER A HOOD PROVIDED WITH SUFFICIENT DRAFT TO CARRY THE DUST PARTICLES AWAY FROM THE WORKMEN. IN ADDITION, THE WORKMEN MUST BE PROVIDED WITH AND USE GOGGLES AND SHOULDER LENGTH GLOVES OF AN INOFFENSIVE MATERIAL. USE RESPIRATORS ON ANY JOB WHERE THE DUST IS NOT PROPERLY CARRIED AWAY BY THE HOOD.

The specification is divided into five PARTS as follows:

"GENERAL" PART: This part covers the requirements of construction that apply equally to PARTS I, II and III and are given in "GENERAL" to avoid duplication in each of the three parts.

PART I: This part covers the manufacture of blankets for steam turbines operating at temperatures up to 500°F.

PART II: This part covers the manufacture of blankets for steam turbines operating at temperatures between 500° and 825°F.

PART III: This part covers the manufacture of blankets for steam turbines operating at temperatures between 825° and 950°F.

PART IV: This part, appearing in the original edition of this specification, has been cancelled and combined with PART III.

PART V: This part covers the method of attaching the blankets to the turbine.

"GENERAL" PART

Fill all blankets with Fiberglas Wool, Material 7793, to a uniform density of 6 pounds per cubic foot.

Cut and sew all cloth to have the least possible number of seams. Cut all cloth to allow for stitching at least one inch from the edge of the cut. When the width of a blanket requires two or more widths of cloth, lap all seams at least 1-1/2 inches and sew with a double row of stitching.

Sew all seams completely except for the filler opening. Turn the bag inside out and fill. All cut edges and seams are on the inside. Tuck in edges at filler opening and sew from the outside with overhand stitching.

Quilt all blankets on approximate 6 inch staggered centers to prevent the filler from shifting in the bag. To prevent the quilting wires from tearing the cloth pass a U shaped wire through a

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a hole reinforcing washer on one side of the blanket, through the blanket, through a two-hole reinforcing washer on the other side, and twist the wire ends together and leave in a manner to prevent snagging of the cloth.

Use lacing hooks to secure the blankets on the turbine. Fasten the lacing hooks to the blankets by quilting wires and reinforcing washers. Place lacing hooks along the edges of the blankets at approximately 6 inch intervals and approximately 3 inches from the edge of the blanket.

Identify all blankets and all blanket positions on the turbine in accordance with drawing 10-E-97 using 18-8 stainless steel identification tags of design on drawing 10-E-69.

The insulation assembly drawings will show the thickness and location of all blankets.

PART I

MATERIALS:
(1) Asbestos Cloth, Material 7794-1.
(2) Asbestos Yarn, Material 7795-1, containing two brass wire inserts.
(3) Quilting Wire, 0.035 inch diameter copper.
(4) Reinforcing Washers, two-hole copper, to drawing 10-E-69 Item 1.
(5) Lacing Hooks, brass, to drawing 10-E-118 Item 1.

CONSTRUCTION: Construct all blankets to the requirements in the "GENERAL" PART.

ATTACHING BLANKETS: Attach all blankets to the turbine in accordance with PART V.

PART II

MATERIALS:
(1) Asbestos Cloth, Material 7794-2, for inner cloth (hot side) and for the side wall cloths where a metallic type cover is required.
(2) Asbestos Cloth, Material 7794-1 for outer cloth (cold side).
(3) Asbestos Yarn, Material 7795-2, containing two nichrome metal wire inserts.
(4) Quilting Wire, 0.035 inch diameter 18-8 stainless steel.
(5) Reinforcing Washers, two-hole 18-8 stainless steel to drawing 10-E-69 Item 2.
(6) Lacing Hooks, 18-8 stainless steel, to drawing 10-E-118 Item 2, attached to blanket with 0.072 inch diameter 18-8 stainless steel wire and reinforcing washers of 18-8 stainless steel.

CONSTRUCTION: Construct all blankets to the requirements in the "GENERAL" PART. 00006869

ATTACHING BLANKETS: Attach all blankets to the turbine in accordance

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with PART V.

PART III

MATERIALS:

(1) Asbestos Cloth, Material 7794-3, two wire Inconel metal inserted.
(2) Asbestos Yarn, Material 7795-2, two wire Inconel metal inserted.
(3) Quilting Wire, 0.035 inch diameter 18-8 stainless steel.
(4) Reinforcing Washers, two hole 18-8 stainless steel to drawing 10-H-69 Item 2.
(5) Lacing Hooks, 18-8 stainless steel, to drawing 10-H-118 Item 2, attached to blanket with 0.072 inch diameter 18-8 stainless steel wire and reinforcing washers of 18-8 stainless steel.

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CONSTRUCTION: Construct all blankets to the requirements in the "GENERAL" PART.

ATTACHING BLANKETS: Attach all blankets to the turbine in accordance with PART V.

PART V

Provide and weld into position sufficient lacing rails of adequate size for securing the blankets to the turbine.

Where a blanket is in contact with a sharp edge, nut, bolt head or point where cutting of the cloth or heat concentration occurs, protect the cloth by a piece, patch, cap, special shape or covering of 1/16 inch sheet metal. Shape the sheet metal protectors to the curvature being covered and secure with 5/16 inch diameter machine screws to drawing 10-H-122 drilled and tapped into the surface being protected. The insulation assembly drawings will show in outline form only, but not dimensioned, the positions where the protectors are located. Standard pipe flanges should be protected with sheet metal covers as shown in [illegible] Book sheet HH 777.1.

Use 0.072 inch diameter brass or galvanized iron wire to attach the blanket to the turbine for temperatures below 500°F. Use 0.072 inch diameter 18-8 stainless steel wire to attach the blanket to the turbine for temperatures above 500°F. Lace the blankets together by means of the lacing hooks provided on each blanket and pass the lacing wires under or around the lacing rails in a manner to secure the blanket firmly to the turbine.

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