

Title (en)

CHAIN HAVING AN ELECTROLESS NICKEL COATING CONTAINING HARD PARTICLES

Title (de)

KETTE MIT EINER STROMLOSEN NICKELBESCHICHTUNG MIT HARTEN PARTIKELN

Title (fr)

CHAÎNE POURVUE D'UN REVÊTEMENT DE NICKEL AUTOCATALYTIQUE CONTENANT DES PARTICULES DURES

Publication

**EP 3426821 A4 20191030 (EN)**

Application

**EP 16893758 A 20160310**

Priority

US 2016021701 W 20160310

Abstract (en)

[origin: WO2017155535A1] A method of applying a wear resistant surface to chain links and pins of a chain by the application of an electroless nickel coating containing hard particles. The coating reduces the friction on the chain links and associated chain components, such as pins, bushings, rockers and other components. The hard particles contained in the coating may be a carbide or nitride formed using the following elements: silicon, boron, chromium or vanadium. The coating may contain a combination of carbide or nitrides. The hard particles may additionally include natural diamond and/or synthetic diamond like carbon (DLC) particles.

IPC 8 full level

**C23C 18/32** (2006.01); **C23C 18/18** (2006.01); **C23C 22/82** (2006.01); **C23G 1/14** (2006.01); **C23G 1/24** (2006.01); **F16G 13/04** (2006.01)

CPC (source: EP US)

**C23C 18/1662** (2013.01 - EP US); **C23C 18/1844** (2013.01 - EP US); **C23C 18/1848** (2013.01 - EP US); **C23C 18/32** (2013.01 - EP US); **C25F 1/00** (2013.01 - EP US); **F16G 13/04** (2013.01 - EP US); **F16G 13/06** (2013.01 - EP US)

Citation (search report)

- [I] WO 2012145750 A2 20121026 - NANO GROUP INC [US], et al
- [I] DE 102009013773 A1 20100923 - SMS SIEMAG AG [DE]
- See references of WO 2017155535A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2017155535 A1 20170914**; CN 108699697 A 20181023; EP 3426821 A1 20190116; EP 3426821 A4 20191030; JP 2019509398 A 20190404; US 2019071780 A1 20190307

DOCDB simple family (application)

**US 2016021701 W 20160310**; CN 201680081926 A 20160310; EP 16893758 A 20160310; JP 2018543124 A 20160310; US 201616083530 A 20160310