

Title (en)

Evaporator for a cooling apparatus with several temperatures.

Title (de)

Verdampfer für ein Mehr-Temperaturen Kühlgerät.

Title (fr)

Evaporateur pour un appareil de refroidissement à plusieurs températures.

Publication

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Application

EP 82107148 A 19820807

Priority

DE 3134300 A 19810829

Abstract (en)

1. An evaporator for a multi-temperature refrigerating device having a main refrigerating compartment disposed below a deep-freezing compartment or freezer compartment, having an evaporator which is associated with the deep-freezing compartment or freezer compartment and which comprises piping for conveying coolant as a coolant passage (7) at least in a cover plate (2), in a side wall (3) and in a bottom plate (1), the injection of the expanded coolant into the coolant passage (7) being effected in the cover plate (2) which rises from its connecting edge (6) to the side wall (3) and the coolant passage (7) is taken from the cover plate (2), dropping steeply, into the side wall (3), directly to the piping (8, 9) of the bottom plate (1), the piping of which changes over, at the end at the flow outlet side, into a parallel passage (10) which extends in the side wall (3) and rises continuously steeply and which is connected directly to the piping of the cover plate (2) from which the end (12) of the piping at the flow outlet side is taken, dropping steadily, through the side wall (3) to the normal refrigerating compartment evaporator (5) connected thereto, in front of which the deep-freezing-compartment evaporator is connected in series in the coolant circuit, characterised in that the coolant passage (7) in the bottom plate (1) comprises series-connected portions with parallel pipelines (8) which are in communication in groups through a plurality of transverse pipelines (9), that the passage branches of the parallel passage (10) lead away from the last portion and are connected to one another via at least one transverse passage (11) in the side wall (3), that the coolant passage (7) is then taken, in a single duct, into the cover plate (2) in meandering turns distributed over the area, that the turns extend parallel to the connecting edge (6), that the parallel passage (10) is connected to the piping of the cover plate (2) close to the connecting edge (6) and that the end of the piping of the cover plate (2) at the flow outlet side passes through a point (13) which is situated higher than the other turns.

Abstract (de)

In einem Mehrtemperaturen-Kühlgerät ist ein kombinierter Verdampfer vorgesehen, bei dem der dem Tiefkühlfach zugeordnete Verdampfer (2) als liegendes U und der Verdampfer für das darunter angeordnete Normalkühlfach als Platte ausgebildet ist. Die Einspritzung des expandierten Kältemittels erfolgt in den Kältemittelkanal (7) der Deckenplatte (2) des Tiefkühlfach-Verdampfers, der windungsfrei durch die Seitenwand (3) in die Bohrung der Bodenplatte (1) geführt ist. Von dort verzweigt sich der Kältemittelkanal (7) in einen Parallelkanal (10), der durch die Seitenwand (3) in die Deckenplatte (2) geleitet ist und in die dort angeordnete mäanderförmige Bohrung mündet sowie durch die Seitenwand (3) zum Hauptkühlfach-Verdampfer (5) geführt ist. Im Parallelkanal befindet sich wenigstens ein Querkanal (11), der ebenso wie die übrige Führung und Ausbildung des Kältemittelkanals zur Trennung des flüssigen vom verdampften Kältemittelkompressor dient. Dadurch wird eine Vereisung des Kältemittelkanals an der Einmündung in den Normalkühlfach-Verdampfer zumindest weitgehend verhindert.

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