

عنوان مقاله:

Effect of Mandrel, Its Clearance and Pressure Die on Tube Bending Process via Rotary Draw Bending Method

محل انتشار:

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خلاصه مقاله:

One of the most prominent industries is bending, while using rotary draw bending method is known to be the most conventional approach for thin wall tube bending. Pressure die is one effective tool which boosts the tube during the process and eventually improves the bending quality. Other effective parameters are mandrel and the amount of clearance between tube and mandrel. In the present study, the process was modeled by finite element method and comparing practical results, the precision of the model was validated. Following this, using the validated model, the effects of pressure die movement and the mandrel and its clearance were investigated. Specifically, the force vicissitudes and bending quality respect to mandrel clearance and pressure die movement were evaluated. It was shown that reducing the clearance between mandrel and tube, results in force increase while the bending quality was improved. Also it was indicated that the pressure die movement has less effects on process forces and flattening of the tube.

کلمات کلیدی:

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