Title (en)

Cryostatic temperature regulator with a liquid nitrogen bath.

Title (de)

Kryostat mit einem Flüssig-Stickstoff (LN2)-Bad.

Title (fr)

Cryostat à bain d'azote liquide.

Publication

EP 0366818 A1 19900509 (DE)

Application

EP 88118199 A 19881102

Priority

EP 88118199 A 19881102

Abstract (en)

[origin: JPH02171573A] PURPOSE: To obtain a cryostat including an LN2 bath where gas loss is avoided by providing a container including a cover for accomodation in the LN2 bath, and forming with the cover a supporter for a cooling head. CONSTITUTION: A cryostat 1 includes a container 2 including a cover 3. An LN2 bath (liquid nitrogen bath) is provided in the container 2, and parts to be cooled are put in the LN2 bath. The cover 3 includes a hood having a flange bottom 8, and a cooling head 11 is fixed to the flange bottom and is protruded into the container 2 at a cooling end 12. When pressure in a chamber 28 is lowered from the outside, force of a compression spring 27 lifts the cooling head 11 whereby dipping depth of the cooling head can be controlled depending upon a load of the LN2 bath. For example, when the load of the LN2 bath is increased, pressure in the cryostat is raised, and pressure in the chamber 28 is also increased, and the cooling head 11 is more deeply dipped in the LN2 bath. Upon non-operation of the cooling head 11 the cooling head is lifted upward with supply of the pressure in the chamber 26 whereby heat conduction loss through the cooling head is reduced.

Abstract (de)

Die Erfindung bezieht sich auf einen Kryostaten (1) mit einem LN2-Bad; um Gasverluste zu vermeiden, ist der Kryostat mit einem Kaltkopf (11) eines Refrigerators ausgerüstet, der am Deckel (3) des Kryostat-Gehäuses gehaltert ist.

IPC 1-7

F17C 3/08; F25J 1/02

IPC 8 full level

F17C 3/08 (2006.01); **F25D 3/10** (2006.01); **F25D 13/00** (2006.01); **F25D 19/00** (2006.01); **F25J 1/00** (2006.01)

CPC (source: EP US)

F17C 3/085 (2013.01 - EP US); **F25D 19/006** (2013.01 - EP US); **F25J 1/0276** (2013.01 - US); F17C 2221/014 (2013.01 - EP US); F17C 2221/017 (2013.01 - EP US); F17C 2270/0509 (2013.01 - EP US); F25J 2290/42 (2013.01 - US)

Citation (search report)

- [A] WO 8805519 A2 19880728 - HELIX TECH CORP [US]
- [A] EP 0015728 A1 19800917 - AIR PROD & CHEM [US]
- [A] EP 0260036 A2 19880316 - OXFORD MAGNET TECH [GB]

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Designated contracting state (EPC)

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EP 0366818 A1 19900509; JP H02171573 A 19900703; US 4967564 A 19901106

DOCDB simple family (application)

EP 88118199 A 19881102; JP 28317389 A 19891101; US 42616689 A 19891025