

Title (en)

METHOD AND DEVICE FOR MANUFACTURING A BI-MATERIAL FERRULE AND FERRULE THUS PRODUCED

Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG EINER HÜLSE AUS ZWEI MATERIALIEN UND AUF DIESE WEISE HERGESTELLTE HÜLLE

Title (fr)

PROCÉDÉ ET DISPOSITIF POUR LA FABRICATION D'UNE VIROLE BI-MATÉRIAUX, ET VIROLE AINSI RÉALISÉE.

Publication

EP 2552625 A1 20130206 (FR)

Application

EP 11719324 A 20110401

Priority

- FR 1052508 A 20100402
- FR 2011050736 W 20110401

Abstract (en)

[origin: WO2011121251A1] The invention relates to a method for manufacturing a bi-material ferrule, consisting of an outer annular ferrule (17) and an inner annular ferrule bonded together; the bottom pouring of the outer ferrule (17) is carried out in a casting space (7) defined by a wall of a first ingot mould and by an upwardly movable outer wall (8) of a second ingot mould that is concentric to the former; said movable wall (8) of the second ingot mould is raised such as to uncover the skin of the outer ferrule (17) which is solidified thereagainst; bottom pouring and solidification of the inner ferrule are carried out in a casting space defined by said skin and a stationary inner wall (9) of said second ingot mould, the bonding of the two ferrules being carried out by diffusion between said ferrules; and forging and/or one of said bonded ferrules is optionally carried out. The invention also relates to a device for using said method and to a ferrule thus produced.

IPC 8 full level

B22D 7/02 (2006.01); **B22D 19/16** (2006.01)

CPC (source: EP KR US)

B22D 7/02 (2013.01 - EP KR US); **B22D 7/06** (2013.01 - KR); **B22D 19/16** (2013.01 - EP KR US); **B22D 25/02** (2013.01 - KR US); **B22D 31/002** (2013.01 - KR US); **F16L 9/02** (2013.01 - KR US); **Y10T 29/49989** (2015.01 - EP US)

Citation (search report)

See references of WO 2011121251A1

Citation (examination)

FR 2149294 A1 19730330 - APV PARAMOUNT LTD

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 RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2011121251 A1 20111006; BR 112012025065 A2 20160621; BR 112012025065 B1 20180925; BR 112012025065 B8 20181218; CN 103025455 A 20130403; CN 103025455 B 20170616; EP 2552625 A1 20130206; FR 2958194 A1 20111007; FR 2958194 B1 20120615; JP 2013523455 A 20130617; JP 5662556 B2 20150128; KR 101809560 B1 20180118; KR 20130064738 A 20130618; RU 2012146729 A 20140520; RU 2557040 C2 20150720; UA 107965 C2 20150310; US 2013087242 A1 20130411; US 8978714 B2 20150317

DOCDB simple family (application)

FR 2011050736 W 20110401; BR 112012025065 A 20110401; CN 201180027210 A 20110401; EP 11719324 A 20110401; FR 1052508 A 20100402; JP 2013501918 A 20110401; KR 20127028259 A 20110401; RU 2012146729 A 20110401; UA A201212460 A 20110401; US 201113638783 A 20110401