

Manufacturing Process: Characterization and the Effect of Process Parameters on Natural Aging in 1004 Steel

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Abstract: The effects of natural aging on the tensile strength in a rod of 1004 steel were studied by the characterization of the manufacturing process. The material was subjected to different processes: drawing, annealing and galvanizing, each process was analyzed and correlated with the natural aging in the steel, this was performed at 25°C over a period of 126 h and values were recorded at different intervals. Electron microscopy observations showed the dissolution of perlite phase for the base metal and heat affected zone.