Creation of the information technology of realization of intensive plastic deformation and surface strengthening of materials by manufacture of details for ensuring of reliability and durability of dies blocks

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Results.

Information technology for determination of parameters at a design stage of manufacturing techniques of articles with ensured reliability and durability is created by methods of cold forging and a sheet-metal forming. Mathematical models of forming articles are developed, load modes of deformation for choosing the press-forging equipment are fixed, specific loads on the deforming instrument are determined for designing the die tooling and for prediction of its durability, the intense-deformed condition for volume of articles is calculated for prediction of mechanical properties of the deformed metal. It is fixed that parameters which are defined with utilization of information technology, do not demand finishing by labour-consuming and cost intensive experimental operations. The time for improvement of existing manufacturing techniques and working out of new manufacturing techniques of articles by methods of cold forging and sheet-metal forming is reduced. It is developed. The series of new technological processes of manufacture of articles from steel shapes and bulbs are developed. It is developed and licensed the constructions of die tooling for realization of an intensive plastic deformation during plastic forming of articles