

WBP2-4

Research and Development of the LTS and HTS Superconductors at SC “VNIINM”

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SC “VNIINM” is the only developer of the technical low-temperature superconducting strands in Russia especially on the base of Nb₃Sn phase and NbTi alloy. NbTi strands for the Tokamak-7, Nb₃Sn strands for the Tokamak-15, Nb₃Sn and NbTi strands for the ITER, NbTi strands for accelerator NICA, pilot batch of Nb₃Sn strands for the LHC upgrade and other projects were produced in industrial conditions using technologies of SC “VNIINM” and by its scientific support. All the strands produced met technical specifications. At present Bochvar Institute develops layout and production technology of Nb₃Sn strands for FCC. SC “VNIINM” have production technologies of the targets and substrate tapes for the HTS-2 and develops MgB₂ superconductors.

Characteristics of the superconductors developed at SC “VNIINM” for the different projects and also targets and substrate tapes for the HTS-2 are reviewed in the paper. The ways of their current-carrying capacity enhancement are discussed.

Keywords: Nb₃Sn, NbTi, strand, HTS