

Title (en)

PRODUCTION OF SHELL-AND-TUBE HEAT EXCHANGERS

Title (de)

HERSTELLUNG VON ROHRBÜNDELWÄRMEÜBERTRAGERN

Title (fr)

FABRICATION D'ÉCHANGEURS THERMIQUES À FAISCEAU TUBULAIRE

Publication

**EP 3019296 A1 20160518 (DE)**

Application

**EP 14741230 A 20140707**

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Abstract (en)

[origin: WO2015004071A1] The invention relates to a method for producing shell-and-tube heat exchangers, consisting of collector tubes, arranged at a distance from one another and running substantially parallel to one another, and a plurality of cross tubes, the ends of which are welded to prefabricated connecting holes of the collector tubes or which are connected to one another by means of welding and using U-shaped tube bends, a metal inert-gas welding with a torch that has a non-consumable electrode and with the addition of a welding filler being used as the welding method, and also relates to a device for carrying out the method. The invention is based on the object of simplifying and automating the entire welding of shell-and-tube heat exchangers. This is achieved according to the invention by the welding device being divided into two individual units, that is the torch on the one hand and the welding wire feed on the other hand, by the two individual units being fastened to separately controllable robot arms, by the torch being moved by means of its robot arm continuously around the welding location by 360° or somewhat more in a single operation and by the welding wire feed being moved by means of its robot arm in such a way that it runs together with the torch around the welding location by about 180° in a first operation, then swivels around to the other side of the torch by about 360°, and finally moves the remaining approximately 180° together with the torch in a second operation.

IPC 8 full level

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