

Development and Fabrication of Multifilamentary Bi(2223)/Ag Jointed Tape.

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Critical current ratio and n-value of Bi(2223)/Ag superconducting joint tape were measured as a function of uniaxial pressure. In the superconducting joint method, MM and MSM joint were used ; MM joint is direct connection of two-multi filamentary tapes, MSM is connection of them by using a single-filamentary tape. It was observed that the critical current ratio(CCR) for jointed tapes was not dependent on the uniaxial pressure but joining methods. The n-value of jointed tapes has similar trends with that of the CCR. Especially, double MSM joint showed the highest electrical properties as 63.4-76.0%(CCR) and 3.5-5.1(n-value). It is considered to be due to the resulting in better interconnections of multifilaments by two single filamentary tapes on both sides. It is believed that the drop of CCR value for MSM jointed tapes over 1000 MPa were caused by nonuniform microstructure induced during pressing

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