



Contribution ID: 51

Type: **Poster presentation (105min)**

Cryogenic Infrastructure for the Serial Magnet Test Facility for FAIR

Wednesday 9 July 2014 14:15 (1h 45m)

In order to test the fast-ramped superconducting magnets for FAIR (Facility for Antiproton and Ion Research), a cryogenic test facility was designed and is currently under construction at GSI.

The overall capacity of the cryo plant is about 1.5 kW @ 4.4 K equivalent and can be distributed to four test benches individually.

In total 108 dipoles for the SIS100 will be tested at cold. The capacity of the cryogenic system is designed in order to simultaneously cool down one magnet while the other one is operated at cold state for the measurements. The other two test benches serve for warming up and for magnet exchange, respectively. Beyond the dipoles, the high flexibility of the set-up allows also the testing of other FAIR magnets, like the SIS100 quadrupole modules or the operation of a string configuration.

The design of the cryogenic infrastructure, including an advanced feed box and magnet support system, will be presented and an overview of the time schedule will be given.

Author: Mr SCHROEDER, Claus (GSI)

Co-authors: Mrs BREIDERT, Anna (GSI); Dr STREICHER, Branislav (GSI); Mr WALTER, Franz (GSI); Dr KOLLMUS, Holger (GSI); Dr EISEL, Thomas (GSI); Mr FISEL, Wolfgang (Linde Kryotechnik)

Presenter: Mr SCHROEDER, Claus (GSI)

Session Classification: Wed-Af-Posters Session 2.1

Track Classification: C-01: Large scale refrigeration, liquefaction