

# **Measurement of the Superconducting Magnets for the XFEL Project at DESY**

H. Brueck, DESY

The European X-ray Free Electron Laser facility (XFEL) is currently under construction at DESY in the Hamburg area in Germany. A linear accelerator consisting of 101 accelerator modules is used to accelerate the electron beam. Each module contains eight superconducting cavities and one magnet package, all operating in a 2K super-fluid Helium bath. The magnet package is designed by CIEMAT and all magnets will be provided as a Spanish contribution to the XFEL project.

The magnet package consists of three nested magnets. Two correction dipole magnets ( $\cos\theta$ -type) are glued onto the surface of the beam pipe being the inner wall of the cryostat vessel. The dipoles are inside of a superferric quadrupole magnet.

Each magnet package together with a conduction-cooled current lead assembly will be tested at room temperature and at 2K in a special cryostat XMTS at DESY. A short description of the XMTS facility, the magnetic field measurement systems used (harmonic coils and stretched wire setups) are given. Finally a short discussion of the results obtained for the first third of the magnets is presented.