

Title (en)

COMPOSITION AND PROCESS FOR TREATING METAL

Title (de)

ZUSAMMENSETZUNG UND VERFAHREN ZUR BEHANDLUNG VON METALL

Title (fr)

COMPOSITION ET PROCEDE DE TRAITEMENT DE METAL

Publication

EP 0746637 A1 19961211 (EN)

Application

EP 94906049 A 19940111

Priority

- JP 1941093 A 19930113
- US 9400212 W 19940111

Abstract (en)

[origin: WO9416119A1] A bath for treating metal surfaces for the formation thereon of composite films for the cold working of metal advantageously comprises an otherwise conventional conversion coating bath that also contains organic cationic polymer having at least 1 cationic nitrogen atom per molecule and having a molecular weight of 1,000 to 1,000,000, or a salt of such a polymer. Major improvements in the lubrication properties, particularly in the seizure resistance, can be achieved by applying out a conventional lubrication treatment on such a composite film. Specifically, practical operating limits in metal cold working, e.g., the working degree or ratio, working speed, tool life, and the like, can be increased in a single step. This is useful in terms of improving productivity, product stability, cost reduction, and the like.

IPC 1-7

C23C 22/00; C08J 3/00; C08K 5/17; C08L 75/00

IPC 8 full level

C10M 107/40 (2006.01); **B21C 9/00** (2006.01); **B21C 9/02** (2006.01); **B21J 3/00** (2006.01); **C10M 105/24** (2006.01); **C10M 107/44** (2006.01); **C23C 22/07** (2006.01); **C23C 22/08** (2006.01); **C23C 22/34** (2006.01); **C23C 22/36** (2006.01); **C23C 22/46** (2006.01); **C23C 22/47** (2006.01); **C10N 20/04** (2006.01); **C10N 30/06** (2006.01); **C10N 40/24** (2006.01); **C10N 50/02** (2006.01)

CPC (source: EP KR)

B21C 9/005 (2013.01 - EP); **B21C 9/02** (2013.01 - EP); **B21J 3/00** (2013.01 - EP); **C10M 105/24** (2013.01 - EP); **C23C 22/00** (2013.01 - KR); **C23C 22/08** (2013.01 - EP); **C23C 22/34** (2013.01 - EP); **C23C 22/46** (2013.01 - EP)

Designated contracting state (EPC)

AT BE DE ES FR GB IT NL SE

DOCDB simple family (publication)

WO 9416119 A1 19940721; CA 2153331 A1 19940721; CN 1054892 C 20000726; CN 1095116 A 19941116; EP 0746637 A1 19961211; EP 0746637 A4 19950914; JP 3193798 B2 20010730; JP H06212444 A 19940802; KR 0144646 B1 19980817; KR 940018479 A 19940818

DOCDB simple family (application)

US 9400212 W 19940111; CA 2153331 A 19940111; CN 94100678 A 19940112; EP 94906049 A 19940111; JP 1941093 A 19930113; KR 19940000490 A 19940113