The Effect of Homogenization Parameters on the Structure of EN AW-6082 Alloy

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High temperature homogenization annealing of DC cast billets from aluminium alloys used for extrusion pressing is considered as one of substantial technological operations during extrusion processing. The structure of DC cast billets consists of dendrite cell structure and contains coarse and inhomogeneously distributed intermetallic phases of β-AlFeSi and α-Al(Fe,Mn)Si type. Structure after a homogenization annealing is quite decisive for both the final properties of extrusions and the extrudability of the cast structure. The present paper deals with the medium strength heat-treatable EN AW-6082 alloy. It is investigated the effect of heating rate, time at the annealing temperature and the cooling rate of continually cast billets during the homogenization annealing on the changes of electrical conductivity, structure and intermetallic phases.

Keywords: EN AW-6082 aluminium alloy, Homogenization, Extrusion, Structure, Phases

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References


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