

**HYDROGEN SUSCEPTIBILITY OF EXPLOSIVELY WELDED ANTICORROSION STEEL AND
TITANIUM OF COMMERCIAL PURITY**

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Abstract

The work deals with hydrogen susceptibility of joint of explosively welded anticorrosion steel of 18Cr/10Ni type with titanium of commercial purity. Studied welds were after twice heat treatment and those were tested in corrosive solution in accord with NACE Standard TM0177-2003 (sulphide stress cracking under stress), representing dynamic test. Threshold level layed close to 40 MPa, approximately. The sources of failure were intermetallic phases of the Fe₂Ti type detected using EBDS. Results were confronted with former results and accessible literature.

Keywords: 18/10-titanium weld, explosive welding, hydrogen susceptibility, intermetallic phase, EBDS

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