

## عنوان مقاله:

EFFECT OF THE INCLINED COOLING PLATE CHARACTERISTICS ON THE THIXOTROPIC MICROSTRUCTURE OF A<sub>3</sub>Si<sub>6</sub> ALUMINUM ALLOY

## محل انتشار:

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## خلاصه مقاله:

In the present work microstructural evolution of A<sub>3</sub>Si<sub>6</sub> Aluminum alloy using an inclined cooling plate casting process for thixoforming feedstock production is investigated. The resultant microstructure was evaluated and compared with those of the same alloy produced by the conventional casting process, i.e. directly cast in the same mold without using an inclined cooling plate. It was found that when alloy melt poured over an inclined cooling plate and subsequently cast in semisolid condition into a metallic mould resulted in fine rosettes and nearly globular  $\alpha$ -Al primary phase uniformly distributed in an Al +Si eutectic matrix. The effect of the processing parameters such as the lengths and angles of the inclined cooling plate and their combinations were identified to produce alloy ingot with the most suitable microstructural constituent for thixoforming process

## کلمات کلیدی:

Cooling plate, Thixotropic, A<sub>3</sub>Si<sub>6</sub>, and Microstructure

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1723103>

