

ABSTRACT

BEHAVIOUR CORROSION OF STEEL AISI 1020 IN THE ENVIRONMENT

NaCl+Na₂SO₄ AT TEMPERATURE OF 700 ° C

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AISI 1020 is low carbon steel that mostly used for the systems pipes petroleum, pipe heat exchanger and pipe steam boiler. However, when working at high temperatures and corrosive environments containin gase of like chlorine and sulfur. The corrosion resistance of steel AISI 1020 declines. It's very important to know the character of stell AISI 1020 to be used according to need. If not exactly in choosing the material will be a failure. In this study testing of oxidation AISI 1020 steel in NaCl+Na₂SO₄ environment at a temperature of 700° C over a period of 1-49 hours.

Weight gain over time is used to determine the kinetics of corrosion rate. The mechanism of oxidation / corrosion learned through the results of corrosion on the specimen using OM (Optic Microscope) and XRD (X-Ray Diffraction). These results indicate the process oksikloridasi derived from deposits NaCl+Na₂SO₄ resulting chlorine gas and sulfur corrosion attack metals and produce kloridasi then facilitate ferric chloride to form iron oxide. Chlorine and sulfur attack may accelerate the corrosion rate of oxidation of the order is higher than with ordinary air oxidation.

Keywords: Steel AISI 1020, deposits NaCl, deposits Na₂SO₄