

Title (en)

PROCESS FOR LUBRICATING THE SURFACE OF METALLIC PIECES MADE OF COPPER AND IRON OR COPPER ALLOYS IN COLD OR HOT DEFORMING OPERATIONS, AND MEANS FOR USING THIS LUBRICATION

Publication

EP 0315532 B1 19930407 (FR)

Application

EP 88402758 A 19881103

Priority

FR 8715437 A 19871106

Abstract (en)

[origin: EP0315532A1] Process for lubricating the surface of metal pieces made of copper or of iron- or copper-based alloys, intended to be deformed when cold or with heating, which process comprises a traditional surface preparation and the application of at least one lanthanide halide.

IPC 1-7

C10M 103/06; **C10M 111/02**; **C10M 125/18**; **C10M 173/02**; **C10N 10/06**; **C10N 40/24**; **C10N 50/08**

IPC 8 full level

C10M 103/06 (2006.01); **C10M 111/02** (2006.01); **C10M 125/18** (2006.01); **C10M 173/02** (2006.01)

CPC (source: EP)

C10M 101/02 (2013.01); **C10M 103/06** (2013.01); **C10M 105/22** (2013.01); **C10M 111/02** (2013.01); **C10M 125/18** (2013.01); **C10M 173/02** (2013.01); **C10M 2201/02** (2013.01); **C10M 2201/0603** (2013.01); **C10M 2201/0613** (2013.01); **C10M 2201/0623** (2013.01); **C10M 2201/0653** (2013.01); **C10M 2201/0663** (2013.01); **C10M 2201/08** (2013.01); **C10M 2201/0803** (2013.01); **C10M 2201/081** (2013.01); **C10M 2201/082** (2013.01); **C10M 2201/084** (2013.01); **C10M 2201/0853** (2013.01); **C10M 2201/0863** (2013.01); **C10M 2201/0873** (2013.01); **C10M 2201/1006** (2013.01); **C10M 2201/1023** (2013.01); **C10M 2201/1033** (2013.01); **C10M 2201/1053** (2013.01); **C10M 2201/123** (2013.01); **C10M 2203/1006** (2013.01); **C10M 2203/1025** (2013.01); **C10M 2203/1045** (2013.01); **C10M 2203/1065** (2013.01); **C10M 2203/1085** (2013.01); **C10M 2205/14** (2013.01); **C10M 2205/16** (2013.01); **C10M 2205/17** (2013.01); **C10M 2207/103** (2013.01); **C10M 2207/125** (2013.01); **C10M 2207/129** (2013.01); **C10M 2207/2606** (2013.01); **C10M 2207/2623** (2013.01); **C10N 2010/00** (2013.01); **C10N 2010/02** (2013.01); **C10N 2010/04** (2013.01); **C10N 2040/24** (2013.01); **C10N 2040/241** (2020.05); **C10N 2040/242** (2020.05); **C10N 2040/243** (2020.05); **C10N 2040/244** (2020.05); **C10N 2040/245** (2020.05); **C10N 2040/246** (2020.05); **C10N 2040/247** (2020.05); **C10N 2050/01** (2020.05)

Citation (examination)

US 4507214 A 19850326 - ALDORF HENRY E [FR]

Cited by

EP0442661A1; EP0452189A1; FR2660930A1; JPH04227688A; WO9304150A1

Designated contracting state (EPC)

AT BE CH DE ES FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0315532 A1 19890510; **EP 0315532 B1 19930407**; AT E87968 T1 19930415; CA 1311462 C 19921215; DE 3880084 D1 19930513; DE 3880084 T2 19930722; ES 2039673 T3 19931001; FR 2622818 A1 19890512; FR 2622818 B1 19900316

DOCDB simple family (application)

EP 88402758 A 19881103; AT 88402758 T 19881103; CA 582166 A 19881103; DE 3880084 T 19881103; ES 88402758 T 19881103; FR 8715437 A 19871106