

Title (en)  
HEAT EXCHANGER WITH CLAMPING CONNECTION FOR A HEADER BOX

Publication  
**EP 0372187 B1 19920415 (DE)**

Application  
**EP 89118465 A 19891005**

Priority  
DE 3841470 A 19881209

Abstract (en)  
[origin: EP0372187A1] In a clamping connection between a plastic header box, provided with at least one flange (4), and a tube plate (2) of a heat exchanger, which plate carries a deformable marginal region (5), between which an elastic seal (3) is held under initial tension, the deformable marginal region (5) extending before its deformation approximately parallel to the flange outer contour and after its deformation has, for the purpose of producing the clamping connection, over the flange (4) of the plastic header box (1) first subregions (7) deformed in an approximately wave-shaped fashion and further, non- deformed subregions (8) extending approximately parallel to the flange outer contour, it being the case in this arrangement that the first subregions (7) deformed over the flange (4) of the plastic header box (1) form the positive connection, in the case of which the lower edges (9) of the deformed first subregions (7) bear under initial tension on the contact surface or surfaces (11) of the flange (4) and in the case of which, for the purpose of facilitating the deformation of the deformable first subregions (7), the lower edges (9) are cut free in being formed, it is proposed for the purpose of reducing the material required for the plastic header box (1) and of improving the tightness, that the top side of the flange (4) has a plurality of protuberances (13), projecting over the outer margin (6) of the tube plate (2), in the region of the non-deformed subregions (8) of the U-shaped outer margin (6), of which the topsides serve as tool application surfaces (14) for initially tensioning the sealing (3), and that these tool application surfaces (14) are arranged perpendicularly over the seal (3). <IMAGE>

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**F28F 9/02**

IPC 8 full level  
**F28F 9/02** (2006.01)

CPC (source: EP)  
**F28F 9/0226** (2013.01)

Citation (examination)  
EP 0169632 A1 19860129 - MODINE MFG CO [US]

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