

Title (en)

BAINITIC HOT WORK TOOL STEEL

Title (de)

BAINITISCHER WARMARBEITSSTAHL

Title (fr)

ACIER BAINITIQUE POUR OUTILS DE TRAVAIL À CHAUD

Publication

EP 3966354 A1 20220316 (EN)

Application

EP 19730566 A 20190510

Priority

SI 2019050008 W 20190510

Abstract (en)

[origin: WO2020231346A1] A novel group of hot work tool steels which exhibit exceptionally high values of thermal conductivity, typically above 45W/mK at the commonly used range work hardness (44-51HRC) has been developed. These steels are characterized by their tendency of largely retaining or even increasing their thermal conductivity at elevated temperatures, with a peak of thermal conductivity typically in the range between 400°C and 500°C. The impact toughness and other mechanical properties remain in compliance with the most common toughness requirements and standard specifications, for hot work tool steels (i.e. H13), while retaining sufficient hardenability to ensure homogenous properties within thick sections. This steel exhibits high tempering stability, low distortion during heat treatment and a very high resistance to heat checking.

IPC 8 full level

C21D 1/20 (2006.01); **C21D 1/25** (2006.01); **C21D 8/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/52** (2006.01)

CPC (source: EP)

C21D 1/20 (2013.01); **C21D 1/25** (2013.01); **C21D 8/005** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/42** (2013.01); **C22C 38/44** (2013.01); **C22C 38/46** (2013.01); **C22C 38/52** (2013.01); **C21D 2211/002** (2013.01)

Citation (search report)

See references of WO 2020231346A1

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

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