

The Effects of Moisture Content in Precursor Powder for Bi-2223/Ag Tape

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The critical current value of Bi-2223/Ag tape can be influenced by various factors. In particular, it was known that properties of precursor powders could affect the formation of Bi-2223 and grain growth rate of the same. Since, moistures and organic matters can easily pollute the precursor powders of Bi-2223 tapes and degrade properties of superconductors, the precursor powders should be kept in optimal conditions to minimize pollution. In this study, the effect of moisture and organic matters has been presented. A Bi-2223/Ag tape polluted with a large amount of moisture and organic matter has been characterized by low critical current values and bubbling. It has been found that as the quantity of moisture increases, the Bi-2223 phases are formed at lower temperature and the amount of non-superconducting phase increases.

keywords : precursor powder, the formation for Bi-2223, Moistures and organic matte