

**JOHNS-MANVILLE RESEARCH
AND ENGINEERING CENTER**

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Memorandum M431-56

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GLASS LINING IN MOLDS FOR CAST BRICK

Requested by: Research

*what does this
mean!*

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AUG 22 1967

A lining of reinforced plate glass in molds used to form cast brick slabs appears to be a way of preventing the buildup of gypsum which now occurs in the steel molds. Other indicated advantages of glass lining are: less force is required to eject the slab from the mold and the slab is uniformly smooth and lacking in the ridges and valleys present in the normal slab. The conceivable disadvantages are: a possibility that the vibration of the molds to reduce air bubbles will shatter or loosen the glass, and the glass may be chipped by mechanical abuse. No attempt was made to study the effects of vibration as this can best be determined under plant conditions. A small amount of chipping (3 x 1 x 1/8-in.) did not appear detrimental.

The sides of one cavity normally used to form slabs for 3-in. brick were cleaned with a wire brush and lined with 1/4-in. thick reinforced plate glass bonded to the steel with Johns-Manville Contact Cement No. 129. This cement was brushed on one side of the glass and on the steel. Then the glass was held in position against the steel by firm pressure with wooden wedges and left undisturbed overnight. Any set cement on the face of the glass should be removed with a spatula without scratching the glass. The ends of the cavity were not lined with glass. Seventy slabs of the JM-23 IFB composition were formed and stripped over a period of four months, one to five slabs were made per day. No buildup of gypsum occurred on the glass.

It is recommended that plant personnel at Zelienople plant consider the conversion of one 3-in. brick mold to a 2-1/2-in. brick mold by lining the wider mold with reinforced plate glass. Alternate methods of evaluating a glass lining and the effects of vibration and possible mechanical abuse may occur to the plant personnel.

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