

ELASTOPLASTIC DEFORMATION OF THE SURFACE LAYER OF MACHINERY CONSTRUCTIONS ON SHOT BLASTING

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Shot blasting results obtained on metal surfaces to be further treated by applying protective nonmetallic coatings were experimentally investigated under different process conditions. The procedure of evaluating the elastoplastic deformation behavior of the surface layer using the experimental-analytical coefficient, which considers the elastoplastic properties of the material, is described. Results of comparing experimental and theoretical data are summarized. The grounds for a possible fracture mechanism on shot blasting of the surface layer of metal products are presented.

Keywords: shot blasting, deformation of a surface layer, fracture mechanism, elastoplastic model, contact stresses.

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