PLAINTIFF'S EXHIBIT
tabbies®
DOW-2226

THE DOW CHEMICAL COMPANY

TEXAS DIVISION
FREEPORT TEXAS 77541

Date: 6-13-68

To: K. H. Barnes

Attached is a copy of Engineering Specification, Insulation
Spec. #, Dated 6-15-68, Page(s)
which is in final form for issuing.

If this specification meets your approval, please sign below and return.

Issuing date has been set for 6-15-68. To meet this deadline this copy must be returned promptly as it cannot be issued until we receive your signature as approved.

Note: (R) on the specification indicates revision.

APPROVED: B. H. Barnes Date: 6/17/68

NOT APPROVED AS MARKED: Date:

RETURN TO:

Angie H. Barnes
Building A-1201

ahb

In 56-502 Change 56-620 To 56-504 Rev.

* 56-502
56-500
56-501
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SPRAYED HOT INSULATION - INCLUDING FINISH
TANKS, VESSELS, AND EQUIPMENT

1. INSULATION MATERIAL AND THICKNESS

1.1 The insulation material for sprayed hot insulation shall be Armstrong's Limpet (asbestos and cement) or owner-approved equal.

1.1.1 Grade LW.25 Limpet shall be used for Classes E, F, and G insulation, and Grade LB.8 Limpet for Classes B, C, and D.

1.2 The finished thickness shall be as shown in the table below.

CLASS	Temperature of Pipe or Equipment	NOMINAL INSULATION THICKNESS																
		NOMINAL PIPE SIZE																Over 24" & Flat Surf.
		1" and Under	1¼	1½	2	3	4	5	6	8	10	12	14	16	18	20	24	
A	1500°F to 1201° F	See Job Specifications																
B	1200°F to 1001° F	2"				2½"			3"				3½"					3½"
C	1000°F to 801° F			2"				2½"						3"				3"
D	800° F to 701° F			1½"								2"						2"
E	700° F to 601° F	1"						1½"							2"			2"
F	600° F to 401° F			1"								1½"						1½"
G	400° F to 140° F				1"								1½"					1"

2. ANCHORING DEVICES

2.1 Insulation shall be secured to circular equipment over 3' in outside diameter and all flat surfaces with 10 gauge steel Nelson weld studs, or secured by other owner-approved method. The Nelson studs shall be placed in rows with the following minimum spacing.

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2.1 (Continued)

Top side of surfaces, including top of vessels, whether flat, conical, or dished.....	24" centers
Bottom side of surfaces, including bottom of vessels, whether flat, conical, or dished.....	12" centers
Vertical surfaces, including heads of horizontal vessels.....	18" centers

2.2 The studs shall be the same length as the insulation thickness so that when Nelson speed clips are applied, the insulation will be compressed approximately 1/4".

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3. APPLICATION

3.1 After the studs, straps, or other anchoring devices have been attached, the insulation shall be spray applied in accordance with the manufacturer's application specifications. The maximum thickness that may be sprayed in one course is 4". Immediately after application, the material shall be tamped with a steel trowel or board to flatten and smooth the surface and to obtain the desired density of 12 pounds per cubic foot. After the required thickness is obtained, the insulation shall be allowed to dry before the finish is applied.

3.2 While the insulation is dry, a coat of Benjamin Foster's Insulation Primer, Black 51-03, or owner-approved equal, shall be applied to the insulation.

3.3 One inch hexagonal Monel wire mesh shall be applied over the insulation and secured to the studs with stainless steel Nelson speed clips. All seams of wire mesh shall be tied, leaving a neat appearance.

3.4 Where insulation is to be over 1-1/2" thick, a layer of 1" hexagonal galvanized wire mesh shall be applied when half of the thickness of insulation has been applied. After the balance of the insulation has been applied, the Monel mesh shall be attached as specified in Paragraph 3.2.

4. FINISH

4.1 A breathing type asphalt emulsion mastic having a dry flame spread of less than 56 on asbestos cement board, in accordance with ASTM E84 test, such as Benjamin Foster's 60-80 Safetee Mastic, or owner-approved equal, shall be troweled into the wire mesh. The insulation finish shall be smooth, neat, pinhole free, and shall have a uniform thickness of at least 1/8" after a minimum drying time of 24 hours.

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