

Title (en)
CLOSED CYCLE CRYOGEN RECIRCULATION SYSTEM AND METHOD

Title (de)
SYSTEM UND VERFAHREN ZUR KRYOGENEN REZIRKULATION IM GESCHLOSSENEN KREISLAUF

Title (fr)
SYSTÈME ET PROCÉDÉ DE RECIRCULATION DE CRYOGÈNE À CYCLE FERMÉ

Publication
EP 3234482 A1 20171025 (EN)

Application
EP 15808154 A 20151210

Priority
• EP 14197216 A 20141210
• EP 2015079195 W 20151210

Abstract (en)
[origin: WO2016091990A1] There is provided refrigeration system (1) and method for remote cooling of a thermal load having a first portion (27) and a second portion (25). The system comprises a cold source (4) having a first cooling stage (5) and a second cooling stage (6), the temperature of the first cooling stage being higher than the temperature of the second cooling stage. The system also comprises a cryogen circuit for circulation of a cryogen flow in a closed cycle, the closed cycle being thermally coupled to the cold source. The system further comprises a compressor (7) for compressing and circulating the cryogen flow in the cryogen circuit. The cryogen circuit comprises a first conduit for thermally connecting the first cooling stage of the cold source to the first portion of the thermal load so as to cool said first portion towards the temperature of the first cooling stage, and a second conduit for thermally connecting the second cooling stage of the cold source to the second portion of the thermal load so as to cool said second portion towards the temperature of the second cooling stage. The cryogen flow in the system is a sub-cooled or saturated liquid, two phase, saturated or overheated, supercritical gas helium flow.

IPC 8 full level
F25B 9/14 (2006.01); **F25B 9/00** (2006.01); **F25B 9/02** (2006.01); **F25B 9/10** (2006.01); **F25B 41/04** (2006.01); **H10N 60/81** (2023.01)

CPC (source: EP US)
F25B 9/002 (2013.01 - EP US); **F25B 9/02** (2013.01 - EP US); **F25B 9/10** (2013.01 - EP US); **F25B 41/20** (2021.01 - EP US); **F25D 19/006** (2013.01 - US); **F25J 1/0221** (2013.01 - US); **F25B 9/14** (2013.01 - EP US); **F25B 2400/04** (2013.01 - EP US); **F25B 2500/01** (2013.01 - US)

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