

Title (en)
Method for producing gun barrels

Title (de)
Verfahren zur Herstellung von Rohren für schwere Geschütze

Title (fr)
Procédé pour la fabrication de tubes de canon

Publication
EP 1239257 B1 20041027 (DE)

Application
EP 02002665 A 20020206

Priority
DE 10111304 A 20010309

Abstract (en)
[origin: EP1239257A1] Production of tubes comprises twisting forged pieces from a molten block made from a tempered steel; initially hardening the blanks obtained; annealing; boring; and finishing. The tempered steel contains (in wt.%) 0.20-0.50 carbon, ≤ 1.0 silicon, ≤ 1.0 manganese, ≤ 0.03 phosphorus, ≤ 0.03 sulfur, ≤ 0.1 aluminum, ≤ 2 chromium, ≤ 4 nickel, ≤ 1 molybdenum, ≤ 0.5 vanadium and a balance of iron. Preferred Features: The tempered steel contains (in wt.%) 0.30-0.40 carbon, 0.15-0.35 silicon, 0.40-0.70 manganese, ≤ 0.015 phosphorus, ≤ 0.010 sulfur, ≤ 0.015 aluminum, 1.0-1.40 chromium, 2.50-3.50 nickel, 0.35-0.60 molybdenum, 0.08-0.20 vanadium and a balance of iron.

IPC 1-7
F41A 21/20; B21C 37/15; C21D 9/12; C22C 38/44; C22C 38/46

IPC 8 full level
B21C 37/06 (2006.01); **B21C 37/15** (2006.01); **C21D 9/12** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **F41A 21/20** (2006.01)

CPC (source: EP US)
B21C 37/06 (2013.01 - EP US); **C21D 9/12** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US);
F41A 21/20 (2013.01 - EP US); **C21D 2261/00** (2013.01 - EP US)

Cited by
CN102234744A; CN107868904A; CN102433511A; US8252129B2; WO2007137714A1; US8101004B2; US8551397B2

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 1239257 A1 20020911; EP 1239257 B1 20041027; AT E280938 T1 20041115; DE 10111304 A1 20020919; DE 10111304 C2 20030320;
DE 50201374 D1 20041202; ES 2230400 T3 20050501; US 2002124716 A1 20020912; US 6652680 B2 20031125

DOCDB simple family (application)
EP 02002665 A 20020206; AT 02002665 T 20020206; DE 10111304 A 20010309; DE 50201374 T 20020206; ES 02002665 T 20020206;
US 9244302 A 20020308