

MODIFICATIONS OF MICROSTRUCTURE AND CORROSION RESISTANCE IN AA 2024-T3 BUTT JOINTS

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Abstract : An experimental investigation has been carried out, in present paper, on microstructure and corrosion resistance of weld butt of AA 2024-T3. Conventional tungsten inert gas (TIG) welding processes have been considered. Micro-hardness measurements allow pointing out a general decay of mechanical properties of TIG joints, mainly due to high temperature experienced by material. Polarization curve tests and electrochemical impedance spectroscopy, performed in this paper, allow assessing a generalized nobler behavior of weld bead with respect to parent alloy

Keywords : welding, Tungsten inert gas, corrosion, polarization curve test, Electrochemical impedance spectroscopy