

Title (en)

Gun barrel with a wear reducing hard chromium layer

Title (de)

Waffenrohr mit einer verschleissmindernden Hartchromschicht

Title (fr)

Tube de canon muni d'une couche de chrome dur pour réduire l'usure

Publication

EP 0977002 A3 20000329 (DE)

Application

EP 99110786 A 19990604

Priority

DE 19834394 A 19980730

Abstract (en)

[origin: EP0977002A2] The cross-sectional surface of the hard chrome layer (3) contains at least 500 cracks (6) per cm and on the surface of the hard chrome layer there are at least 150 cracks per cm.

IPC 1-7

F41A 21/22

IPC 8 full level

F41A 21/04 (2006.01); **F41A 21/22** (2006.01); **C25D 3/04** (2006.01)

CPC (source: EP US)

F41A 21/04 (2013.01 - EP US); **C25D 3/04** (2013.01 - EP US); **Y10T 428/12632** (2015.01 - EP US)

Citation (search report)

- [YD] DE 4107273 A1 19920910 - RHEINMETALL GMBH [DE]
- [Y] DE 2244029 A1 19730315 - M & T CHEMICALS INC
- [A] GB 1456355 A 19761124 - PARKER STE CONTINENTALE
- [A] US 3943040 A 19760309 - WILLSON KARL STUART
- [A] FR 2549090 A1 19850118 - TRAITEMENTS SURFACE MECANIQUE [FR]

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0977002 A2 20000202; **EP 0977002 A3 20000329**; **EP 0977002 B1 20021127**; DE 19834394 A1 20000203; DE 59903519 D1 20030109; ES 2185270 T3 20030416; US 2001029689 A1 20011018; US 2002095846 A1 20020725; US 6381893 B2 20020507; US 6701656 B2 20040309

DOCDB simple family (application)

EP 99110786 A 19990604; DE 19834394 A 19980730; DE 59903519 T 19990604; ES 99110786 T 19990604; US 36365199 A 19990730; US 9547602 A 20020313