

Commissioning of an Autonomous Cooling System for a Compact Superconducting Cyclotron Devoted to Radioisotope Production

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Abstract:

A 4 Tesla superconducting magnet has been developed by CIEMAT for a compact cyclotron for radioisotope production in the framework of AMIT project (Advanced Molecular Imaging Techniques) in collaboration with other Spanish companies. First power tests were performed using liquid helium transferred from dewars. An autonomous cooling system has been developed in collaboration with CERN, where the system was characterized with a dummy load. Some improvements have been implemented to reduce the cooling time before connecting the cyclotron magnet. A new low-thermal-loss transfer line has been developed to overcome the problems detected in the first cooling tests connecting the magnet.

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