

Title (en)

Method for producing a heat exchanger for fuel fired water heaters

Title (de)

Verfahren zur Herstellung eines Wärmeübertragers für brennstoffbeheizte Wassererhitzer

Title (fr)

Méthode de production d' un échangeur de chaleur pour un chauffe-eau chauffé par combustible

Publication

EP 0933150 A3 20000503 (DE)

Application

EP 98122043 A 19981120

Priority

DE 19803177 A 19980128

Abstract (en)

[origin: EP0933150A2] Heat exchanger production comprises the use of a rotating oversized expander tool working at high pressure. The heat exchanger has pipes and lamella, forming gaps for combustion gas passage. The working pressure expanding the pipes (10), especially the pressure between pipe and lamella (12) and the size of the lamella, are chosen, so that with combustion gas temperatures of ca. 1300 degrees C, the lamella foot sections (16) are cooled to below the recrystallization temperature of the lamella material. This guarantees the seat of the lamella on the pipes without soldering. Each pipe is expanded by an oversized rotating tool (20) passing through it.

IPC 1-7

B21D 53/08; **B21D 39/06**; **F24H 9/00**

IPC 8 full level

B21C 37/24 (2006.01); **F28F 1/24** (2006.01)

CPC (source: EP)

B21C 37/24 (2013.01); **B21D 39/08** (2013.01); **F28F 1/24** (2013.01); **F28F 2275/125** (2013.01)

Citation (search report)

- [X] US 4970770 A 19901120 - JANSSEN GOESTA [SE], et al
- [A] FR 794298 A 19360212 - LABO
- [A] DE 722235 C 19420704 - MANUF GENERALE METALLURG SA

Cited by

CN112683098A; CN109518442A

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0933150 A2 19990804; **EP 0933150 A3 20000503**; DE 19803177 A1 19990805; DE 19803177 B4 20050303

DOCDB simple family (application)

EP 98122043 A 19981120; DE 19803177 A 19980128