

Reliability test of small power supplies in SuperKEKB Main Ring

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SuperKEKB is an asymmetric-energy electron-positron collider for Belle II experiment to search new phenomena in B-meson decays.

The MR magnet system consists of about 2,600 magnets, power supplies, and their interlock system.

More than 400 magnets and power supplies were newly fabricated.

The number of power supplies for the Main Ring (MR) magnets is 2393 as of June 2019.

The most part of the power supplies are small class power supply which output power is less than 1 kW.

Stability and setting accuracy of the power supplies are among the most critical factors for successful luminosity tuning.

We construct a test-stand of the small-class power supplies to confirm its soundness.

The MR magnet system ran stably without any serious problems during the Phase I and II commissioning runs, which contributed greatly to the smooth start-up of the MR.

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