

Title (en)  
REFRIGERATION AND/OR LIQUEFACTION DEVICE AND METHOD THEREOF

Title (de)  
KÜHLANLAGE UND/ODER VERFLÜSSIGUNGSANLAGE UND VERFAHREN DAFÜR

Title (fr)  
DISPOSITIF DE RÉFRIGÉRATION ET/OU DE LIQUÉFACTION ET PROCÉDÉ CORRESPONDANT

Publication  
**EP 2936006 A1 20151028 (FR)**

Application  
**EP 13803115 A 20131108**

Priority  
• FR 1262186 A 20121218  
• FR 2013052683 W 20131108

Abstract (en)  
[origin: WO2014096585A1] A device for refrigerating and/or liquefying a working gas comprising helium, the device comprising a looped working circuit for the working gas comprising, in series, a compression station (1), a cold box (2), a heat exchange system (14) exchanging heat between the cooled working gas and a user (10), the device further comprising an additional pre-cooling system comprising at least one tank (3) of auxiliary cryogenic fluid, such as liquid nitrogen, the cold box (2) comprising a first cooling stage of the working gas comprising a first (5) exchanger disposed at the output of the compression station (1) as well as a second (15) heat exchanger and a third (25) heat exchanger, the first (5) heat exchanger being of the aluminium plate-fin type, the second (15) heat exchanger being of the tube or welded plate type, characterised in that the second (15) and third (25) heat exchangers are connected both serially and in parallel on the working circuit downstream of the first (5) heat exchanger.

IPC 8 full level  
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CPC (source: CN EP US)  
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Citation (search report)  
See references of WO 2014096585A1

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