

ABSTRACT

CHARACTERISATION ALUMINIUM COATED AISI 1090 HIGH CARBON STEEL WITH HOT DIPPING METHODE

By

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AISI 1090 High carbon steel coated with aluminium using hot dipping methode on 700 °C dipping time variation on 9, 16 and 25 second. High carbon steel hot dip result analysis on liquid aluminium done with OM, SEM, XRD and Hardness test. From research result and test that already done to high carbon steel which using hot dipping aluminizing coating temperature on 700 °C gained intermetallic layer that is FeAl_3 and Fe_2Al_5 . Thickness Aluminium layer increase on stell substrate surface along with dipping duration time. But after 16 second dipping the aluminium thickness relatively constan it caused by solubed silicon inside aluminium matrix

Keyword: High carbon steel, Hot dip, Intermetallic phase