

Research Barkhausen noise method for study of hardened drill pipe thread

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Abstract

The article is devoted to the definition of control method of Barkhausen hardened drill pipe thread. In this case, the method for hardening of constructional alloy steel is high quality surface plastic deformation deep rolling. It is particularly important that the study done non-destructive method to get data about a toughened surface layer.

Materials and methods

The main provisions of the theory of deformation of solid mechanics,

mechanical engineering technology basics Wednesday, modeling techniques of stressed-strained state of the theory of surface plastic deformation.

Keywords

hardening, deep roll thread, residual stresses, surface plastic deformation, method of Barkhausen

Results

This study helped to improve the fatigue resistance and durability of screw connections of drill pipe. The possibility

of using Barkhausen noise method in monitoring methodology hardened thread. The combination of Barkhausen noise method and control of thread method gives an idea about the distortion of the thread profile and prediction of maximum permissible values of the deformation of hollow carving.

Conclusions

Using Barkhausen noise method for controlling hardened drill pipe thread has allowed to determine the quality of the surface layer after folding.

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