



ICMH 2012
30 - 31 May 2012
Iran, Isfahan

Abstract Book

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In the Name of God



certificate ...

Islamic Azad University
Majlesi Branch
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This is to certify that

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Presented paper No. 2060714 Entitled

**Effect of Austenitizing Temperature on the Micro-structure
of Ductile Irons Containing 2% Al**

**In ICMH 2012 -May 30-31st, 2012
Hotel Abbasi, Isfahan, Iran.**

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International Conference on
Materials Heat Treatment
ICMH 2012

**Isfahan, Iran, May 30-31
Abbasi Hotel**



Effect of Austenitizing Temperature on the Micro-structure of Ductile Irons Containing 2% Al

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Abstract :

Considering the importance of austenization in preparing steel, it is crucial to have a good understanding of the effects of temperature on this process. In this project, we studied these effects on an aluminum-containing ductile iron sample. We exposed many of these samples for 30 minutes to 890, 920 and 950 Celsius degrees and immediately quenched them in cold water. Micro-structural studies and XRD tests show that samples prepared in 950 degrees have a better micro-structure and hardness. In addition, we found that heat treatment of the as-cast samples containing Fe₃Si in matrix microstructure causes the disappearance of this phase.

Keywords : ductile iron, micro-structure, austenite, martensite.