

Title (en)

HEAT-TREATED STEEL MATERIAL AND HEAT TREATMENT METHOD FOR STEEL MATERIAL

Title (de)

WÄRMEBEHANDELTES STAHLMATERIAL UND WÄRMEBEHANDLUNGSVERFAHREN FÜR STAHLMATERIAL

Title (fr)

MATÉRIAU EN ACIER TRAITÉ THERMIQUEMENT ET PROCÉDÉ DE TRAITEMENT THERMIQUE POUR MATÉRIAU EN ACIER

Publication

EP 4324944 A1 20240221 (EN)

Application

EP 22788163 A 20220412

Priority

- JP 2021069177 A 20210415
- JP 2022017584 W 20220412

Abstract (en)

To provide a heat-treated steel excellent in both tensile strength and toughness. A heat-treated steel contains 0.38 to 1.05% by mass of C, 0.0 to 1.0% by mass of Mn, 0.0 to 0.50% by mass of Cr, and 0.0 to 1.5% by mass of Si with the remainder being Fe and unavoidable impurities, wherein an average crystal grain size at a grain boundary setting angle of 15° is $10 \times C + 7(\mu\text{m})$ or less (wherein, C represents a carbon content (%)).

IPC 8 full level

C21D 9/52 (2006.01); **C21D 1/40** (2006.01); **C21D 1/42** (2006.01); **C21D 1/48** (2006.01); **C22C 38/00** (2006.01); **C22C 38/18** (2006.01)

CPC (source: EP KR)

C21D 1/20 (2013.01 - EP); **C21D 1/40** (2013.01 - EP KR); **C21D 1/42** (2013.01 - KR); **C21D 1/48** (2013.01 - EP KR); **C21D 8/065** (2013.01 - EP KR); **C21D 9/525** (2013.01 - KR); **C21D 9/5732** (2013.01 - EP); **C21D 9/62** (2013.01 - EP); **C21D 9/64** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/18** (2013.01 - EP KR); **C21D 2201/05** (2013.01 - EP); **C21D 2211/009** (2013.01 - EP)

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

Designated validation state (EPC)

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