

A Study on the Flux Pump for High Field Magnet

H. M. Kim^{*a}, B. W. Lee^a, I. S. Oh^a, Haigun Lee^b, Yukakazu Iwasa^b

^a *LG Industrial systems, Cheongju, Korea*

^b *Massachusetts Institute of Technology, MA, USA*

This paper deals with the flux pump for high field magnet. Flux pump coupled to a slightly dissipative high field magnet enables the magnet to operate effectively in persistent mode. This paper presents: 1) design and operation concept of the flux pump; and 2) parameters and performance results of a prototype flux pump. Performance results of the prototype coupled, sequentially, to two NbTi magnets show that agreement between analysis and experiment is excellent.

keywords : Flux pump, high field magnet