

Title (en)

Cold work steel with high wear resistance

Title (de)

Kaltarbeitsstahl mit hohem Verschleisswiderstand

Title (fr)

Acier pour travail à froid avec résistance à l'usure élevée

Publication

EP 1382704 B1 20041103 (DE)

Application

EP 03450155 A 20030623

Priority

AT 10272002 A 20020708

Abstract (en)

[origin: EP1382704A1] Cold work steel comprises (in wt.%) 2.21-2.64 carbon, 0.08-1.1 silicon, 0.05-1.1 manganese, 3.71-4.69 chromium, 3.1-4.4 molybdenum, 0.14-0.3 nickel, 8.45-9.5 vanadium, 0.5-1.5 tungsten, 1.1-4.9 cobalt, up to 0.3 sulfur, up to 0.1 niobium, up to 0.1 nitrogen, up to 0.06 aluminum, up to 0.01 titanium, maximum 0.029 phosphorus, maximum 0.03 oxygen, and a balance of iron. Preferred Features: The ratio of V to Mo + W is 1.5-2.2. The ratio of Cr + Mn + Ni to Co is 2.05-2.95.

IPC 1-7

C22C 38/12

IPC 8 full level

C22C 33/02 (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/52** (2006.01); **C22C 38/56** (2006.01)

CPC (source: EP)

C22C 33/0278 (2013.01); **C22C 38/44** (2013.01); **C22C 38/46** (2013.01); **C22C 38/52** (2013.01); **C22C 38/56** (2013.01)

Cited by

JP2008506844A; CN111850384A; US7722697B2; WO2015006006A1; WO2006007984A1; US10472704B2; EP2933345A1; CN106164312A; US2017016099A1; EP3132066A4; JP2017514016A; JP2018159133A; AU2015246667B2; RU2691327C2; TWI658154B

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