

عنوان مقاله:

Prediction of effect of microstructure on ultimate tensile strength of Ni-DP steels produced by controlled rolling process using neural network model

محل انتشار:

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خلاصه مقاله:

In this investigation, the effect of microstructure on ultimate tensile strength (UTS) of dual phase (DP) steels with niobium was investigated. Microstructure consists of: Martensite volume fraction (V_m), ferrite grain size (d) and martensite hardness (HV). These parameters have been correlated with the UTS and are brought out in the form of 3D diagrams. Also, a neural network model based on the V_m , d and HV was used to predict UTS. The results of this investigation show that V_m is the most significant parameter in increasing or decreasing the UTS for this type of steels. (and there is a good agreement between experimental values and predicted values by artificial neural network (ANN).

کلمات کلیدی:

microstructure; ultimate tensile strength; dual phase steels; controlled rolling; neural network

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