

Title (en)  
DIE STEEL HAVING SUPERIOR RUSTING RESISTANCE AND THERMAL CONDUCTIVITY, AND METHOD FOR PRODUCING SAME

Title (de)  
GEWALTZTER STAHL MIT HERVORRAGENDER KORROSIONSFESTIGKEIT UND WÄRMELEITFÄHIGKEIT SOWIE  
HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
ACIER POUR MATRICE PRÉSENTANT UNE RÉSISTANCE À LA ROUILLE AINSI QU'UNE CONDUCTIVITÉ THERMIQUE SUPÉRIEURES ET  
PROCÉDÉ POUR SA PRODUCTION

Publication  
**EP 2660348 B1 20171115 (EN)**

Application  
**EP 11854240 A 20110929**

Priority  
• JP 2010289442 A 20101227  
• JP 2011072317 W 20110929

Abstract (en)  
[origin: EP2660348A1] Provided are: a mold steel which, in addition to satisfying the basic characteristics of mold steel, also combines superior rust resistance and superior thermal conductivity; and a method for producing the same. Steel having a composition containing, in terms of mass%: 0.07 to 0.15% C; between 0 and 0.8% Si, exclusive; between 0 and 1.5% Mn, exclusive; less than 0.05% P; less than 0.06% S; between 0 and 0.9% Ni, exclusive; 2.9 to 4.9% Cr; Mo and W either alone or in a complex such that (Mo + 1/2W) is between 0 and 0.8%, exclusive; between 0 and 0.15% V, exclusive; and 0.25 to 1.8% Cu, the remainder being composed of Fe and unavoidable impurities, wherein the mold steel has a hardness of 30 to 42 HRC. Preferably, Al, which is an unavoidable impurity, is restricted to less than 0.1%, N is restricted to less than 0.06%, and O is restricted to less than 0.005%. The aforementioned hardness can be obtained through quenching and through tempering at 530°C or higher.

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 6/00** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP KR)  
**C21D 1/18** (2013.01 - EP KR); **C21D 1/25** (2013.01 - EP KR); **C22C 38/001** (2013.01 - EP); **C22C 38/002** (2013.01 - EP);  
**C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP); **C22C 38/42** (2013.01 - EP KR);  
**C22C 38/44** (2013.01 - EP KR); **C22C 38/46** (2013.01 - EP KR); **C22C 38/60** (2013.01 - EP KR)

Cited by  
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