

Effect of Hot Rolling Conditions on Magnetic Properties of Fe-3%Si Non-Grain Oriented Electrical Steels

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Abstract : Non-grain oriented electrical steels are high silicon containing steels in which the direction of magnetism is intended the same in any direction of the material. Major applications of non-grain-oriented electrical steels are electrical motors, generators, etc. where low magnetic losses are required. Selection of proper hot rolling process parameters is an important factor in order to produce a material that has desired magnetic properties. In this study, the effect of finishing and coiling temperatures on magnetic properties of Fe-3%Si non-grain oriented electrical steels will be investigated. Additionally, the effect of slab reheating temperature at same entry finishing temperature will be investigated by means of reduction in roughing mill pass number from 1-5 to 1-3.

Keywords : electrical steels, hot rolling, magnetic properties, roughing mill

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