

Title (en)

HEAT EXCHANGER AND METHOD OF COOLING A FLOW OF HEATED AIR

Title (de)

WÄRMETAUSCHER UND VERFAHREN ZUR KÜHLUNG EINES STROMS ERWÄRMTER LUFT

Title (fr)

ÉCHANGEUR DE CHALEUR ET PROCÉDÉ DE REFOUILLISSEMENT D'UN FLUX D'AIR CHAUFFÉ

Publication

EP 3517873 A1 20190731 (EN)

Application

EP 18211108 A 20181207

Priority

US 201815880624 A 20180126

Abstract (en)

A heat exchanger, particularly a charge-air cooler, in which heated air is cooled by a cooling fluid, is constructed from stacked pairs of plates with air flow passages arranged between adjacent ones of the plate pairs. Each of the pairs of plates includes an inlet and an outlet for the cooling fluid flow arranged within an inlet and outlet region and aligned with the direction of the air flow through the heat exchanger. A flow barrier formed by beads of the plates is arranged between the inlet and outlet region and a heat exchange section of the plate pair. A flow of cooling fluid is directed through a coolant flow path extending through the plate pair between the cooling fluid inlet and the cooling fluid outlet, with the cooling fluid flow path having a first portion along one longitudinal edge of the plates, a second portion along an opposing longitudinal edge of the plates, and a third portion extending through the heat exchange section between the first and second portions. The flow of cooling fluid through the third portion is in a direction counter to the flow of air.

IPC 8 full level

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CPC (source: CN EP)

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Citation (applicant)

- DE 29809080 U1 19980723 - WAGNER WILFRIED [AT]
- DE 102006048667 A1 20080417 - MODINE MFG CO [US]

Citation (search report)

- [XA] DE 102012006346 A1 20131002 - MODINE MFG CO [US]
- [XA] US 2015068717 A1 20150312 - GLÜCK RAINER [DE]
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- [A] EP 1830048 A1 20070905 - MODINE MFG CO [US]
- [A] WO 9964805 A1 19991216 - HEATCRAFT [US]

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