

Design and Testing of a Cheap Modulating Current System for Determination of SRS Quadrupole Misalignment, S.A. GRIFFITHS, CLRC
Darebury Laboratory - Superimposition of a small AC signal onto a quadrupole magnet can be used to determine the magnitude of electron beam offset in that magnet, thereby providing information on the relative alignment of the beam, the magnet and the bpms in a storage ring. In the SRS it is desirable to collect such data in each of its 32 main focussing quadrupoles in an efficient, cheap manner since regular checks need to be made around the whole ring in order to preserve good orbit control for the user beam lines. The paper gives a brief outline of the design philosophy of the system and a detailed technical description of the electrical engineering solution, which provides a ± 5 A modulation at variable frequency 1-8 Hz. A DC offset up to 10 A is a valuable additional facility.