

# Optimized PIT Process to Improve Sausaging and Engineering Critical Current Density in Bi-2223/Ag Tapes

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Manufacturing of Bi-2223/Ag high temperature superconducting tapes implies non-uniform deformation such as sausaging between silver metal and superconducting ceramics in PIT process. In this study, intermediate deformation methods were optimized to reduce the sausaging that can significantly degrade the superconducting properties of Bi-2223/Ag HTS tapes. In order to reduce the sausaging, superconducting wire was heat-treated in the middle of drawing process prior to rolling and also rolled with high reduction ratio. Cross-section of superconducting tape was observed to know the relationship of processing parameters and sausaging. Engineering critical current density and critical current of Bi-2223/Ag HTS tape was measured up to 8,400 A/cm<sup>2</sup> and 72 A, respectively. This research was supported by a grant from Center for Applied Superconductivity Technology of the 21st Century Frontier R&D Program funded by the Ministry of Science and Technology, Republic of Korea

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