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Annealing Process Study at Galvanizing Line: Characterization and Implication Inherent to Lead Entrainment

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Abstract : This paper discusses the experiments carried out based on the wire drawing process analysis and later annealing on lead furnace on a galvanizing line. Using Design of Experiments methodology, the aim of this work is to understand the occurrence of lead entrainment originating from the annealed wires in order to decrease this problem. Wire samples were collected from wire drawing machines and galvanizing line and submitted to surface roughness analysis and its implications on lead drag out based on wire speed, wire diameter, lead bath temperature, thermal capacity of the lead kettle, wire surface condition, wire roughness and wire superficial cleanliness. Proposals to decrease lead drag out were made in order to increase wire drawing machines and galvanizing line performance.

Keywords : wire drawing process, galvanizing, heat treatment, lead
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