

## **The R&D of the CSNS/RCS Vacuum System**

The Chinese Spallation Neutron Source (CSNS) complex consists of linac producing the H<sup>-</sup> ion with the energy of 81MeV, beam transport lines of linac to ring and ring to target, Rapid Cycling Synchrotron (RCS) which accumulates and accelerates beams to 1.6GeV at 25HZ repetition rate. CSNS will be a multidisciplinary platform and used for research in many scientific fields.

The R&D of the CSNS/RCS vacuum system is described in this paper. The RCS operating pressure will be  $1 \times 10^{-8}$ Torr. The prototypes of dipole and quadrupole ceramic chambers have been fabricated and coated with TiN layer of about 100 nm in thickness. In addition, the pressure profile has been calculated.