

Title (en)
CRYOSTAT HAVING A MAGNET COIL SYSTEM, WHICH COMPRISES AN UNDERCOOLED LTS SECTION AND AN HTS SECTION ARRANGED IN A SEPARATE HELIUM TANK

Title (de)
KRYOSTAT MIT EINEM MAGNETSPULENSYSTEM, DAS EINE UNTERKÜHLTE LTS- UND EINE IN EINEM SEPARATEN HELIUMTANK ANGEORDNETE HTS-SEKTION UMFASST

Title (fr)
CRYOSTAT MUNI D'UN SYSTEME DE BOBINES MAGNETIQUES QUI COMPREND UNE SECTION LTS SURREFROIDIE ET UNE SECTION HTS DISPOSEE DANS UN RESERVOIR D'HELIUM SEPRE

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Abstract (en)
[origin: WO2007107239A1] A cryostat (1) having a magnet coil system, which comprises superconductive conductors, for producing a magnetic field $B > 0$ in a measurement volume (3), having a plurality of solenoid-like coil sections (4, 5, 6), which are arranged nested radially one inside the other and are connected electrically in series and of which at least one LTS section (5, 6) comprises a conventional low-temperature superconductor (LTS) and at least one HTS section (4) comprises a high-temperature superconductor (HTS), wherein the LTS section is located with liquid helium in a first helium tank (9) of the cryostat (1) at a helium temperature $T < T_L < 4 \text{ K}$, is characterized by the fact that the HTS section (4) is arranged radially within the LTS section (5, 6) in a separate helium tank (19) of the cryostat (1) with standard liquid helium and is separated from the LTS section (5, 6) by at least one wall between the two helium tanks. An HTS coil section can be used in the long term and reliably in the cryostat according to the invention.

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