

Title (en)
SUPERCONDUCTING MAGNET SYSTEM AND METHOD FOR OPERATING THE SYSTEM

Title (de)
SUPRALEITENDES MAGNETSYSTEM UND VERFAHREN ZUM BETRIEB DES SYSTEMS

Title (fr)
SYSTÈME D'AIMANT SUPRACONDUCTEUR ET PROCÉDÉ POUR FAIRE FONCTIONNER LE SYSTÈME

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Abstract (en)
The invention relates to a superconducting magnet system (1) the system comprising a superconducting coil (2) with a least a superconducting coil winding (3) for generating a magnetic field, wherein the superconducting coil winding (3) is located in a first temperature region (5), a magnet persistent current switch (8), MPCS, wherein the MPCS is made of a high temperature superconductor, HTS, and thermally connected to a second temperature region (6), the second temperature region (6) having a temperature below a critical temperature of a high temperature superconductor, HTS, wherein the MPCS (8) is connected to the superconducting coil winding (3) by the electrical current lead assembly (9), wherein the first current lead (12) and the second current lead (13) are made of a high temperature superconductor, HTS. In this way, the superconducting magnet system (1) can be energized more easily without creating a heat load on the low temperature region of the superconducting magnet coil (2). The invention also relates to a method for controlling a ramp-up or ramp-down process for a superconducting magnet system (1). The invention further relates to a magnetic resonance examination system, the magnetic resonance examination system comprising such a superconducting magnet system (1). The invention further relates to a method for energizing a superconducting magnet system (1) and an associated computer program product. Hence, an improved method for energizing a superconducting magnet system (1) is provided.

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Citation (search report)
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