

Recent Activities of 2G-HTS Tapes at Shanghai Superconductors Technology

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Abstract— Shanghai Superconductor Technology Co., Ltd. (SSTC) is a high-tech enterprise for development of 2G-HTS tapes. After R&D on both process optimization and deposition-equipment fabrication, km-class 2G HTS wires with high performance can be delivered commercially. Average I_c values of higher than 800 A/1cm-width at 77 K, *s.f.* are achieved in wires with high homogeneity. By modulating the composition and microstructure at nanoscale, the excellent superconducting performance of I_c exceeds 800 A/4mm-width at 4.2 K, 10T due to the presence of artificial pinning centers. Moreover, we developed an advanced lamination techniques in order to enhance the mechanical (and/or electro-mechanical) properties of the wires for practical applications. Several typical application cases based on using our products are also briefly mentioned, demonstrating the excellent performance of our 2G HTS wires for broad potential applications.

Keywords (Index Terms) — 2G-HTS, critical current, artificial pinning centers, lamination.

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