

Fabrication and Transportation Properties of 1000 A Class Multistrand Conductor for HTS Power Cable

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For the fabrication of HTS power cable, multifilamentary Bi-2223/Ag tapes have been prepared using the powder-in-tube (PIT) process. After final heat treatment, these tapes have I_c value of 43A, and J_c value of 28,000A/cm²(77K, 0T). Prototype 1000A class multistrand conductor(length ~1m) was fabricated using these tapes. This multistrand conductor was impregnated with low-temperature epoxy. The transportation properties of prototype 1000A class multistrand conductor has been evaluated at 77K, and yielding a current capacity up to 1200A.

Keywords : Bi-2223, multistrand conductor