

Title (en)

Method for forming pipes and for manufacturing hollow shafts

Title (de)

Verfahren zum Umformen von Rohrelementen und Verfahren zur Herstellung von Hohlwellen

Title (fr)

Procédé de formage de tubes et de fabrication d'arbres creux

Publication

**EP 1611973 B1 20091104 (DE)**

Application

**EP 05014313 A 20050701**

Priority

DE 102004032122 A 20040701

Abstract (en)

[origin: EP1611973A1] In a process to modify the shape of a hollow shaft (5), the shaft is inserted in a sleeve (1, 2) with a variable inner cross sectional profile that includes a zone whose inner diameter (A) is greater than that of the shaft (5). In a second stage a mandrel (3, 5) is inserted into the hollow shaft (5) which is then subject to longitudinal compression. Also claimed is a commensurate assembly.

IPC 8 full level

**B21D 53/84** (2006.01); **B21J 5/08** (2006.01); **B21K 1/06** (2006.01); **B21K 1/12** (2006.01)

CPC (source: EP)

**B21C 37/205** (2013.01); **B21D 53/845** (2013.01); **B21J 5/08** (2013.01); **B21K 1/12** (2013.01); **B21K 23/04** (2013.01)

Cited by

EP2030701A1; EP2759358A1; EP2711106A3; WO2009027789A2; US9751124B2; WO2009027789A3; EP2711106A2; DE102013015483A1

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 NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 1611973 A1 20060104**; **EP 1611973 B1 20091104**; AT E447450 T1 20091115; DE 102004032122 A1 20060119; DE 502005008431 D1 20091217

DOCDB simple family (application)

**EP 05014313 A 20050701**; AT 05014313 T 20050701; DE 102004032122 A 20040701; DE 502005008431 T 20050701