

## **EFFECT OF Cu ADDITION ON THE MICROSTRUCTURAL CONSTITUENTS AND MECHANICAL PROPERTIES OF TWIN ROLL CAST AlFeMnSi ALLOYS**

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### **ABSTRACT**

In this study, the effect of copper addition on microstructural evolution, mechanical and corrosion properties of twin roll cast (TRC) AlFeMnSi alloy system mainly used in container foil applications was investigated. Microstructural characterization studies were conducted on as-cast, homogenization annealed and final products by employing optical and scanning electron microscopes. The mechanical properties of the samples obtained from compositional were determined at the thickness of final product by tensile and Erichsen tests. Addition of Cu improved mechanical properties and formability performance of the foil products with the contribution of final annealing parameters. Corrosion properties were also improved as compared to those of the AlFeMnSi alloys having lower Cu content.

**Keywords:** Twin roll casting, AlFeMnSi alloys, container foil, homogenization.