

Title (en)

METHOD FOR TREATING A PART MADE OF FERROUS METAL, AND PART MADE OF FERROUS METAL

Title (de)

VERFAHREN ZUR BEHANDLUNG EINES TEILES AUS EISENMETALL UND TEIL AUS EISENMETALL

Title (fr)

PROCÉDÉ DE TRAITEMENT D'UNE PIÈCE EN MÉTAL FERREUX ET PIÈCE EN MÉTAL FERREUX

Publication

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Application

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Abstract (en)

[origin: CA3160425A1] The invention relates principally to a method for treating a part (P) made of ferrous metal, comprising: a nitriding operation forming on the part (P) a combination layer (2) having a thickness of between 5 and 30 µm, and a diffusion region (3), arranged beneath and in contact with the combination layer (2), having a thickness of between 100 µm and 500 µm; then an operation of quenching the part (P) by high-frequency induction, over an induction depth that is greater than or equal to 0.5 mm, thereby hardening the part (P) and lending said part (P): ? a surface hardness greater than or equal to 50 HRC, ? a hardness of the combination layer (2) greater than or equal to 400 HV0.05, ? a hardness of the part of greater than or equal to 500 HV0.05 at a depth of 500 µm, and wherein the high-frequency induction quenching operation is carried out without the application of a protective film on the part (P) prior to the induction quenching operation. The invention also relates to a part (P) made of ferrous metal, having significant resistance to wear by abrasion and adhesion, improved friction properties and improved resistance to scaling, and good corrosion behavior.

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