

## **Studies on 2024-T351 Friction Stir Welding joints.**

### **ABSTRACT**

Characterisation of macrostructure, microstructure and precipitate distribution of 2024-T351, aluminium Friction Stir Welding (FSW) joints has been conducted in order to characterise the critical areas for natural fatigue crack initiation. The cyclic strength of the weld micro-regimes are controlled by grain size and distribution of precipitates achieved during the weld process. The comprehensive information of micro and macro mechanic gathered will be used to assist in understanding the mechanism that governed the fatigue crack initiation, propagation and life of the FSW.

**Keyword:** Friction stir welding; 2024-T351; Aluminium alloy; Microstructure; Precipitates; Fatigue.