

## Title (en)

HOT WORK TOOL STEEL HAVING EXCELLENT TOUGHNESS, AND PROCESS OF PRODUCING SAME

## Title (de)

WARMARBEITSSTAHL MIT AUSGEZEICHNETER ZÄHIGKEIT UND VERFAHREN ZU SEINER HERSTELLUNG

## Title (fr)

ACIER POUR OUTIL DE TRAVAIL À CHAUD DOTÉ D'UNE EXCELLENTE TÉNACITÉ ET SON PROCÉDÉ DE PRODUCTION

## Publication

**EP 2682491 B1 20180704 (EN)**

## Application

**EP 12752790 A 20120228**

## Priority

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- JP 2011148203 A 20110704
- JP 2012054868 W 20120228

## Abstract (en)

[origin: EP2682491A1] Provided are a hot work tool steel having improved toughness and a process of producing the hot work tool steel. A hot work tool steel comprising, in mass%, 0.3% or more and less than 0.6% of C, 1.5% or less of Si, 1.5% or less of Mn and 3.0% or more and less than 6.0% of Cr, wherein more than 0.0025% and 0.025% or less of Zn and 0.005% or more of P are contained and the Zn/P ratio is more than 0.5; and a process of producing a hot work tool steel, comprising a first step of preparing a molten steel having a chemical composition of a hot work tool steel containing 0.005 mass% or more of P, a second step of adding Zn to the molten steel having the chemical composition of the hot work tool steel, and a third step of casting the Zn-added molten steel to produce a steel ingot, wherein the second step is a step of adding Zn in such a manner that more than 0.0025 mass% and 0.025 mass% or less of Zn and 0.005 mass% or more of P can be contained in the chemical composition of the steel ingot after the casting in the third step and the hot work tool steel can have a Zn/P ratio of more than 0.5.

## IPC 8 full level

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## Citation (opposition)

Opponent : Uddeholms AB

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