

عنوان مقاله:

Investigating the Ultrasonic Assistance in the Tube Hydroforming Process

محل انتشار:

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خلاصه مقاله:

The purpose of introducing ultrasonic vibrations in the tube hydroforming process is to create more formability by obtaining a lower corner radius, improve thickness distribution of the wall and provide good tribological conditions at the tube and the die interface. Vibrations imposed on the die create alternating gaps which improve the formability in the tube hydroforming process in the presence of ultrasonic vibrations. Therefore, we attempted to understand the processing mechanism of the ultrasonic tube hydroforming in the square die using the finite element method. Abaqus software was used in these simulations and the die was considered as a deformable element

کلمات کلیدی:

Tube hydroforming, Ultrasonic oscillations, Finite element method, Square die

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