

Title (en)

METHOD AND APPARATUS FOR PROVIDING A LAYER OF COMPRESSIVE RESIDUAL STRESS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR BEREITSTELLUNG EINER RESTDRUCKSPANNUNGSSCHICHT

Title (fr)

PROCEDE ET APPAREIL D'APPLICATION D'UNE COUCHE DE CONTRAINTE EN COMPRESSION RESIDUELLE

Publication

**EP 1485510 A1 20041215 (EN)**

Application

**EP 03716639 A 20030314**

Priority

- US 0308130 W 20030314
- US 34648902 P 20020318
- US 37675702 P 20020430

Abstract (en)

[origin: WO03080877A1] The shot peening method and apparatus (Fig. 13) of the present invention utilizes control of the shot peening coverage to provide higher surface compression and comparable depth of compression to conventional 100% coverage peening but with reduced cold working providing improved thermal stability and reduction in shot peening time and cost. A preferred embodiment of this invention employs x-ray diffraction (Fig. 13) residual stress and percent cold work determined by line broadening to establish the optimal degree of coverage for a given material and shot peening intensity.

IPC 1-7

**C21D 7/06**

IPC 8 full level

**C21D 7/06** (2006.01)

CPC (source: EP)

**C21D 7/06** (2013.01)

Cited by

CN109583037A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 03080877 A1 20031002**; AU 2003220340 A1 20031008; AU 2003220340 B2 20080911; AU 2003220340 B8 20090115; CA 2479373 A1 20031002; CA 2479373 C 20100601; EP 1485510 A1 20041215; EP 1485510 A4 20070620

DOCDB simple family (application)

**US 0308130 W 20030314**; AU 2003220340 A 20030314; CA 2479373 A 20030314; EP 03716639 A 20030314