

Title (en)

980 MPA-GRADE BAINITE HIGH HOLE EXPANSION STEEL AND MANUFACTURING METHOD THEREFOR

Title (de)

980 BAINITSTAHL MIT HOHER LOCHEXPANSION IN MPA-QUALITÄT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER À FORTE EXPANSION DE TROU EN BAINITE DE QUALITÉ 980 MPA ET PROCÉDÉ DE FABRICATION DE CELUI-CI

Publication

EP 4206351 A1 20230705 (EN)

Application

EP 21860563 A 20210830

Priority

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- CN 2021115433 W 20210830

Abstract (en)

Disclosed are a 980 MPa-grade bainite high hole expansion steel and a manufacturing method therefor. The steel contains the following chemical components in percentages by weight: 0.05-0.10% of C, 0.5-2.0% of Si, 1.0-2.0% of Mn, P≤0.02%, S≤0.003%, 0.02-0.08% of Al, N≤0.004%, Mo≥0.1%, 0.01-0.05% of Ti, Cr≤0.5%, B≤0.002%, O≤0.0030%, and the balance of Fe and other inevitable impurities. The high hole expansion steel of the present invention has a yield strength of ≥800 MPa and a tensile strength of ≥980MPa, has a good elongation rate (the transverse A_{sub>50}</sub>

being ≥11%) and hole expansion performance (the hole expansion ratio being ≥40%), and can be applied to a position on a chassis part of a passenger car, such as a control arm and a vice frame, where high strength and thinning are required.

IPC 8 full level

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