

Hydrogen Removal from Liquid Metal

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Foundry aluminum alloys have many advantages compared to foundry alloys of different metals, such as great castability, low melting point, narrow crystallization period, good chemical stability and hydrogen content, which is the only gas soluble in aluminum, which can be minimized by applying of appropriate technological conditions. Provision of the quality of aluminum production is based on an adequate purity of used materials. That is the reason why liquid aluminum, after electrolysis or after remelting secondary aluminum, requires treatment prior to casting. Cleaning and treatment of aluminum melt are particularly important tasks in contemporary fields of use, for example elaborately shaped products, foils etc. The only gas soluble in aluminum is hydrogen, whereas other gases are inert or create insoluble compounds when in contact with melted metal. That is the reason why it is necessary to know the whole dissolution process of hydrogen in aluminum melt as well as ways of its removal. One of those ways is system I-60 SIR.

Keywords: Aluminum alloys, Remelting secondary aluminium, Hydrogen.

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