

Title (en)

Heat-resisting steel, heat treatment method for heat-resisting steel and high-temperature steam turbine rotor

Title (de)

Wärmebeständiger Stahl, Wärmebehandlungsmethode für wärmebeständigen Stahl und Hochtemperaturdampfturbinenrotor

Title (fr)

Acier résistant à la chaleur, méthode de traitement thermique pour l'acier résistant à la chaleur et rotor à hautes températures de turbine à vapeur

Publication

EP 1637615 B1 20140716 (EN)

Application

EP 05019872 A 20050913

Priority

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Abstract (en)

[origin: EP1637615A1] A heat-resisting steel consisting of, in percentage by weight, 0.25 to 0.35 of C, 0.15 or less of Si, 0.2 to 0.8 of Mn, 0.3 to 0.6 of Ni, 1.6 to 1.9 of Cr, 0.26 to 0.35 of V, 0.6 to 0.9 of Mo, 0.9 to 1.4 of W, less than 0.01 of Ti, 0.001 to 0.007 of N, 1.3 to 1.4 of a total of Mo and W/2 and the balance of Fe and inevitable impurities, wherein the heat-resisting steel consists of a bainite single phase structure securing 3.5 or more of a total amount of precipitates as 1.0 or more of Fe, 0.8 to 0.9 of Cr, 0. 4 to 0. 5 of Mo, 0. 3 to 0.5 of W and 0.2 or more of V in percentage by weight are moved into the precipitates after a tempering heat treatment.

IPC 8 full level

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