

Title (en)

One-piece calibration method for crankcase tempering, device for implementing the method

Title (de)

Monoblock-Kalibrierungsverfahren zur Härtung eines Gehäuses, Vorrichtung zur Umsetzung dieses Verfahrens

Title (fr)

Procédé de calibrage monobloc pour trempe de carter, dispositif de mise en oeuvre du procédé

Publication

EP 1840230 A3 20091125 (FR)

Application

EP 07290364 A 20070326

Priority

FR 0651039 A 20060327

Abstract (en)

[origin: EP1840230A2] The method involves arranging a cylindrical part (1) of an aeronautic turbomachine case e.g. compressor casing, in a pot heater (5), and heating the cylindrical part to a hot thermal processing temperature. An inner sizing die (8) is installed inside the cylindrical part during its maximum structural recess, where the sizing die has a diameter higher than a diameter of the cylindrical part. The cylindrical part is cooled to a temperature lower than an ambient temperature of a maximum structural recess. The inner sizing die is extracted. An independent claim is also included for a cylindrical part sizing device comprising a model.

IPC 8 full level

C21D 1/673 (2006.01); **B21C 37/30** (2006.01); **C21D 9/00** (2006.01); **C21D 9/08** (2006.01)

CPC (source: EP US)

B21C 37/30 (2013.01 - EP US)

Citation (search report)

- [X] EP 0553154 B1 19940727 - ZAHNRADFABRIK FRIEDRICHSHAFEN [DE]
- [A] ZOCH H-W ET AL: "VERZUG UND STRANGGUSS - EINFLUSS DES GIESSFORMATS BEIM FIXTURHAERTEN VON WAEZLAGERSTAHLRINGEN", HTM HAERTEREI TECHNISCHE MITTEILUNGEN, CARL HANSER VERLAG, MUNCHEN, DE, vol. 49, no. 4, 1 July 1994 (1994-07-01), pages 245 - 253, XP000459597, ISSN: 0341-101X

Designated contracting state (EPC)

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

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 1840230 A2 20071003; EP 1840230 A3 20091125; EP 1840230 B1 20120613; CA 2582391 A1 20070927; CA 2582391 C 20140617; CN 101045245 A 20071003; CN 101045245 B 20130109; FR 2898822 A1 20070928; FR 2898822 B1 20090116; IL 182193 A0 20070724; IL 182193 A 20120329; JP 2007262578 A 20071011; JP 5350596 B2 20131127; RU 2007110983 A 20081010; RU 2434702 C2 20111127; US 2007221299 A1 20070927; US 2010019423 A1 20100128; US 7718017 B2 20100518; US 8206644 B2 20120626

DOCDB simple family (application)

EP 07290364 A 20070326; CA 2582391 A 20070326; CN 200710093603 A 20070327; FR 0651039 A 20060327; IL 18219307 A 20070326; JP 2007078352 A 20070326; RU 2007110983 A 20070326; US 57529609 A 20091007; US 69112207 A 20070326