Title (en)

SUPERCONDUCTIVE MAGNETIC COIL COMPRISING REGIONS HAVING DIFFERING HEAT TRANSFER

Title (de)

SUPRALEITENDE MAGNETSPULE MIT BEREICHEN MIT UNTERSCHIEDLICHEM WÄRMEÜBERGANG

Title (fr)

BOBINE MAGNÉTIQUE SUPRACONDUCTRICE DOTÉE DE PARTIES PRÉSENTANT DIFFÉRENTS TRANSFERTS DE CHALEUR

Publication

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Application

EP 10712386 A 20100318

Priority

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Abstract (en)

[origin: WO2010115690A1] The invention relates to a superconductive magnetic coil. The magnetic coil is located in a cryostat for cooling purposes which is filled only up to a certain fill level with liquid helium. A helium gas phase having a temperature stratification, in which, for example, temperatures are present that can lead to a collapse of the superconductivity, forms over said helium accumulation. The magnetic coil is therefore subdivided into at least two partial regions having differing heat transfer between the coil and the surrounding medium. In a first partial region of the coil, in the surroundings of which a sufficiently low temperature for cooling is present, the heat transfer is high, while the magnetic coil in a second partial region, in the surroundings of which the temperature of the cooling medium is above a critical value, exhibits heat insulation. Consequently, no heat is exchanged between the coil and the surroundings in the second partial region, while cooling of the coil takes place in the first partial region.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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