

Controlling the Initial Conditions of Precursor Powders and its Effects on the Phase Evolution and J_c Properties of Bi-2223/Ag Tapes

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By varying fabricating process, precursor powders with different initial conditions were prepared. Subsequently, Bi-2223/Ag tapes were made through these powders. The effects of precursor powders on the phase evolution and J_c properties of Bi-2223/Ag tapes were studied along with several thermomechanical cycles. Our results showed that the initial conditions of precursor powders could strongly influence the phase formation rate and J_c value in final tapes. The microstructures of the tapes were evaluated through SEM and X-ray diffraction to construct a relation between the microstructures and the J_c properties.

Keywords: Bi-2223/Ag tapes; precursor powder; phase evolution; J_c