

Interface Analysis of Annealed Al/Cu Cladded Sheet

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Abstract : Effect of aging treatment on microstructural aspects of interfacial layers of the Cu/Al clad sheet produced by Differential Speed Rolling (DSR) process were studied by Electron Back Scattered Diffraction (EBSD). Clad sheet of Al/Cu has been fabricated by using DSR, which caused severe shear deformation between Al and Cu plate to easily bond to each other. Rolling was carried out at 100°C with speed ratio of 2, in which the total thickness reduction was 45%. Interface layers of clad sheet were analyzed by EBSD after subsequent annealing at 400°C for 30 to 120 min. With increasing annealing time, thickness of interface layer and fraction of high angle grain boundary were increased and average grain size was decreased.

Keywords : aluminium/copper clad sheet, differential speed rolling, interface layer, microstructure, annealing, electron back scattered diffraction

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