

Study the Effect of Friction on Barreling Behavior during Upsetting Process Using Anand Model

Authors : H. Mohammadi Majd, M. Jalali Azizpour, V. Tavaf, A. Jaderi

Abstract : In upsetting processes contact friction significantly influence metal flow, stress-strain state and process parameters. Furthermore, tribological conditions influence workpiece deformation and its dimensional precision. A viscoplastic constitutive law, the Anand model, was applied to represent the inelastic deformation behavior in upsetting process. This paper presents research results of the influence of contact friction coefficient on a workpiece deformation in upsetting process. finite element parameters. This technique was tested for three different specimens simulations of the upsetting and the corresponding material and can be successfully employed to predict the deformation of the upsetting process.

Keywords : friction, upsetting, barreling, Anand model

Conference Title : ICMSMM 2015 : International Conference on Materials Science, Metal and Manufacturing

Conference Location : Barcelona, Spain

Conference Dates : August 17-18, 2015