

Title (en)
BORON STEEL GRADE FOR INDUCTION HARDENING AND SHAFT

Title (de)
BORSTAHLQUALITÄT ZUM INDUKTIONSHÄRTEN UND WELLE

Title (fr)
QUALITE D'ACIER AU BORE DURCI PAR INDUCTION ET ARBRE

Publication
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Application
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Abstract (en)
[origin: WO2006110100A1] Low-alloy boron steel grade, e.g. for shafts, which by induction hardening of a surface zone are given an improved fatigue and static strength. The greatest improvement in fatigue strength is obtained by stationary (single shot) induction hardening, due to higher compressive stresses in the surface compared to those obtained by progressive (scanning method) induction hardening. High corresponding tensile stresses in the shaft centre have, however, proved to be able to cause central cracks for these steel grades. The invention means that by using slightly increased contents of molybdenum and nickel as compared with those which as a rule appear as impurities in boron steel of standard composition without specification of the molybdenum and nickel content, the occurrence of central cracks is eliminated.

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