

26th National Symposium on Cryogenics and Superconductivity

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Experience of helium cryogenic system towards six years uninterrupted operation of Superconducting magnet of K-500 cyclotron at VECC

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Content :

K-500 Superconducting cyclotron has a bath cooled Nb-Ti superconducting magnet with cryostat with a total weight of seven tons, operating at 4.4 K and immersed in 300 litres of liquid helium. It has a static heat load of 150 W @ 4.4 K. We have managed the requirement with two separate helium liquefiers, one common sub-cooler and three equal capacity helium compressors. I am sharing our group experience about the operational philosophy, automation, cryogen management, major problems and continuous improvements undertaken for meeting the demands satisfactorily.

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