

The ANKA RF Cavities, A. FABRIS, C. PASOTTI, P. PITTANA, M. SVANDRLIK, Sincrotrone Trieste; D. EINFELD, F. PEREZ, S. VOIGT, FZK - Four 500 MHz ELETTRA-type radiofrequency cavities will be installed in the ANKA storage ring, under construction at Karlsruhe. For an overvoltage factor of 3.6 they will provide a total accelerating voltage up to 2.4 MV. With 400 mA of stored current at 2.5 GeV, about 264 kW have to be delivered to the beam. The maximum forward power through the input window is therefore larger than 100 kW. At a high power test performed at DESY it could be verified that the input window stands a power of up to 200 kW. The input coupler is a slightly modified version of the ELETTRA type coupler. An external cage stretching or compressing the axial region of the cavity will provide the required tuning range for the accelerating mode, which is ± 150 kHz. Effects of the cavity Higher Order Modes will be cured by mode shifting. A measurement set-up for full characterization of the cavities, field measurements included, has been prepared as well as a test stand for automatic RF power conditioning of the cavity. The status of the cavity fabrication is also presented.