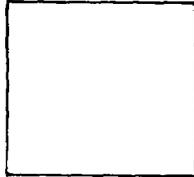


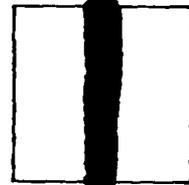
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Korolac-type Coating for Corrosion Resistance.

Reference: A.S.T.M. Committee B-3, Sub. VIII, Sub-sub. on complete immersion galvanic couple tests.

Test Model: Steel strips separated by wood but in electrical contact by means of steel bolts, with no protruding surfaces, and all edges rounded. Rolled ends coated with Korolac (Jnl. Ind. & Eng. Chem. 27, 1935, 667)

Supplier: B. F. Goodrich Company, Akron, Ohio; Mr. Arthur W. Carpenter; letters of June 11, 24, 28, 1935.

Test Solution: 10% H_2SO_4 ; hot 150/200°F

Test Method: After test model was kept on top of desk for six weeks, it was immersed in beaker of acid for eight hours. After rinsing, it was then kept on top of desk for four months.

Results: Gentle handling did not cause rupture of film or any other noticeable change. Film was reasonably hard. During immersion the steel was corroded and the solution penetrated between coating and steel and wooden holder to quite an extensive (60%)

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degree. In one place, gas collected, causing a bubble to form in coating which burst. Photograph W.A. 362-73 shows the appearance of the test model after immersion in acid.

After four months film still was hard, strong and pliable. Upon bending 180° and creasing, coating did not crack.

Conclusion: This method of preventing undesired corrosion in A.S.T.M. specimens will not be successful. Any method that depends upon a tight glove-like coating will not be suitable. A method of coating where the adherence of the film at any particular area is not dependent upon the adherence on areas adjacent should be sought.

Respectfully submitted,



P. R. Kosting
Chemical Engineer

