

YBCO Superconductor Single Crystal Binding

S. C. Han, J. P. Lee, B. C. Park, T. H. Sung

Korea Electric Power Research Institute, Daejeon, Korea

Large and single grains of Y-Ba-Cu-O(YBCO) bulk superconductor have been fabricated by using a seeded melt growth and infiltration-growth method. The bonding experiments of YBCO single crystals were conducted to confirm the possibility of single crystal property of the bonded YBCO superconductor. The bonding temperature was slightly under the peritectic temperature of YBCO and the bonding agent was the mixing paste of Y123+20 wt%Ag. The superconductor properties of the bonded crystal are measured and analyzed to relate with the density and size of Y211 particle around the bonded interface.

Keywords : binding, YBCO, Single crystal, Y211