

Title (en)

Scroll decompression device for cryogenic temperatures

Title (de)

Spiralexpansionsanlage fÜr Kryogene Temperaturen

Title (fr)

Dispositif de detente à spirales pour des températures cryogéniques

Publication

EP 1251278 A3 20030521 (FR)

Application

EP 02077846 A 19970206

Priority

- EP 96925790 A 19960716
- FR 9508608 A 19950717

Abstract (en)

[origin: FR2736999A1] A temperature reduction device using scrolls for cryogenic expansion is disclosed. The device for expansion of a gaseous, liquid or two-phase fluid, comprising an expansion compartment which includes a first scroll (72), a second scroll (70) inside said first scroll, and means for enabling circular translation but not actual rotation of the second scroll inside the first scroll for fluid expansion.

IPC 1-7

F01C 1/02; F01C 17/06; F01C 17/00; F01C 21/16

IPC 8 full level

F01C 1/02 (2006.01); **F01C 1/04** (2006.01); **F01C 17/00** (2006.01); **F01C 17/06** (2006.01); **F01C 20/08** (2006.01); **F01C 21/02** (2006.01);
F04C 18/04 (2006.01); **F04C 23/00** (2006.01); **F25B 9/06** (2006.01); **F25B 9/14** (2006.01); **F25B 41/00** (2006.01)

CPC (source: EP)

F01C 1/0215 (2013.01); **F01C 1/0246** (2013.01); **F01C 17/00** (2013.01); **F01C 17/06** (2013.01); **F01C 20/08** (2013.01); **F01C 21/02** (2013.01);
F04C 23/003 (2013.01); **F04C 2220/22** (2013.01); **F05B 2260/10** (2013.01); **F05C 2251/044** (2013.01)

Citation (search report)

- [A] US 4291547 A 19810929 - LEO BRUNO S
- [A] US 3817664 A 19740618 - HATFIELD E, et al
- [A] FR 2532011 A1 19840224 - VOLKSWAGEN AG [DE]
- [XA] US 5391065 A 19950221 - WOLVERTON STEVEN R [US], et al
- [A] FR 1596943 A 19700622
- [A] DE 3017045 A1 19801127 - AGINFOR AG
- [A] EP 0122722 A1 19841024 - SANDEN CORP [JP]
- [A] PATENT ABSTRACTS OF JAPAN vol. 8, no. 230 (M - 333)<1667> 23 October 1984 (1984-10-23)

Designated contracting state (EPC)

DE GB IT

DOCDB simple family (publication)

FR 2736999 A1 19970124; FR 2736999 B1 19970822; EP 0839258 A1 19980506; EP 1251278 A2 20021023; EP 1251278 A3 20030521;
JP H11509597 A 19990824; WO 9704215 A1 19970206

DOCDB simple family (application)

FR 9508608 A 19950717; EP 02077846 A 19970206; EP 96925790 A 19960716; FR 9601102 W 19960716; JP 50634997 A 19960716