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## ENVIRONMENTAL INFLUENCES ON STRESSED METALLIC SURFACES

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### Abstract

This paper presents some aspects regarding the damage of metal surfaces undergoing mechanical stress corrosive environmental interaction. This interaction is investigated on samples made of two types of low-alloy steel, general use steel type OL524Ak and a shipbuilding steel grade E36, subjected to cyclic load in aqueous solution of 3.5% NaCl. Both electrochemical and fractographic aspects reveal the initiation and development of damage processes on the metal surfaces. It is also highlighted that the processes of damage by corrosion fatigue of the steel structures can be monitored based on recordings of the electrochemical parameters.

*Key words:* crack, electrochemical, environment, fatigue, stress

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