

Capacitor Discharge Welding of Aluminium Studs

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The paper deals with capacitor discharge welding of aluminum studs type AlMg3 on two different materials (aluminum sheet of the same chemical composition with a thickness of 1.5 mm, and the magnesium sheet, material AZ61 and thickness 1 mm). Influences of welding parameters on the mechanical properties of the weld joints and the creation of typical defects were examined. For assessing the quality of weld joints, a series of tests were made: micro hardness test, bend test, torque test, test of macro and microstructure and SEM analysis on the electron microscope. The results are presented in the paper including suggestions for welded joints of required quality.

Keywords: Aluminum Alloy; Magnesium Alloy; Stud; Stud Welding

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