

**The Effect of Drying Process Polyester Putty on Corrosion Rate and  
Microstructure of ST 40 Low Carbon Steel in the Atmospheric Environment  
of Jember Region**

by

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**ABSTRACT**

Corrosion is a form of breakdown that occurs in metal. There are many causes of corrosion in a metal, one of which is the atmosphere. Corrosion itself cannot be eliminated but the corrosion rate can be inhibited. There are several ways to inhibit the corrosion rate, one of which is using polyester putty. In this study, ST 40 steel and polyester putty is used as coatings/inhibitors. The used variations is ST 40 steel without coating, ST 40 steel with forced drying polyester putty coating, and ST 40 steel with normal drying polyester putty coating. Placement of specimens in the atmospheric environment is in Ambulu and in Silo. The atmospheric environment in both places is still in the good category because the corrosion rate is at 1-5 mpy. The use of polyester putty as a coating in both places is included in the less and sufficient category because it has inhibitor efficiency between 21-40% and 41-60%.

**Keywords:** *ST 40 steel, polyester putty, corrosion rate, atmospheric environment*