

The influence of welding parameters and corrosive environment on the joint strength of resistance spot-welded mild steel sheets

In the present work, mild steel sheets consisting two batches were welded by resistance spot welding at different welding parameters and exposed under different environments. The 5% sodium chloride brine was used in the salt spray test, produced a whole rusty surface on the tested specimens (batch 2). The welding joints were subjected to tensile-shearing test in order to determine the strength of the welded joints from ambient and in corrosive environment. Tensile-shear test showed significant differences on the failure load between these two batches where corrosion had affected the surface strength of the welded steel. The results also showed that the highest tensile shear strength is given by the specimen welded using 4kA current at 4 cycles.