

Title (en)  
MECHANICAL PART INCLUDING AN INSERT MADE OF A COMPOSITE MATERIAL

Title (de)  
MECHANISCHES TEIL MIT EINEM EINSCHUB AUS EINEM VERBUNDWERKSTOFF

Title (fr)  
PIECE MECANIQUE COMPORTANT UN INSERT EN MATERIAU COMPOSITE

Publication  
**EP 2191029 A2 20100602 (FR)**

Application  
**EP 08830741 A 20080710**

Priority  
• FR 2008001014 W 20080710  
• FR 0705453 A 20070726

Abstract (en)  
[origin: FR2919283A1] The process for manufacturing a mechanical component (10), comprises fabricating an insert (3) by winding a beam or a sheet linked with coated wire (32) around a rotating component, and inserting the insert in opposite sides of a container undergoing hot isostatic compaction. The insert is made of a composite material having metal matrix in which metallic sheath ceramic fibers extend, and positioned in planes forming an angle ( $\alpha$ ), which is non-zero. A part of the winding is carried out in straight direction. The rotating component includes two parallel portions of rectilinear coils. The process for manufacturing a mechanical component (10), comprises fabricating an insert (3) by winding a beam or a sheet linked with coated wire (32) around a rotating component, and inserting the insert in opposite sides of a container undergoing hot isostatic compaction. The insert is made of a composite material having metal matrix in which metallic sheath ceramic fibers extend, and positioned in planes forming an angle ( $\alpha$ ), which is non-zero. A part of the winding is carried out in straight direction. The rotating component includes two parallel portions of rectilinear coils. The two parallel portions are inserted between two circular portions having different radius. Independent claims are included for: (1) a mechanical component; and (2) a winding device.

IPC 8 full level  
**C22C 47/06** (2006.01)

CPC (source: EP US)  
**C22C 47/04** (2013.01 - EP US); **C22C 47/064** (2013.01 - EP US); **C22C 47/14** (2013.01 - EP US); **C22C 49/04** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US); **Y10T 29/49986** (2015.01 - EP US); **Y10T 428/12486** (2015.01 - EP US)

C-Set (source: EP US)  
**B22F 2999/00 + C22C 47/14 + B22F 3/15**

Citation (search report)  
See references of WO 2009034263A2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**FR 2919283 A1 20090130; FR 2919283 B1 20100917**; BR PI0814322 A2 20150120; CA 2694370 A1 20090319; CA 2694370 C 20161018; CN 101999010 A 20110330; CN 101999010 B 20140730; EP 2191029 A2 20100602; EP 2191029 B1 20130123; IL 203453 A 20140831; JP 2010534763 A 20101111; RU 2010107049 A 20110910; RU 2490355 C2 20130820; US 2010291339 A1 20101118; US 8920935 B2 20141230; WO 2009034263 A2 20090319; WO 2009034263 A3 20091022

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