Short Communication

Investigation of Corrosion of A and E36 Naval Steels Using Potentiodynamic Polarization and Modified Prohesion Test

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Our research paper aims to investigate the effects of 0.4% ammonium sulphate and 0.05% sodium chloride mixture solution (Prohesion test) on the corrosion behavior of A and E36 naval steels tested at the room temperature. The corrosion investigations have been investigated using electrochemical method such as potentiodynamic polarization curves and gravimetric method. Subsequently, the samples were subjected to morphological and compositional analyzes by scanning electron microscopy. The corrosion behavior of the A and E36 naval steels were determined from breakdown potential using potentiodynamic polarization method. The results of the electrochemical tests and gravimetric method indicate that the E36 naval steel sample has better corrosion resistance than A naval steel sample.

Keywords: Corrosion resistance; Naval steels; Potentiodynamic polarization; Electrochemical method

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