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MemorandumEngineering Department
Materials Laboratory
Richmond, California

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WEATHER JACKET OVER EXISTING
CaSiO₄ INSULATION - REFINERY PIPING
Materials Laboratory File: M-283.00MR. L. G. ANDERSON:
Bakerfield Refinery

Most of the insulated piping at the Bakersfield Refinery is covered with calcium silicate insulation with an asphaltic felt weather jacket. In many locations the asphaltic covering is falling off. The exposed CaSiO₄ insulation poses two problems. 1) The asbestos fibers used in older CaSiO₄ insulation represent a potential health hazard if they are exposed and become airborne. 2) Excessive weathering also will cause the insulation to deteriorate and eventually sluff-off. As a result, many locations of the insulated pipe need a new weather jacket.

Our conclusion is that an aluminum weather jacket is the most appropriate covering for straight run piping based on an expected lower installed cost. However, aluminum may be more expensive than an organic covering around elbows and fittings. At these locations it might be more economical to cover the insulation with Foster's Sealfas 30-36 which is listed in drawing GB-N99993 of EG-1381 under N-108. Attached is a data sheet on the product.

The installation of an aluminum weather jacket is quick and comparatively easy, however, certain precautions should be taken.

- 1) Do not remove the old asphaltic felt tape. Removing the tape will cause problems with airborne emissions of asbestos fibers in the insulation. In areas where tape is hanging, it should be cut off.
- 2) Securing the aluminum weather jacket should be done with stainless steel straps as specified in EG-1381.
- 3) At fittings where a coating is used to cover the insulation, there should be at least a 4-inch overlap of the aluminum weather jacket over the mastic coating.

JEM/jhh

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