

Title (en)

High-strength martensite heat resisting cast steel and method of producing the steel

Title (de)

Martensitischer Hochfester Hitzebeständiger Gussstahl und dessen Herstellungsverfahren

Title (fr)

Acier martensitique coulé thermorésistant à haute résistance et procédé de sa fabrication

Publication

EP 1770184 B1 20160504 (EN)

Application

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Priority

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Abstract (en)

[origin: EP1770184A1] A high-strength martensite heat resisting steel which has long-time creep rupture strength required for steam temperature condition of 600 - 630°C and toughness at room temperature, and which is suitable for use as a material of a steam turbine rotor shaft and as large-sized forged steel with an improvement of hot forgeability. A method of producing the steel and applications of the steel are also provided. The high-strength martensite heat resisting steel contains 0.05 - 0.20% by mass of C, 0.1% or less of Si, 0.05 - 0.6% of Mn, 0.1 - 0.6% of Ni, 9.0 - 12.0% of Cr, 0.20 - 0.65% of Mo, 2.0 - 3.0% of W, 0.1 - 0.3% of V, 2.0% or less of Co, 0.02 - 0.20% of Nb, 0.015% or less of B, 0.01 - 0.10% of N, and 0.015% or less of Al, (W/Mo) being 4.0 - 10.0.

IPC 8 full level

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Cited by

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