

Magnet Design Issues & Concepts for The New Injector

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Abstract - Possible layouts of superconducting dipoles for the main injector of High Energy LHC (HE-LHC) are proposed on the basis of the experience matured with ongoing R&D activities at the Italian National Institute of Nuclear Physics (INFN), targeted at developing the technologies for high field fast cycled superconducting magnets for the SIS300 synchrotron of FAIR. Two different magnets are analysed: a) a 4 T dipole ramped up to 1.5 T/s, and b) a 6 T dipole to be operated at lower ramp rates.

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