

Study of Magnetic Field Profiles and Transport Current in Striated YBCO Thin Film Using Scanning Hall Probe Microscopy

S. B. Lee^a, J. M. Kim^a, S. K. Park^a, C. J. Kim^b, B. G. Kim^c, H.-C. Ri^{a,*}

^a *Department of Physics, Kyungpook National University, Daegu 702-701, Republic of Korea*

^b *Neutron Science Division, Korea Atomic Energy Research Institute(KAERI), Daejeon 305-353, Republic of Korea*

^c *HANARO Utilization Technology Development Center, Korea Atomic Energy Research Institute(KAERI), Daejeon 305-353, Republic of Korea*

A scanning Hall probe microscope has been used to map the distribution of magnetic flux in YBCO strips carrying transport of magnetization currents at 77K. Both shielded and trapped field were studied as a function of applied field and transport current. We scanned wide area and very closely of the thin film, the mode of 2D and 1D methods. The results of Hall probe magnetic measurements were used in the inverse calculation to obtain the current distribution across the filaments.

Keywords : YBCO, strips, Hall probe