

THE CONTROL SYSTEM FOR BEPCII SUPERCONDUCTING MAGNET

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Abstract

There are 16 superconducting magnet power supplies in the storage rings of BEPCII. It is used 14 superconducting magnets for the Collide mode, and 4 superconducting magnets for the Synchrotron Radiation mode. According to the physics design of BEPCII, the SCQ (superconducting quadruple magnet) can decrease the parasite transition effect and the bunch though IP (interaction point) will be separated in horizon. It is unavoidable that there are some matching errors and fixed errors during the magnet installation, so, the intensity of magnetic field and some correlative parameters must be measured on-line, which is very helpful for the beam tuning. This paper describes the superconducting magnet power supply control of magnet measure system, especially in the interlocked operation of quench protection system. The programs of ramping, standardization and current reading subroutine are also reported here.

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