

# Current Limiting Characteristics of Parallel-Connected Coated Conductors for High- $T_c$ Superconducting Fault Current Limiting Transformer (HTc-SFCLT)

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**Abstract**—We have been developing Superconducting Fault Current Limiting Transformer (SFCLT) as a superconducting transformer with current limiting function. As the Step-5 of the SFCLT project for the up-graded ratings of current and voltage, in this paper, we focused on the up-grading of current by parallel-connected YBCO coated conductors. Based on the asymmetric configuration of coated conductors, different parallel connections were tested and evaluated in terms of critical current level and current limiting characteristics under large ac current at 77 K in liquid nitrogen.

**Index Terms**—YBCO coated conductor, superconducting fault current limiter, superconducting transformer.

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