

Title (en)

METHOD AND DEVICE FOR PRODUCING A ROD-SHAPED ELEMENT

Title (de)

VERFAHREN UND VORRICHTUNG ZUM HERSTELLEN EINES STABFÖRMIGEN ELEMENTES

Title (fr)

PROCÉDÉ ET DISPOSITIF DE FABRICATION D'UN ÉLÉMENT EN FORME DE TIGE

Publication

**EP 3917696 A1 20211208 (DE)**

Application

**EP 20704789 A 20200130**

Priority

- DE 102019102600 A 20190201
- EP 2020052339 W 20200130

Abstract (en)

[origin: WO2020157226A1] The invention relates to a method for producing a rod-shaped element. The aim of the invention is to provide a method by means of which a rod-shaped element can be produced which overcomes at least one of the disadvantages of the rod-shaped elements known from the prior art. This aim is achieved, according to the invention, in that the method comprises the steps of providing a tube made of a metal, wherein the tube has a longitudinal direction; providing at least one strand having a plurality of threads, wherein at least one of the threads has carbon fibers; introducing the at least one strand into the tube such that the at least one strand extends in the longitudinal direction in the tube; and cold forming the tube, together with the at least one strand, by means of a forming tool, such that an outside diameter of the tube before the cold forming is greater than the outside diameter of the tube after the cold forming.

IPC 8 full level

**B21C 37/04** (2006.01); **B21C 37/08** (2006.01); **B21F 19/00** (2006.01)

CPC (source: EP KR US)

**B21B 21/00** (2013.01 - KR); **B21C 1/22** (2013.01 - EP KR US); **B21C 37/045** (2013.01 - EP KR US); **B21C 37/08** (2013.01 - EP KR US); **B21B 21/00** (2013.01 - EP)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2020157226 A1 20200806**; CN 113382811 A 20210910; DE 102019102600 A1 20200806; EP 3917696 A1 20211208; EP 3917696 B1 20231129; EP 3917696 C0 20231129; ES 2970165 T3 20240527; JP 2022519098 A 20220318; JP 7467487 B2 20240415; KR 20210123330 A 20211013; US 2022118494 A1 20220421

DOCDB simple family (application)

**EP 2020052339 W 20200130**; CN 202080011875 A 20200130; DE 102019102600 A 20190201; EP 20704789 A 20200130; ES 20704789 T 20200130; JP 2021544722 A 20200130; KR 20217026987 A 20200130; US 202017425963 A 20200130