

Title (en)

Method for reinforcing by means of small plates at least end rows of tubes engaged into tube plates for constituting a heat exchanger, and such a heat exchanger.

Title (de)

Verfahren zur Verstärkung von Rohrenden gefasst in Rohrböden, mittels einer Hilfsplatte zur Herstellung eines Wärmetauschers und ein derartiger Wärmetauscher.

Title (fr)

Procédé pour le renfort au moyen de plaquettes au moins des rangées d'extrémité des tubes engagés dans des plaques collectrices pour constituer un échangeur de chaleur et échangeur en faisant application.

Publication

EP 0091873 A1 19831019 (FR)

Application

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Priority

FR 8206566 A 19820416

Abstract (en)

[origin: ES8602245A1] EP--91873 A The plate reinforcement is for the ends of an assembly of tubes (3) in a collector plate of a heat exchanger. The collector plate (1) is made by punching to form collets (4), with end bisections to form the base (5) of parts separating two successive tube passages (2). - The tube ends are enlarged and on the base is a plate (6) with openings (7) to fit the tubes. The assembly is brazed up and the spaces between the collector enlargement (5) and the first plate forms capillary passages (8) for brazing. The tube ends can be machined to help brazing. (2/2) EPAB- EP--91873 B The plate reinforcement is for the ends of an assembly of tubes (3) in a collector plate of a heat exchanger. The collector plate (1) is made by punching to form collets (4), with end bisections to form the base (5) of parts separating two successive tube passages (2). - The tube ends are enlarged and on the base is a plate (6) with openings (7) to fit the tubes. The assembly is brazed up and the spaces between the collector enlargement (5) and the first plate forms capillary passages (8) for brazing. The tube ends can be machined to help brazing. (11pp Dwg.No.2/2) USAB- US4813112 A The method is for reinforcing by small plates, at least end rows of tubes engaged into tube end plates for constituting a heat exchanger. It involves forming the tube end plate by punching in order to delimit collars in the tube end plate with the collars having an irregular bevelled end, and to bulge bottom of the parts separating two successive tube passages in the tube end plate to form bulged parts. - It involves applying an apertured small planar plate on the bulged parts. The small planar plate has apertures corresponding to the tubes, the applied plate and bulged parts, thereby forming a unit.

[origin: ES8602245A1] EP--91873 A The plate reinforcement is for the ends of an assembly of tubes (3) in a collector plate of a heat exchanger. The collector plate (1) is made by punching to form collets (4), with end bisections to form the base (5) of parts separating two successive tube passages (2). - The tube ends are enlarged and on the base is a plate (6) with openings (7) to fit the tubes. The assembly is brazed up and the spaces between the collector enlargement (5) and the first plate forms capillary passages (8) for brazing. The tube ends can be machined to help brazing. (2/2) EPAB- EP--91873 B The plate reinforcement is for the ends of an assembly of tubes (3) in a collector plate of a heat exchanger. The collector plate (1) is made by punching to form collets (4), with end bisections to form the base (5) of parts separating two successive tube passages (2). - The tube ends are enlarged and on the base is a plate (6) with openings (7) to fit the tubes. The assembly is brazed up and the spaces between the collector enlargement (5) and the first plate forms capillary passages (8) for brazing. The tube ends can be machined to help brazing. (11pp Dwg.No.2/2) USAB- US4813112 A The method is for reinforcing by small plates, at least end rows of tubes engaged into tube end plates for constituting a heat exchanger. It involves forming the tube end plate by punching in order to delimit collars in the tube end plate with the collars having an irregular bevelled end, and to bulge bottom of the parts separating two successive tube passages in the tube end plate to form bulged parts. - It involves applying an apertured small planar plate on the bulged parts. The small planar plate has apertures corresponding to the tubes, the applied plate and bulged parts, thereby forming a unit.

Abstract (fr)

Pour renforcer la liaison entre les tubes (3) d'un échangeur et la plaque collectrice (1) dans laquelle ils sont engagés, on forme la plaque collectrice (1) par poinçonnage pour délimiter des collets (4) à extrémité biseautée (4a) et former des fonds bombés (5) entre les collets puis on applique sur les fonds bombés (5) une plaquette plate (6) que l'on prase en même temps que les tubes (3) et la plaque collectrice (1).

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Citation (search report)

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