

Title (en)  
Use of a tool steel for plastic material molds

Title (de)  
Verwendung eines Werkzeugstahles für Kunststoffformen

Title (fr)  
Utilisation d'un acier à outils pour moules pour le plastique

Publication  
**EP 1251187 B1 20030702 (DE)**

Application  
**EP 01109276 A 20010417**

Priority  
EP 01109276 A 20010417

Abstract (en)  
[origin: EP1251187A1] Use of tool steel in the manufacture of molds for plastic parts is new. The steel contains (wt.%): <??>(1) carbon (0.25-0.3); <??>(2) silicon (0.04-0.2); <??>(3) manganese (1.2-2.0); <??>(4) chromium (1.0-2.0); <??>(5) nickel (0.9-1.5); <??>(6) molybdenum (0.3-0.8); <??>(7) vanadium ( $\leq 0.2$ ); and <??>(8) aluminum and a balance of iron (0.01-0.03). <??>Preferred Features: The steel contains 0.9-1.2 wt.% nickel, 0.04-0.15 wt.% silicon, 1.2-1.6 wt.% manganese, 0.4-0.6 wt.% molybdenum, 0.05-0.15 wt.% vanadium and 0.008-0.15 wt.% sulfur. The steel is pre-hardened using water or a polymer.

IPC 1-7  
**C22C 38/44**

IPC 8 full level  
**C21D 1/18** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C21D 9/00** (2006.01)

CPC (source: EP US)  
**C21D 1/18** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US)

Cited by  
EP3211109A1; DE102016103283A1; EP3587066A1; DE202012003298U1; EP2644717A2; US9522485B2; EP3587066B1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1251187 A1 20021023**; **EP 1251187 B1 20030702**; AT E244319 T1 20030715; DE 50100349 D1 20030807; ES 2202237 T3 20040401; PT 1251187 E 20031128; US 2003131911 A1 20030717; WO 02083965 A1 20021024

DOCDB simple family (application)  
**EP 01109276 A 20010417**; AT 01109276 T 20010417; DE 50100349 T 20010417; EP 0203060 W 20020320; ES 01109276 T 20010417; PT 01109276 T 20010417; US 29646202 A 20021125