



Cryogenics Operations 2018

Contribution ID: 17

Type: not specified

Capability of the cryogenic system in SRF Test Facility of RISP

accelerator, cavity, cryogenic system, cryomodule, RISP, SRF, test facility

Summary

A first SRF test facility (TF) of rare isotope science project (RISP) was launched in 2016. RISP's accelerator, RAON, consists of 104 cryomodules (347 cavities), 13 LTS triplet magnets, and 7 HTS magnets, and the cryomodules, cavities, and magnets will be tested in the SRF TF. A cryogenic system, which consists of a helium liquefier, distribution system, recovery system and warm pump system, provides 4.5 K liquid helium, and gives support to produce 2 K superfluid helium for cavity and cryomodule tests. 6 cavity tests and 7 cryomodule tests were successfully supported during 2017 and performances of them are evaluated. This paper describes the test procedures and our capability as SRF TF. We outline all components of the cryogenic system and explain how tests are conducted in details. Currently, a new SRF TF is under construction to increase capability of cryogenic tests. In 2019, our capability will be 13 cavity tests and 5 cryomodule tests for 1 month and it will do the major role in order to establish successfully RISP's accelerator.

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