

Uncertainty evaluation for the critical-current measurement of Bi-2223 wire

K. W. Lee^{a,*}, Y. B. Lee^a, D. H. Kim^b, S. J. Lee^c, J. W. Cho^d and K. D. Shim^d

^a *Korea Research Institute of Standards and Science, Daejeon, Korea*

^b *Yeungnam University, Gyeongbuk, Korea*

^c *Uiduk Univsity, Gyeongbuk, Korea*

^d *Korea Electric Power Research Institute, Daejon, Korea*

The role of IEC TC90 is to prepare international standards related to superconducting materials and devices. In the 11th IEC TC90 Meeting held in Berlin, the Committee decided that uncertainty evaluation should be added to the annex of each IEC standard. According to the decision, we derived a mathematic uncertainty model of the measurement based upon GUM (Guide to the Expression of Uncertainty in Measurement) for the critical-current measurement of Bi-2223 wire. From the mathematic model, we evaluated type A and type B of standard uncertainties and determined the combined standard uncertainty and the expanded uncertainty. More detail calculation procedure and result will be presented in the Conference.

Keywords : Critical Current, Uncertainty, GUM, Combined Uncertainty, Expanded Uncertainty.