

***STRENGTH ANALYSIS OF POLYESTER COATED ST 40 STEEL
PUTTY AFTER EXPOSED TO CORROSION IN THE
ENVIRONMENT
JEMBER ATMOSPHERE***

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ABSTRACT

Steel is a metal that is often used in the construction and manufacturing fields. There are several types of steel, one of which is low carbon steel ST 40. This research analyzes the strength of steel exposed to corrosion in an atmospheric environment and then carries out tensile testing. A problem that often occurs when using metal is corrosion. Corrosion is a form of damage that occurs to metal. Corrosion can be prevented, one of which is by coating polyester putty (putty) as a coating and protection against corrosion. The variation used is a placement of the specimens in the atmospheric environment of Jember Regency which includes 6 areas and 10 location points, Tanggul as a Mountain area, Panti and Patrang as a Mountain Slope area, Summersari and Kaliwates as a City Center area, Arjasa and Pakusari as an Agricultural area, Silo as Plantation areas, Ambulu and Puger as coastal areas. The results of tensile test analysed, breaking stress and breaking strain, Patrang District were 31.13 N/mm² and 1.13 mm/mm, Summersari 30.46 N/mm² and 1.13 mm/mm, Kaliwates 24.51 N/mm² and 1, 14 mm/mm, Arjasa 26.31 N/mm² and 1.13 mm/mm, Pakusari 24.13 N/mm² and 1.14 mm/mm, Silo 22.38 N/mm² and 1.14 mm/mm, Ambulu 21.44 N/mm² and 1.14 mm/mm, Puger 21.27 N/mm² and 1.14 mm/mm, Panti 24.33 N/mm² and 1.13 mm/mm, Dike 24.52 N /mm² and 1.14 mm/mm.

Key words: ST 40 steel, tensile test, atmospheric environment, corrosion.