عنوان مقاله:

Predicting Strip Tearing in Cold Rolling Tandem Mill using Neural Network

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خلاصه مقاله:

Strip tearing during cold rolling process has always been considered among the main concerns for steel companies. Several works have been done so far regarding the examination of the issue. In this paper, experimental data from cold rolling tandem mill is used for detecting strip tearing. Sensors are placed across the cold rolling tandem mill. They receive information on parameters (such as angular velocity of the rolls, voltage and the electrical current of electrical motors driving rolls, roll gap, and strip tension force between rolls) directly from the cold rolling tandem mill and save as files. The information included two modes: perfect rolling and ruptured rolling. A neural network was designed by means of MATLAB software and, then, trained using the information from files. Finally, the neural network was examined by new data. It was concluded that neural network has high accuracy in distinguishing between perfect and defected rolling.

کلمات کلیدی:

Cold Rolling Tandem Mill, Strip Tearing, Neural Network, Multi-Layer Perceptron

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