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عنوان مقاله:

Using Artificial Neural Networks to Predict Rolling Force and Real Exit Thickness of Steel Strips

محل انتشار:

فصلنامه فرایندهای نوین در ساخت و تولید, دوره 3, شماره 3 (سال: 1393)

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خلاصه مقاله:

There is a complicated relation between cold flat rolling parameters such as effective input parameters of cold rolling, output cold rolling force and exit thickness of strips. In many mathematical models, the effect of some cold rolling parameters has been ignored and the outputs have not a desirable accuracy. In the other hand, there is a special relation among input thickness of strips, the width of the strips, cold rolling speed, mandrill tensions, required exit thickness of strips with rolling force and the real exit thickness of the rolled strip. First of all in this study, the effective parameters of cold rolling process modeled using an artificial neural network according to the optimum network achieved by using a written program in MATLAB. It has been shown that the prediction of rolling stand parameters with different properties and new dimensions attained from prior rolled strips by an artificial neural network is applicable.

کلمات کلیدی:

Cold rolling, Artificial Neural Networks, rolling force, real rolled, thickness of strips

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