

Title (en)

METHOD FOR INCREASING THE STRENGTH OF COMPONENTS MADE OF STEEL UNDER CYCLIC LOAD

Title (de)

VERFAHREN ZUM STEIGERN DER BEANSPRUCHBARKEIT VON BAUTEILEN AUS STAHL UNTER ZYKLISCHER BELASTUNG

Title (fr)

PROCÉDÉ POUR AUGMENTER LA RÉSISTANCE DE PIÈCES EN ACIER SOUMISES À DES CHARGES CYCLIQUES

Publication

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Application

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Abstract (en)

[origin: WO2011047930A1] The invention relates to a method for increasing the strength of components (1) made of steel, in particular pressurized components of fuel injection systems and/or components of fuel injection systems subjected to high mechanical loads, under cyclic load using residual compressive stresses that are deliberately introduced into the component surface and that counteract the load distribution acting on the component surface during cyclic loads, wherein, according to the invention, a residual compressive stress profile is introduced into the component surface by means of gas nitriding of the component (1) and a nitride bonding layer (3) having a thickness (d) of no more than 10 µm is applied to the component surface during gas nitriding.

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Citation (search report)

See references of WO 2011047930A1

Citation (examination)

- EP 1686295 A1 20060802 - RIKEN KK [JP]
- JP 2002047554 A 20020215 - SUMITOMO METAL MINING CO

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