

عنوان مقاله:

Modeling the friction stir welding process by artificial neural network and regression method

محل انتشار:

دومین کنفرانس مکانیک، مهندسی برق و کامپیوتر (سال: 1399)

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خلاصه مقاله:

In today's industrial world, Welding is recognized as one of the most popular joining methods, it is because of high reliability and high performance. The Increasing use of friction stir welding method causes to obtain many investigations on effective parameters. One of the assessment methods to recognize the efficiency of joint is measuring theyield stress, ultimate stress and percentage of elongation. The prominent purposes of the present investigation are present a model to estimate the yield stress, ultimate stress and percentage of elongation. The full-factorial mode were utilized to design the experiments. The input parameters are the mode of position, amount of tool offset, Difference of yield stress for welding metals. The artificial neural network was employed to create the model. To accede a high level of adequacy for estimating, developing and confirming the empirical formula, the regression analysis were utilized. The rotational speed and advancing velocity were considered constantly. These amounts .weregained by obtaining some trials and selecting the suitable speeds

کلمات کلیدی:

friction stir welding, artificial neural network, tool offset

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