Transport Properties in SmBCO Coated Conductor with Various Stabilizer

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We deposited singular or double stabilizers among Pt, Au, Ag, Al, Cu on the $LaMaO_3$/MgO/IBAD template to improve electronic contact. The template was made from thermal co-evaporation method using EDDC in KERI. Each stabilizer was prepared ranging from 1 um to 5 um thickness by thermal evaporation or sputtering method. First, we measured I_c of the sample at 1 um standard thickness of Pt, Au, Ag stabilizer. And then we deposited Ag, Al, Cu ranging from 1 um to 4 um thickness on the predeposited layer. In every deposition, the samples were annealed at 450℃ for 30 mins in oxygen atmosphere. I_c of each sample was measured in liquid nitrogen with or without magnetic field. From the data, we compared two properties, n-value and H-I_c curve, and analyzed which stabilizer had better property.

keywords : SmBCO, Coated Conductor, Stabilizer