

MON-2486

**BECHTEL CORPORATION**
INTER-OFFICE MEMORANDUM

To: G. L. Jobasen w/attach

From: W. G. Kast

Dept.: Refinery & Chemical Construction

At: Alvin, Texas

Subject: Job 3375
Chocolate Bayou Refinery
Insulation Specifications

Copies to: W. B. Hart ✓
B. M. Tice
G. B. Hill w/attach
C. G. Tuller
P. M. Passano w/attach
L. T. Tuttle w/attach

We now have both insulation contractors at the jobsite and during the past several weeks we have had many discussions of specifications, all leading up to correcting some minor differences of opinion. This memo is being written to bring you up-to-date on items that have been discussed here. All of these have been reviewed with the client and they are in agreement providing you have no objection. We shall list below the changes we wish to make

1. Precast Calcium Silicate Elbows. One of the subcontractors has expressed a desire to use premolded cast elbows for reasons of operating efficiency. We have no objection providing there is no additional cost to us. Since we supply insulation materials, we will work out the details of purchase and have indicated our intention to approve the use of this material.
2. Pop Rivets in place of metal screws. Not permitted on cold insulation jackets. We have no objection to use of pop rivets on hot insulation jackets provided both subcontractors use the same method. We have requested that the two subcontractors get together on this issue and present their final recommendation.
3. Nozzle flashing. All of us agree that the present flashing design for hot equipment is impractical. We propose an asbestos cloth collar stapled to the insulation and wrapped at the nozzle neck with 16 gauge s.s. wire. Weathercoating of Lion Oil mastic and glass fabric finishes the installation. See attached sketch.
4. Expand-R-Strap for Hot equipment. Since we have no aluminum jacket on vessels, the Expand-R-Strap for the outer insulation will present an unfavorable appearance under the weather coat. In actual practice there are only a few pieces of equipment in each plant where the combination of operating temperature and girth dimension requires Expand-R-Straps. We propose to limit the use of Expand-R-Straps to those cases where it is required mechanically.

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5. Tie Wire for pipe insulation. We have this backwards! That is, bands on the insulation and wire or screws on the jacket. Asbestos roofing felt should be secured with bands, not wire. We propose to use stainless steel wire for securing all hot pipe insulation both inner and outer layers on 9" centers. Use $\frac{1}{4}$ " x 0.015 stainless steel bands on 9" centers to secure felt for the off-plot weather coating.
6. Spiral wrapping glass fiber. All of us agree that spiral wrapping is not practical on large equipment. We will not wrap spirally; but will maintain the 1" overlap thus complying with the intent of the specifications.

7. Comments on Specification LM3 revision 4.

- 4.301 change bands to $\frac{1}{4}$ " x 0.015"
4.302 change bands to $\frac{1}{4}$ " x 0.015"
5.1 change to flat bands at 9" centers
5.2 change bands to $\frac{1}{4}$ " x 0.015"
5.4 change bands to $\frac{1}{4}$ " x 0.015"
6.1 change to flat bands
6.3 change bands to $\frac{1}{4}$ " x 0.015"
7.2 replace bands with $\frac{1}{4}$ " pressure sensitive fiber glass reinforced tape on 12" centers.
7.3 change bands to $\frac{1}{4}$ " x 0.015" on 9" centers.
7.4 change bands to $\frac{1}{4}$ " x 0.015" on 9" centers.
7.5 change bands to $\frac{1}{4}$ " x 0.015". Add words "where practical" to last sentence.
7.7 change bands to $\frac{1}{4}$ " x 0.015"

Detail on Page. 13. Change item 7 to read $\frac{1}{4}$ " x 0.015" stainless steel strap.

Detail on Page 14. Change item 5 to read $\frac{1}{4}$ " x 0.015" aluminum strap.

Add note to item 7 "where practical".

Detail on page 15. Change item 5 to read $\frac{1}{4}$ " x 0.015" aluminum strap.

Detail on page 16. Subcontractor feels this detail is awkward and will provide his own design for our approval.

Detail on page 18. Change item 5 to read $\frac{1}{4}$ " x 0.015" aluminum strap.

Detail on page 19. Change item 4 to read $\frac{1}{4}$ " x 0.015" stainless steel band.

Detail on page 20. Change item 4 to read $\frac{1}{4}$ " x 0.015" stainless steel band.

Detail on page 21. Change item 4 to read $\frac{1}{4}$ " x 0.015" stainless steel band.

Detail on page 22. Change item 6 to read $\frac{1}{4}$ " x 0.015" stainless steel band.

8. Comments on Specification LM4 revision 2.

4.22 change bands to $\frac{1}{4}$ " x 0.015"

5.12 limit use of Expand-R-Straps per our comments in number 4 above

5.13 spiral winding of reinforcing membrana not practical. See our comments in number 6 above

5.21 same comments as 5.12 above

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- 5.311 change stainless steel wire ties to 9" centers
- 5.312 change ties from bands to stainless steel wire on 9" centers. See our comments in number 8 above.
- 5.32 same comments as 5.312 above
- 5.331 change sheet metal screws to pop rivets
- 5.332 change stainless steel wire to $\frac{1}{4}$ " x 0.015" stainless steel bands on 9" centers.
- Detail on page 9. Substitute detail described in number 3 above. See sketch enclosed
- Detail on page 10. Same comment as detail on page 9.
- Detail on page 11. Change item 3 to read $\frac{1}{4}$ " x 0.015" stainless steel strap.
- Detail on page 12. Change items 3 and 4 to read $\frac{1}{4}$ " x 0.015" stainless steel strap.
- Detail on page 13. Change item 3 to read $\frac{1}{4}$ " x 0.015" stainless steel strap.

We request that you review these comments immediately and advise us of your concurrence at your earliest convenience.

W. G. East
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encl. sketch

/jev

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