

Title (en)
REFRIGERATION PLANT

Title (de)
KÄLTEANLAGE

Title (fr)
SYSTÈME DE RÉFRIGÉRATION

Publication
EP 3099985 B1 20220921 (DE)

Application
EP 15701214 A 20150126

Priority
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• EP 2015051491 W 20150126

Abstract (en)
[origin: WO2015110634A1] In order for a refrigeration plant, comprising a refrigerant circuit, in which a total mass flow of a refrigerant is guided, a refrigerant-cooling heat exchanger on the high pressure side, an expansion element which generates a main mass flow of liquid refrigerant and an additional mass flow of gaseous refrigerant which enter an intermediate pressure collector, at least one normal cooling stage which taps off a normal cooling mass flow from the main mass flow and expands it in a normal cooling expansion unit, a deep-cooling intermediate pressure expansion unit which feeds to a deep-cooling intermediate pressure collector a deep-cooling main mass flow of liquid refrigerant and a deep-cooling additional mass flow of gaseous refrigerant, a deep-cooling stage which conducts the deep-cooling main mass flow away from the deep-cooling intermediate pressure collector and has at least one deep-cooling expansion unit, a deep-cooling compressor unit which compresses the deep-cooling main mass flow and feeds it to a refrigerant compressor unit for compressing it to high pressure, to be improved such that the risk of aspiration of liquid is considerably reduced, it is proposed that the additional mass flow is expanded via an expansion element and is fed to the deep-cooling intermediate pressure collector such that a liquid phase separates off in the deep-cooling intermediate pressure collector and such that a gas phase of the additional mass flow, which forms in the deep-cooling intermediate pressure collector, is fed together with the deep-cooling additional mass flow to an additional mass flow compressor unit for compressing it to high pressure.

IPC 8 full level
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