



Cryogenics Operations 2018

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The cryogenic control system of 40 T hybrid magnet

The cryogenic system is one of the key components for 40 T hybrid magnet for cooling the external cooling-shields, internal cooling-shields, outsert superconducting coil, current lead and the cryogenic distribution valve box of the hybrid magnet. Considering the complexity of the cryogenic system, a safe and stable control system is required. The control system is based on Siemens S7-300 PLC, with Siemens WinCC as the host computer monitoring software. Four experiments over the past two years have demonstrated the safety, stability and efficiency of this control system. This paper describes the network structure, hardware configuration, software structure, auxiliary system and future development direction.

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