

Title (en)

METHOD AND DEVICE FOR DEFORMING U-SHAPED ELECTRIC CONDUCTORS

Title (de)

VERFAHREN UND VORRICHTUNG ZUM UMFORMEN VON U-FÖRMIGEN ELEKTRISCHEN LEITERN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE FORMAGE DE CONDUCTEURS ÉLECTRIQUES EN FORME DE U

Publication

**EP 3622614 A1 20200318 (DE)**

Application

**EP 18724231 A 20180511**

Priority

- DE 102017004538 A 20170511
- EP 2018062243 W 20180511

Abstract (en)

[origin: WO2018206783A1] The invention relates to a method and a device (1) for deforming a U-shaped electric conductor (6) into a hairpin (19) which can be used to produce a bar winding of an electric machine. Prior to the deforming process, the electric conductor (6) has two parallel limbs (7, 8) which are integrally connected together by means of a connection limb (9), and the three limbs (7, 8, 9) are arranged on an imaginary plane (10). The aim of the invention is to carry out the deformation of the electric conductor (6) into a hairpin (19) in an inexpensive manner. According to the invention, this is achieved in that the two parallel limbs (8, 9) are first clamped in a respective clamping device (A, B), the first limb (7) together with the first clamping device (A) is then held in place, the second limb (8) is then moved away from the first limb (7) on a circular path (42), thereby stretching the connection limb (9), and a deformation section (11') of the electric conductor (6) is simultaneously or subsequently moved on a guide surface (31) of a twisting guide element (30), said guide surface protruding radially beyond the circular path (42).

IPC 8 full level

**H02K 15/00** (2006.01)

CPC (source: EP KR US)

**B23P 19/02** (2013.01 - US); **H02K 15/00** (2013.01 - EP); **H02K 15/0421** (2013.01 - EP KR US); **H02K 37/00** (2013.01 - KR)

Citation (search report)

See references of WO 2018206783A1

Cited by

FR3121297A1; WO2022207992A1

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)

**DE 102017004538 A1 20181115**; CN 110603719 A 20191220; CN 110603719 B 20211126; EP 3622614 A1 20200318;  
JP 2020520629 A 20200709; JP 6970282 B2 20211124; KR 20200018413 A 20200219; US 11601034 B2 20230307;  
US 2021135552 A1 20210506; WO 2018206783 A1 20181115

DOCDB simple family (application)

**DE 102017004538 A 20170511**; CN 201880029920 A 20180511; EP 18724231 A 20180511; EP 2018062243 W 20180511;  
JP 2020512917 A 20180511; KR 20197034114 A 20180511; US 201816611965 A 20180511