

DEVELOPMENT OF HIGH POWER PROTON LINEAR ACCELERATOR AT KAERI *

H. J. Kwon, Y. S. Cho, J. Y. Kim, K. R. Kim, J. W. Park, K. Y. Kim, B. H. Choi
PEFP, KAERI, Daejeon 305-353, Korea

Abstract

The Proton Engineering Frontier Project (PEFP) has been launched by the Korean Government at 2002. One of the main goals of the PEFP is to develop a 100-MeV, 20mA high power proton accelerator which consists of a 50-keV proton injector, a 3-MeV radio frequency quadrupole (RFQ), a 20-MeV drift tube linac (DTL I) and a 100-MeV drift tube linac (DTL II). In addition to the accelerator itself, it has beam lines to supply proton beam to users for the basic science and industrial applications. As a front part, a 20-MeV accelerator has been installed and under beam service at Korea Atomic Energy Research Institute (KAERI) site in Daejeon. Almost components of the 100-MeV linac have been developed and will be installed at Gyeongju site in 2012. In this paper, the development of the PEFP 100-MeV high power proton accelerator is presented.

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