

SHELL OIL COMPANY
MFG & TECH - ENG
REF & CHEM PLTS

ENGINEERING GUIDE
FIREPROOFING

17 EG-2

April 1985

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3. MISCELLANEOUS ITEMS

3.1 VESSEL HEADS

When required, internally insulated bottom heads on vertical vessels or columns shall be fireproofed if the head is exposed to a potential fire area.

3.2 BUILDINGS

Structural steel columns in brick walls shall be fireproofed with one four-inch course of brick. Columns shall be sandblasted and primed with inorganic zinc in accordance with 19 GS-11 and 12, prior to bricking in.

3.3 INSTRUMENT RACEWAYS

Instrument conduits and cable trays for pneumatic and electrical instrumentation in hydrocarbon process areas shall be encased in one inch thick insulating board as shown on appended Drawing No. S-17-2-2 in those areas indicated on routing plan. These areas typically include regions with higher fire risks, such as over hydrocarbon pumps, hot piping manifolds, ect.

4. FIREPROOFING MATERIALS AND APPLICATION

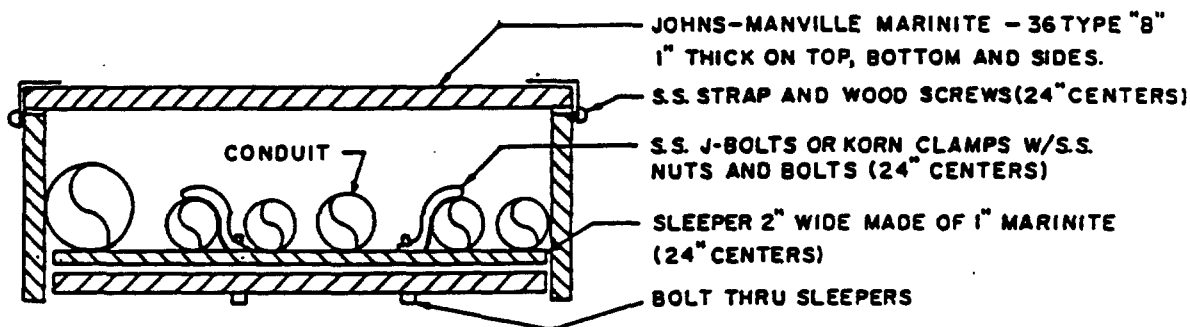
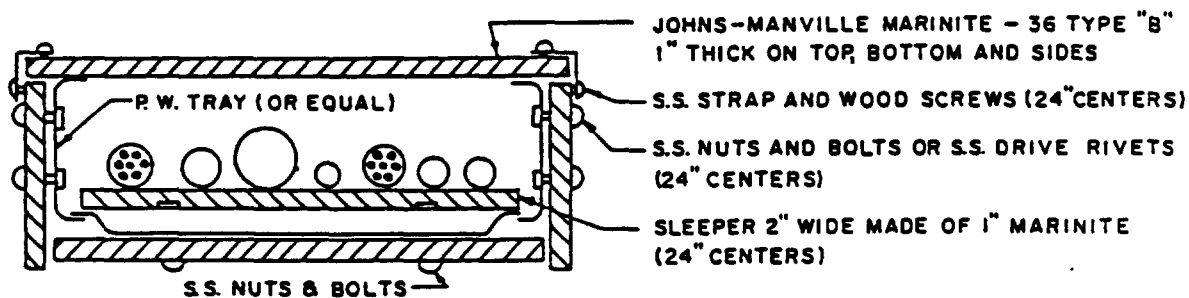
4.1 REINFORCED CONCRETE FIREPROOFING

- 4.1.1 Concrete materials shall be designed and proportioned so that the concrete shall have a minimum compressive strength of 3,000 pounds per square inch at 28 days.
- 4.1.2 Cement shall be Portland cement, ASTM C150, Type 1.
- 4.1.3 Aggregate shall be pea gravel, ASTM C33, having a maximum size of 3/8 inch.
- 4.1.4 Reinforcing mesh shall be 2 inch x 2 inch x 14 gauge welded steel fabric.
- 4.1.5 Lacing wire shall be 18 gauge wire.
- 4.1.6 Method of placement shall be formed-in-place or trowled; i.e., pneumatic method shall not be used. Mixing, placement, curing, and testing shall conform to applicable parts of American Concrete Institute Standard 318.
- 4.1.7 When poured placement is used, slump shall not be less than 3 inches or more than 6 inches.

LAM 018205

FIREPROOFING DETAILS INSTRUMENT CABLE TRAYS AND CONDUIT

DRAWING: S-17-2-2

CONDUIT PROTECTIONCABLE AND TUBING PROTECTIONNOTES

1. MITER MARINITE EDGES AT ALL ELLS AND TEES IN RACK.
2. PAINT ALL EXPOSED MARINITE SURFACES WITH TWO COATS EPON ESTER GRAY

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