

Title (en)
HIGH-TEMPERATURE SUPERCONDUCTOR MAGNET SYSTEM

Title (de)
HOCHTEMPERATUR-SUPRALEITER-MAGNETSYSTEM

Title (fr)
SYSTÈME MAGNÉTIQUE SUPRACONDUCTEUR À HAUTE TEMPÉRATURE

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Application
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Abstract (en)
[origin: WO2012013205A1] The invention relates to a high-temperature superconductor (HTS) magnet system, preferably for an insertion device for producing high-intensity synchrotron radiation, comprising the coil body (6), on the outer surface of which poles having windings lying therebetween are arranged, wherein at least one high-temperature superconducting strip (23) is wound in one direction on the coil body (6) and adjacent winding packages (13) or winding sections are electrically connected to each other in such a way that the current flows in the opposite direction. The solution according to the invention has the advantage of a simplified winding process, wherein optionally individual coil pairs can be replaced due to the modular arrangement. The scheme can be applied to any possible configuration of an insertion device and therefore is also suitable for use in free-electron lasers and other light sources on the basis of particle accelerators. Furthermore, the expensive cooling is unnecessary, so safety problems due to a lack of cooling cannot occur.

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