

Title (en)
Steel for cold forming

Title (de)
Stahl zur Kaltformung

Title (fr)
Acier pour le formage à froid

Publication
EP 0856591 B1 20010801 (FR)

Application
EP 98400178 A 19980129

Priority
FR 9701459 A 19970204

Abstract (en)
[origin: EP0856591A1] Steel suitable for cold-shaping is prepared by melting and refining and contains by weight 0.80-1.50% carbon, 6.25-9% chromium, 1.80-3% molybdenum, 0.20-0.40% vanadium, 0.60-1.50% niobium, 500-1500 ppm of titanium or zirconium and up to the following levels of other ingredients: 1% manganese, 1% silicon, 0.030% phosphorous, 0.005% sulphur, 0.50% nickel, 0.15% aluminium, 150 ppm nitrogen and 50 ppm oxygen, the balance being iron and impurities.

IPC 1-7
C22C 38/22; **C22C 38/24**; **C22C 38/26**; **C22C 38/28**

IPC 8 full level
C22C 38/22 (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01)

IPC 8 main group level
C21D 1/00 (2006.01)

CPC (source: EP)
C22C 38/22 (2013.01); **C22C 38/24** (2013.01); **C22C 38/26** (2013.01); **C22C 38/28** (2013.01)

Designated contracting state (EPC)
AT BE DE ES GB IT MC NL PT SE

DOCDB simple family (publication)
EP 0856591 A1 19980805; **EP 0856591 B1 20010801**; AR 011620 A1 20000830; AT E203784 T1 20010815; AU 5289398 A 19980806; AU 733190 B2 20010510; BR 9800544 A 19990928; CA 2226350 A1 19980804; CA 2226350 C 20020910; CN 1087038 C 20020703; CN 1200411 A 19981202; CO 4930308 A1 20000627; DE 69801241 D1 20010906; DE 69801241 T2 20020508; ES 2161506 T3 20011201; FR 2759092 A1 19980807; FR 2759092 B1 19990416; HK 1016657 A1 19991105; KR 100487086 B1 20050721; KR 19980071037 A 19981026; MY 117322 A 20040630; PT 856591 E 20011228; SG 60192 A1 19990222; SI 9800030 A 19981031; ZA 98725 B 19980805

DOCDB simple family (application)
EP 98400178 A 19980129; AR P980100467 A 19980203; AT 98400178 T 19980129; AU 5289398 A 19980203; BR 9800544 A 19980203; CA 2226350 A 19980203; CN 98106194 A 19980204; CO 98005268 A 19980203; DE 69801241 T 19980129; ES 98400178 T 19980129; FR 9701459 A 19970204; HK 99101665 A 19990416; KR 19980002983 A 19980203; MY PI9800424 A 19980203; PT 98400178 T 19980129; SG 1998000239 A 19980204; SI 9800030 A 19980204; ZA 98725 A 19980129