Title (en)

AGE-HARDENABLE STEEL, AND METHOD FOR MANUFACTURING COMPONENTS USING AGE-HARDENABLE STEEL

Title (de)

AUSHÄRTBARER STAHL UND VERFAHREN ZUR HERSTELLUNG VON KOMPONENTEN MIT AUSHÄRTBAREM STAHL

Title (fr)

ACIER DURCISSABLE PAR VIEILLISSEMENT, ET PROCÉDÉ DE FABRICATION DE COMPOSANTS AU MOYEN DE L'ACIER DURCISSABLE PAR VIEILLISSEMENT

Publication

EP 3272896 A4 20181010 (EN)

Application

EP 16765035 A 20160316

Priority

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- JP 2016058391 W 20160316

Abstract (en)

[origin: EP3272896A1] Age hardenable steel is low in hardness after hot forging, providing a machine part with the desired fatigue strength and yield strength by aging treatment, and high in toughness after aging treatment, comprising C: 0.09 to 0.20%, Si: 0.01 to 0.40%, Mn: 1.5 to 2.5%, S: 0.001 to 0.045%, Cr: over 1.00% to 2.00%, Al: 0.001 to 0.060%, V: 0.22 to 0.55%, N: over 0.0080 to 0.0170%, and a balance of Fe and impurities, where an area rate of bainite structures is 80% or more, an effective V ratio (amount of dissolved V/total amount of V) is 0.9 or more, a P and Ti in the impurities is P: 0.03% or less and Ti: less than 0.005%, and the chemical composition is one where the following F1 is 1.00 or less and the F2 is 0.30 or more: F 1 = C + 0.1 × Si + 0.2 × Mn + 0.15 × Cr + 0.35 × V F 2 = ## 4.5 × C + Mn + Cr ## 3.5 × V

IPC 8 full level

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Citation (search report)

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- [A] US 2013167986 A1 20130704 - TERAMOTO SHINYA [JP], et al
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Designated contracting state (EPC)

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DOCDB simple family (application)

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