

Title (en)

PROCESS FOR MANUFACTURING A MECHANICAL PART INCLUDING AN INSERT MADE OF A COMPOSITE MATERIAL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES MECHANISCHEN ELEMENTS MIT EINEM EINSATZ AUS EINEM VERBUNDMATERIAL

Title (fr)

PROCEDE DE FABRICATION D'UNE PIECE MECANIQUE COMPORTANT UN INSERT EN MATERIAU COMPOSITE

Publication

EP 2179069 A2 20100428 (FR)

Application

EP 08830550 A 20080710

Priority

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Abstract (en)

[origin: FR2919284A1] The process for manufacturing a mechanical component (10), comprises fabricating a draft of insert by winding a beam or a sheet linked with coated wire (32) around a rotating polygonal component, inserting the draft in a first container, carrying out hot isostatic compaction of the first container, machining the first container to form a straight insert, inserting the insert in a second container, carrying out hot isostatic compaction of the second container, and machining the second container to form a mechanical component. The insert is made of a composite material having metal matrix. The process for manufacturing a mechanical component (10), comprises fabricating a draft of insert by winding a beam or a sheet linked with coated wire (32) around a rotating polygonal component, inserting the draft in a first container, carrying out hot isostatic compaction of the first container, machining the first container to form a straight insert, inserting the insert in a second container, carrying out hot isostatic compaction of the second container, and machining the second container to form a mechanical component. The insert is made of a composite material having metal matrix in which metallic sheath ceramic fibers extend. A part of the winding is carried out in straight direction. The rotating component includes two parallel portions (34) 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)

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Citation (search report)

See references of WO 2009034264A2

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