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Development of a demountable joint for NUCLOTRON type cable

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The NUCLOTRON type cable has been chosen for developing a fast cycled superconducting dipole for the booster ring of the HIAF project at IMP. The splices of the cable are key components for the magnet. A design which has a resistance about 10-9 Ohm and is easy to be fabricated is developed. The structure of the joint is optimized with Opera software. And reliable fabrication process is developed. In this paper, the simulation of the structure, the key fabrication art and the cold test of the joint is discussed.

Primary authors: NI, Dongsheng (Institute of Modern Physics Chinese Academy of Sciences); Mr OU, Xianjin; WANG, xu dong (Institute of Modern Physics. Chinese Academy of Sciences); CHEN, Yuquan; YANG, Tongjun (Institute of Modern Physics, Chinese Academy of Sciences); WANG, Lishi (Institute of Modern Physics, Chinese Academy of Sciences); QIN, Xiangqi (Institute of Modern Physics, CAS); QIAO, Weiyu (Institute of Modern Physics, Chinese Academy of Sciences); ZHU, li; Mrs CHENG, yue (Institute of Modern Physics Chinese Academy of Sciences)

Presenter: NI, Dongsheng (Institute of Modern Physics Chinese Academy of Sciences)

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