

Mass production and performance test of SCL3 cryomodule for RAON

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The Rare isotope Accelerator Complex for ON-line Experiments (RAON) has been built for providing beam of exotic rare isotope of various energies at the Institute for Basic Science (IBS). The low energy linac (SCL3) is composed of 22 Quarter wave resonator (QWR) cryomodules and 34 Half wave resonator (HWR) cryomodules. The total number of QWR and HWR cavities are 22 and 106, respectively. The performance test of the cryomodules were done in the SRF test facility. The main factor for the acceptance was the total thermal load of cryomodule. The requirement of the total thermal load of QWR cryomodule, HWR cryomodules A and HWR cryomodules B were 20 W at 4.2 K, 14 W at 2.05 K and 26 W at 2.05 K, respectively. Also, the characteristics of cavities such as df/dp and LFD with tuner in the cryomodule, Qext's of power coupler and pick-up coupler were measured and the operation test of tuner were done. In this paper, the whole procedure of performance test and test results are reported in detail.

Paper submission Plan

Yes

Best Presentation

No

Contribution track

ICABU WG1. Accelerator Systems

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