ABSTRACT

Friction Stir Welding (FSW) has become a feasible manufacturing alternative in the automotive and refrigeration industry to obtain the sound joining process. In many applications, steels are replaced by copper due to their excellent mechanical properties and corrosion resistance. In this experiment, the joining of similar copper material is done by a friction stir welding process. The result shows that spindle speed, welding speed and tool geometry has influenced the mechanical properties of copper welded samples. Optimum defect-free weld is obtained at the range of spindle speed 1400 rpm, welding speed mm/min with penetration of 5.5 mm hexagonal tool profile.