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Analysis of the impact of informative heat treatment parameters on the properties of hardening of the surface layers

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Abstract

© Published under licence by IOP Publishing Ltd. The change features of surface steel layer were investigated under influence of plasma source of concentrated energy. The results of research of the effect of plasma treatment process on the microstructure and the thickness distribution of microhardness of the product and the formation of heat affected zone were presented. The resulting information (informative) data and measured values of microhardness in the hardened layers, depending on the plasma processing modes allow you to manage the process of heat treatment of metals. Designed programming model that works on the basis of the solution of the heat equation, allows to predict and investigate the temperature field after exposure to the plasma stream.

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