Title (en)

HEAT EXCHANGER FOR THE RECOVERY OF REFRIGERATION CAPACITY FROM THE REGASIFICATION OF CRYOGENIC LIQUEFIED GASES

Title (de)

WÄRMEÜBERTRAGER FÜR DIE RÜCKGEWINNUNG VON KÄLTELEISTUNG AUS DER REGASIFIZIERUNG TIEFKALTER VERFLÜSSIGTER GASE

Title (fr)

ÉCHANGEUR DE CHALEUR CONÇU POUR RÉCUPÉRER UNE CAPACITÉ FRIGORIFIQUE À PARTIR DE LA REGAZÉIFICATION DE GAZ LIQUÉFIÉ SURGELÉ

Publication

**EP 4111121 A1 20230104 (DE)**

Application

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Priority

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Abstract (en)

[origin: WO2021170165A1] The invention relates to a heat exchanger for the recovery of refrigeration capacity from the regasification of cryogenic liquefied gases with the aid of adapted refrigerants. A pipe-in-pipe heat exchanger according to the invention consists substantially of an inner pipe and an outer pipe disposed as coaxially as possible with respect to the inner pipe, thereby forming a shell space. The liquefied gas to be regasified flows through the inner pipe, while the refrigerant flows through the shell space and thus transports the refrigeration capacity from the liquefied gas to be regasified to the refrigerating consumer. The heat exchanger is configurable in a straight pipe arrangement and in a u-shaped manner and can be operated continuously or intermittently. The used refrigerant is adapted such that heat flows can be managed over large temperature gradients that lead to low temperatures without the need for the integration of an intermediate medium contributing with additional heat transfers. The heat exchanger can be designed as a standardised module of a modular heat transfer system, thereby permitting freely selectable magnitudes of the mass flow to be regasified and of the temperature gradient to be managed and thus a universal application that is both scalable and individually configurable.

IPC 8 full level

**F28D 7/10** (2006.01)

CPC (source: EP)

**F28D 7/106** (2013.01); **F28D 7/14** (2013.01); **F28D 20/021** (2013.01); **F28F 9/04** (2013.01); F28D 2021/0033 (2013.01); F28D 2021/0064 (2013.01); F28F 2265/26 (2013.01); Y02E 60/14 (2013.01)

Citation (search report)

See references of WO 2021170165A1

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