

Title (en)

Method of manufacturing a multi-layer tube for guiding heat transfer fluids and multi-layer tube

Title (de)

Herstellungsverfahren für ein Mehrschichtrohr zur Führung eines Wärmeübertragungsfluids und Mehrschichtrohr

Title (fr)

Méthode de fabrication d'un tube multicouche pour le guidage des fluides de transfert de chaleur et tube multicouche

Publication

**EP 1537921 B1 20070627 (DE)**

Application

**EP 04028534 A 20041202**

Priority

DE 10357671 A 20031205

Abstract (en)

[origin: EP1537921A1] A first tube (24) is positioned with radial play within a second tube (18), and the tubes are connected via plastic forming of first and/or second tube. The second tube is positioned with radial play within a third tube (16), and connected by plastic forming of second and/or third tube. The forming force is applied to inner and/or the outer tube. All tubes have a circular cross section, and engage on each other or enclose a ring gap. The outermost tube is placed in a mold, and the inner tube is expanded hydraulically or by a forming tool, until it forms a bond with a neighboring tube. The compound tube (10) has an inner/outer layer of a material with high heat conductivity, a material with high structural stability at relevant temperatures, and an anti-corrosion layer (22).

IPC 8 full level

**B21C 37/15** (2006.01); **B21D 26/051** (2011.01)

CPC (source: EP)

**B21C 37/154** (2013.01); **B21D 26/051** (2013.01); **B21D 39/04** (2013.01)

Cited by

CN102489593A; CN102489597A; CN102489591A; CN102489598A; CN102397937A; EP1746363A2

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 MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 1537921 A1 20050608**; **EP 1537921 B1 20070627**; AT E365592 T1 20070715; DE 10357671 A1 20050707; DE 502004004180 D1 20070809; ES 2287630 T3 20071216

DOCDB simple family (application)

**EP 04028534 A 20041202**; AT 04028534 T 20041202; DE 10357671 A 20031205; DE 502004004180 T 20041202; ES 04028534 T 20041202