

"Full size model manufacturing and advanced design status of the SIS100 main magnets"

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Following an intensive R&D period on short model magnets, GSI launched the production of three full size dipoles and a quadrupole magnet for SIS 100 in 2007 within the framework of the FAIR project. The first straight dipole manufactured at BNG Wuerzburg was already shipped to GSI and is prepared for testing. The other magnets to be manufactured applying different technological solutions will be completed until the second half of 2008 by JINR Dubna (a straight dipole and a quadrupole) and by BINP Novosibirsk (a curved dipole).

We give a brief description of the main construction details and the technological solutions chosen. We will show the critical parameters to be studied on these magnets and their influence on the final design. We will exemplify that on the dipole, whose design was changed recently to provide even more intensive cycles.