

Title (en)
HEAT EXCHANGER

Title (de)
WÄRMETAUSCHER

Title (fr)
ÉCHANGEUR DE CHALEUR

Publication
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Application
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Abstract (en)
Disclosed is a heat exchanger which is small and can efficiently exchange heat, and can be produced at low cost in comparison with a conventional heat exchanger. In the heat exchanger, a heat-transfer tube through which a fluid to be processed passes can be easily replaced so that the heat exchanger can be used for a treatment which requires a low flow rate, especially, in various kinds of chemical experiments. A heat-transfer tube (1) produced in the form of a coil is attached to, for example, a lower closing portion (8) and an inner tube (5), which are integrally produced. After that, the heat-transfer tube (1) is pulled in the U-direction to reduce the diameter of the coiled portions and, thus, is closely bonded or welded to the inner tube (5). After that, an outer tube (6) and an upper closing portion (9) are attached so that there is a slight gap between the outer tube (6) and the outer diameter of the heat-transfer tube (1). A fluid (2) to be processed is passed through the heat-transfer tube (1). A heat medium is passed through a space (7) and a coiled space (4) to efficiently exchange heat. The space (7) is defined between the inner and outer tubes (5) and (6) and closed by the upper and lower closing portions (8) and (9). The coiled space (4) is defined between the coiled portions of the heat-transfer tube (1). The heat exchanger can be easily disassembled in the reverse order of the above procedure, and the heat-transfer tube (1) can be easily replaced.

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