

SHMS Magnet Hi-pot Procedure

Equipment:

Fluke 1550 10kV Insulator tester
multi meter or Ohm Meter
Insulating rubber floor mat
Safety glasses

Training:

CPR
Electrical worker training
Read Fluke's 1550 insulator tester operations manual

Procedure:

Disconnect all signal connectors from Magnet.
Magnet's He vessel should be at 1 atm, filled with GN2 or GHe. Magnet shall be at ambient temperature and free of external moisture or icing on surfaces.
Measure and record, with multi Meter, the resistance across the current lead flags.
Measure and record, with multi Meter, the resistance from a current lead to the Outer vacuum shell of the Cryo-can.
Test operator shall stand clear of magnet during testing. Operator shall stand on insulating rubber mat.
Apply one probe to current lead flag
Apply the other lead to ground Lug on Magnet cryo-can
Set meter to 1,000 V maximum output.
Ramp voltage in increments, hold and soak for two minutes and record levels.
Final voltage will be 1,000V, hold and soak for 5 minutes.
Set voltage to zero and discharge meter.
Unclip lead from the magnet current lead flag and connect the other flag.
Repeat test.