

Title (en)

COMPOUND HEAT EXCHANGE EVAPORATIVE CONDENSER OF BOARD PIPE

Title (de)

ZUSAMMENGESETZTER WÄRMEAUSTAUSCHVERDAMPFUNGSKONDENSATOR EINES PLATTENROHRS

Title (fr)

CONDENSEUR PAR ÉVAPORATION ET ÉCHANGE DE CHALEUR COMBINÉ À ENSEMBLE CANALISATION

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Application

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Abstract (en)

The present invention discloses a combined plate-and-tube heat exchange evaporative condenser, which comprises a fan, a water pump, a water sprayer, a reservoir and a combined plate-and-tube heat exchanger; the combined plate-and-tube heat exchanger consists of a plurality of combined plate-and-tube heat exchange pieces connected by inlet headers and outlet headers; the combined plate-and-tube heat exchange piece comprises a heat transfer plate and a serpentine tube machined by the heat exchange tube; the heat transfer plate is provided with a groove, and the shape of the groove matches with that of the serpentine tube; the serpentine tube is disposed in the groove, and a gap between the serpentine tube and the groove is filled with a thermally conductive adhesive layer. Compared with the existed technology, the thermally conductive adhesive layer makes the heat transfer plate fully contact with the serpentine tube, and subsequently enables the serpentine tube to have the fin effect and lead to improvement in the effective heat exchange area; the heat exchange plate can direct the cooling water to form a continuous water membrane, and lead to improvement in evaporation area of the cooling water; the improvement of the effective heat exchange area and the cooling water evaporation area increases the heat exchange effectiveness, as well as facilitates the reduction of the overall size of the condenser.

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