

Title (en)

HIGH-NITROGEN AND HIGH-CHROMIUM PLASTIC DIE STEEL, AND SMELTING METHOD AND THERMAL PROCESSING METHOD THEREFOR

Title (de)

STICKSTOFFREICHER UND CHROMREICHER KUNSTSTOFFMATRIZENSTAHL UND SCHMELZVERFAHREN UND WÄRMEBEARBEITUNGSVERFAHREN DAFÜR

Title (fr)

ACIER À MATRICE PLASTIQUE À TENEUR EN AZOTE ÉLEVÉE ET À TENEUR EN CHROME ÉLEVÉE, ET PROCÉDÉ DE FUSION ET PROCÉDÉ DE TRAITEMENT THERMIQUE POUR CELUI-CI

Publication

**EP 3889285 A1 20211006 (EN)**

Application

**EP 19889385 A 20191012**

Priority

- CN 201811433208 A 20181128
- CN 2019110868 W 20191012

Abstract (en)

High-nitrogen and high-chromium plastic die steel, and a smelting method and a thermal processing method therefor. The high-nitrogen and high-chromium plastic die steel comprises the chemical components in percentage by weight: 0.25-0.35% of C, 0.45-0.8% of Si, 0.4-0.7% of Mn, 16.5-17.5% of Cr, 0.1-0.3% of Ni, 0.1-0.5% of Mo, 0.06-0.10% of N, and the balance being Fe and inevitable impurity elements. The thermal processing comprises spheroidizing annealing and isothermal quenching-tempering. The plastic die steel has good corrosion resistance.

IPC 8 full level

**C22C 38/02** (2006.01); **C21D 1/20** (2006.01); **C21D 1/32** (2006.01); **C21D 6/00** (2006.01); **C22C 33/04** (2006.01); **C22C 38/44** (2006.01)

CPC (source: CN EP KR)

**C21C 7/072** (2013.01 - EP); **C21D 1/19** (2013.01 - EP); **C21D 1/20** (2013.01 - CN EP KR); **C21D 1/26** (2013.01 - EP); **C21D 1/28** (2013.01 - EP); **C21D 1/30** (2013.01 - EP); **C21D 1/32** (2013.01 - CN KR); **C21D 6/004** (2013.01 - CN EP KR); **C21D 6/005** (2013.01 - CN KR); **C21D 6/008** (2013.01 - CN KR); **C21D 9/0068** (2013.01 - EP); **C22C 1/02** (2013.01 - EP); **C22C 33/04** (2013.01 - CN KR); **C22C 38/001** (2013.01 - CN EP KR); **C22C 38/02** (2013.01 - CN EP KR); **C22C 38/04** (2013.01 - CN EP KR); **C22C 38/44** (2013.01 - CN EP KR); **C21D 1/32** (2013.01 - EP); **C21D 1/607** (2013.01 - EP); **C21D 6/002** (2013.01 - EP); **C21D 6/005** (2013.01 - EP); **C21D 6/008** (2013.01 - EP); **C22C 33/04** (2013.01 - EP)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3889285 A1 20211006; EP 3889285 A4 20220706; EP 3889285 B1 20240221**; CN 109266970 A 20190125; CN 109266970 B 20201110; KR 102597090 B1 20231101; KR 2021091156 A 20210721; WO 2020108123 A1 20200604

DOCDB simple family (application)

**EP 19889385 A 20191012**; CN 201811433208 A 20181128; CN 2019110868 W 20191012; KR 20217014235 A 20191012