

Title (en)

Method for the peening and vibratory finishing of gears

Title (de)

Methode zum Kugelstrahlen und Vibrationsgleitschleifen von Zahnrädern

Title (fr)

Méthode pour le grenaillage et l'affûtage de surface de glissement des pignons

Publication

EP 2436487 B1 20150603 (EN)

Application

EP 10169858 A 20100716

Priority

EP 10169858 A 20100716

Abstract (en)

[origin: EP2436487A1] The present invention is directed to a method and apparatus for processing a metallic gear (20) comprising providing a gear (20), directing a first peening media at the metallic gear (20) thereby exposing a plurality of surfaces on the metallic gear (20) to the first peening media whereby the strength and wear properties of the teeth roots of the gear (20) are enhanced, directing a second peening media at the metallic gear (20) thereby exposing a plurality of surfaces on the metallic gear (20) to the second peening media whereby the surface compressive stress of the gear (20) is enhanced, providing a container (200), placing a fine finishing medium (212) in the container (200), placing the gear (201) with the fine finishing medium (212) in the container (200), coupling vibrations to the container (200) to vibrate the fine finishing medium (212) with the wetted gear (20), removing the gear (20) from the container (200), washing the gear (201) and rinsing the gear (20) with rust inhibitor.

IPC 8 full level

B24C 1/10 (2006.01); **B23F 17/00** (2006.01); **B24B 1/04** (2006.01); **B24B 31/06** (2006.01); **B24B 31/073** (2006.01); **B24C 11/00** (2006.01); **C21D 7/06** (2006.01)

CPC (source: EP)

B24B 1/04 (2013.01); **B24B 31/062** (2013.01); **B24B 31/073** (2013.01); **C21D 7/06** (2013.01); **C21D 9/32** (2013.01)

Citation (examination)

- US 4307544 A 19811229 - BALZ GUNTHER W
- EP 2110203 A1 20091021 - REM TECHNOLOGIES [US], et al

Cited by

FR3093661A1

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 SE SI SK SM TR

DOCDB simple family (publication)

EP 2436487 A1 20120404; **EP 2436487 B1 20150603**; ES 2541004 T3 20150715; HU E025386 T2 20160229; PL 2436487 T3 20151130

DOCDB simple family (application)

EP 10169858 A 20100716; ES 10169858 T 20100716; HU E10169858 A 20100716; PL 10169858 T 20100716