

Title (en)
METHOD OF USING INTRINSICALLY CONDUCTIVE POLYMERS WITH INHERENT LUBRICATING PROPERTIES, AND A COMPOSITION HAVING AN INTRINSICALLY CONDUCTIVE POLYMER, FOR PROTECTING METAL SURFACES FROM GALLING AND CORROSION

Title (de)
VERFAHREN ZUR VERWENDUNG VON INTRINSISCH LEITFÄHIGEN POLYMEREN MIT INHÄRENTEN SCHMIEREIGENSCHAFTEN UND ZUSAMMENSETZUNG MIT EINEM INTRINSISCH LEITFÄHIGEN POLYMER ZUM SCHUTZ VON METALLOBERFLÄCHEN VOR OBERFLÄCHENVERSCHLEISS UND KORROSION

Title (fr)
PROCEDE POUR UTILISER DES POLYMERES INTRINSEQUEMENT CONDUCTEURS AVEC DES PROPRIETES LUBRIFIANTES INHERENTES ET COMPOSITION COMPRENANT UN POLYMER INTRINSEQUEMENT CONDUCTEUR DESTINEE A PROTEGER LES SURFACES METALLIQUES CONTRE LES ERAILLURES ET LA CORROSION

Publication
EP 1723270 A2 20061122 (EN)

Application
EP 05702504 A 20050210

Priority
• IB 2005000380 W 20050210
• US 77508604 A 20040211

Abstract (en)
[origin: US2005176592A1] A method for protecting a metal surface from galling and corrosion includes a step of providing a protective dry film on the metal surface. The film includes a solid lubricant and a conducting polymer, the conducting polymer having lubricant properties and being capable of binding the solid lubricant to the metal surface. Threaded metal joint surfaces coated with the film are capable of resisting galling under high pressure and high torque conditions, even after several fastening and unfastening operations or over a long period of time. Protection from corrosion is also provided by the film. The method and film are economical in that only a single layer of protective compound need be applied in order to provide metal surfaces with both lubrication and protection against corrosion, and problems such as removal or leakage, which are associated with protective compounds that use oils, are avoided. Additionally, the dry film is advantageous because it does not contain heavy metals that are harmful to the environment.

IPC 8 full level
C25D 13/00 (2006.01); **B05D 7/14** (2006.01); **C09D 5/24** (2006.01); **C09D 5/44** (2006.01); **C10M 103/02** (2006.01); **C10M 103/06** (2006.01); **C10M 111/02** (2006.01); **C10M 119/24** (2006.01); **C10M 149/04** (2006.01); **C10M 169/04** (2006.01); **C23C 22/83** (2006.01); **C23F 11/173** (2006.01); **C25D 13/08** (2006.01); **F16B 33/00** (2006.01); **F16L 15/00** (2006.01); **F16L 15/02** (2006.01); **F16L 57/06** (2006.01); **F16L 58/04** (2006.01); **F16L 58/10** (2006.01); **C08L 79/02** (2006.01)

CPC (source: EP US)
C09D 5/24 (2013.01 - EP US); **C09D 5/4419** (2013.01 - EP US); **C09D 5/4476** (2013.01 - EP US); **C10M 169/04** (2013.01 - EP US); **C10M 169/041** (2013.01 - EP US); **C23C 22/83** (2013.01 - EP US); **C25D 13/08** (2013.01 - EP US); **F16L 15/08** (2013.01 - EP US); **F16L 57/06** (2013.01 - EP US); **F16L 58/10** (2013.01 - EP US); **F16L 58/182** (2013.01 - EP US); **C08L 79/02** (2013.01 - EP US); **C10M 2201/041** (2013.01 - EP US); **C10M 2201/0413** (2013.01 - EP US); **C10M 2201/065** (2013.01 - EP US); **C10M 2201/0653** (2013.01 - EP US); **C10M 2215/223** (2013.01 - EP US); **C10M 2217/046** (2013.01 - EP US); **C10N 2030/00** (2013.01 - EP US); **C10N 2030/12** (2013.01 - EP US); **C10N 2050/02** (2013.01 - EP US); **C10N 2050/08** (2013.01 - EP US); **C10N 2060/10** (2013.01 - EP US)

Citation (search report)
See references of WO 2005080644A2

Cited by
US9683109B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
US 2005176592 A1 20050811; AR 047599 A1 20060125; EP 1723270 A2 20061122; WO 2005080644 A2 20050901; WO 2005080644 A3 20060216

DOCDB simple family (application)
US 77508604 A 20040211; AR P050100461 A 20050209; EP 05702504 A 20050210; IB 2005000380 W 20050210