Analysis of shear deformation scheme efficiency in plastic structure formation processes

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Abstract

© 2014 Faculty of Metallurgy. All rights reserved. The paper is devoted to the analysis of such an important factor as deformation behavior in the simple shear conditions. It is shown that non-monotonous character of material plastic flow exerts significant influence on the intensity of initial structure refinement. Induced non-monotonous character that ensures formation of equiaxed structural states plays an important role in the process.

Keywords

Equal-channel angular pressing (ECAP), Non-monotony, Plastic deformation, Severe and large plastic deformations, Simple shear