

عنوان مقاله:

A novel artificaila neural network model for evaluating hardness of stir stir zone of submerge friction stir processed Al-6061-T6 plate

محل انتشار:

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خلاصه مقاله:

The aluminium Al alloy 6061 -T6 was friction stir processed at submerged condition and differents tool rotation speeds ω and processing speed V. the effect of processing parameters on hardness of stir zone was investigated, in order to derve out the relationship between the hardness of stir zone and processing parmeters and optimizing them, some test was done and a matrix of variation parmeters of process was filled and used for training of an arificail neural network ANN model. A sensitvity analysis was carried out using the ANN model, it is shown that, among two process parmeters, the processing speed V is more important on stir harness . in addition. a safe zone can be defined by ANN .model in which superior hardness can be achieved

کلمات کلیدی:

Submerge friction stir processing, artificail neural networks ANN, Al-6061

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