

Title (en)

PROCESS FOR THE REPAIR OR PROTECTION OF ONE EXTREMITY OF A METALLIC HEAT EXCHANGER TUBE, AND SLEEVE FOR CARRYING IT OUT

Publication

**EP 0271739 B1 19901003 (FR)**

Application

**EP 87117143 A 19871120**

Priority

FR 8616231 A 19861121

Abstract (en)

1. A method of repairing a damaged area or an area (4) submitted to corrosion (4) of a metal tube end of a heat exchanger (1) near the inner surface of its tube sheet (2), whereby a metal sleeve (5) having an outer diameter slightly smaller than the tube's inside diameter is inserted from the outer surface of the tube sheet into the tube to a sufficient length in order to penetrate into the tube beyond the damaged area or the area submitted to corrosion, a localized bulging (6) of the sleeve end situated on the side of the outer surface of the tube sheet on the tube is performed, this end of the sleeve is locally (8) welded to the corresponding end of the tube, the end of the sleeve (7) is applied to the tube beyond the damaged area or an area submitted to corrosion and this end of the sleeve is locally (9) welded on the inside of the tube with partial penetration into the latter, characterized in that the localized welding (8) inside the bulged area (6) inwards from the edge of the sleeve is carried out, with partial penetration of the weld into the tube, and in that then a bulging of the end area of the sleeve against the tube in an area situated inside the tube sheet above the localized weld (8) is carried out.

IPC 1-7

**B21D 39/04; F16L 55/16; F28F 11/02**

IPC 8 full level

**F28F 11/02** (2006.01)

CPC (source: EP KR US)

**F28F 11/02** (2013.01 - EP KR US); **Y10T 29/49352** (2015.01 - EP US); **Y10T 29/49742** (2015.01 - EP US); **Y10T 29/49748** (2015.01 - EP US); **Y10T 29/49911** (2015.01 - EP US); **Y10T 29/4994** (2015.01 - EP US); **Y10T 428/12347** (2015.01 - EP US)

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EP0416848A1; US5155894A; FR2736989A1; US5924743A; CN1069391C; WO9704268A1

Designated contracting state (EPC)

BE CH DE ES FR GB IT LI SE

DOCDB simple family (publication)

**FR 2607235 A1 19880527; FR 2607235 B1 19900216**; DE 3765402 D1 19901108; EP 0271739 A1 19880622; EP 0271739 B1 19901003; ES 2017991 B3 19910316; IN 172043 B 19930320; JP S63153398 A 19880625; KR 880006523 A 19880723; US 4960650 A 19901002; ZA 878663 B 19880518

DOCDB simple family (application)

**FR 8616231 A 19861121**; DE 3765402 T 19871120; EP 87117143 A 19871120; ES 87117143 T 19871120; IN 992DE1987 A 19871118; JP 29386687 A 19871120; KR 870013146 A 19871121; US 36636289 A 19890615; ZA 878663 A 19871119