

Aging Behaviour of 6061 Al-15 vol% SiC Composite in T4 and T6 Treatments

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Abstract : The aging behaviour of 6061 Al-15 vol% SiC composite was investigated using Rockwell B hardness measurement. The composite was solutionized at 350°C and quenched in water. The composite was aged at room temperature (T4 treatment) and also at 140°C, 160°C, 180°C and 200°C (T6 treatment). The natural and artificial aging behaviour of composite was studied using aging curves determined at different temperatures. The aging period for peak aging for different temperatures was identified. The time required for attaining peak aging decreased with increase in the aging temperature. The peak hardness was found to increase with increase with aging temperature and the highest peak hardness was observed at 180°C. Beyond 180°C the peak hardness was found to be decreasing.

Keywords : 6061 Al-SiC composite, aging curve, Rockwell B hardness, T4, T6 treatments

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