Abstract

Friction stir welding is a solid-state welding method that involves bonding two similar or dissimilar metals utilizing a rotating tool. Traverse speed, rotating speed, axial force, and the angle of the tool are different variables used in this method. Mechanical characterization, similar and dissimilar metals, structural characterization, and the Influences of tool pin profiles for FSW processes square measure a number of the vital areas of analysis. In this project work the mechanical, metallurgical properties and analysis in friction stir welding. In the present work, aluminium alloy AA6082 and aluminium alloy AA2014 plates of 6 mm thickness are welded together using the friction stir welding process. The base material and welded joints are then tested for their mechanical properties and metallurgical properties by conducting tests such as tensile test, notch tensile, impact, hardness tests, SEM Fractrography, and the results are evaluated.