

FATIGUE CRACK GROWTH BEHAVIOUR OF THE FRICTION STIR WELDED 6082-T6 ALUMINIUM ALLOY

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RESUMO

A study on fatigue crack growth behaviour of friction stir butt welds of 3mm thick 6082-T6 aluminium alloy was performed. Fatigue crack growth curves were determined for cracks growing in different locations of the weldments, namely the base material, friction stirred material and heat affected material. Results are complemented with monotonic tensile data, microhardness measurements and scanning electron microscopy observations. Friction stir material exhibited lower tensile strength and ductility properties than base material. However, an enhanced crack propagation resistance is observed.