

Title (en)
READY-USE LOW-CARBON STEEL MECHANICAL COMPONENT FOR PLASTIC DEFORMATION AND METHOD FOR MAKING SAME

Title (de)
GEBRAUCHSFERTIGES MECHANISCHES TEIL AUS STAHL MIT NIEDRIGEM KOHLENSTOFFGEGHALT FÜR PLASTISCHE VERFORMUNG UND HERSTELLUNGSVERFAHREN

Title (fr)
PIECE MECANIQUE PRETE A L EMPLOI EN ACIER BAS CARBONE POUR D EFORMATION PLASTIQUE ET SON PROCEDE DE FABRICATION

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Application
EP 03796115 A 20031127

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Abstract (en)
[origin: US2007051434A1] A ready-for-use low-carbon steel mechanical component, like wheel swivel joints of terrestrial vehicles, pins, shafts, suspension bars, links . . . with elevated characteristics obtained by a hot or cold plastic transformation of a laminated long steel product (wire or rod) without any further heat treatment, the chemical composition of said steel complies with the following analysis, given in percentages by weight, based on the iron: C<=0.15%; 0.04%<=Nb<=0.10%; 0.001%<=B<=0.005%; 0.15%<=Mo<=0.35%; 1.3%<=Mn<=2.0%; 0.15%<=Si<=1.30%; 0.01%<=Al<=0.08% and N<=0.015% with Ti>=3.5x% N and said long steel product is obtained from a semi-finished product coming from the continuous casting and hot-rolled in the austenitic range to obtain a bainitic or essentially bainitic structure, and worked by a cold or hot plastic transformation into its final shape, exhibiting a tensile strength at break greater than 800 MPa. The invention is particularly directed to applications of stamping or cold forging or hot forging. But, it also applies to other applications of plastic deformation, such as wire drawing, deep drawing, stamping, etc

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