

عنوان مقاله:

A Study of Plastic Deformation Behavior of AA1050 Aluminum Alloy during Pure Shear Extrusion with Back Pressure

محل انتشار:

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خلاصه مقاله:

In the present study, the effect of back pressure on the filling fraction of dies during pure shear extrusion, a novel severe plastic deformation process, is investigated by finite element analysis. The applied load predicted by simulation during the pure shear extrusion process is verified and a good agreement between the predicted results at a Coulomb friction factor of 0.12 and experiments is found. Next, various amounts of back pressure are applied to a plunger at the exit channel of the dies, and their influence on the filling fraction of the die are studied.

کلمات کلیدی:

Pure shear extrusion, Finite element method, Back pressure, Aluminum

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