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Title of the lecture: The numerical modelling of the KOBO extrusion process

Description:

The aim of the lecture is to familiarize the audience with the KOBO extrusion process. In this process, the die is subjected to torsional vibrations, which causes cyclically changing conditions of plastic flow of the extruded material. It makes to extrude materials which cannot be formed in classical extrusion processes (without die rotations). The numerical simulations of the KOBO extrusion process require the application of a model which includes the material hardening. During the lecture, the Chaboche-Lemaitre model will be shown in numerical modelling. The calibration of model parameters will be presented and then, the results of numerical calculations with the application of the Chaboche-Lemaitre model will be also shown.