Power Coupler Development for SC Cavities, S. CHEL, M. DESMONS, C. DUPERY, X. HANUS, M. JUILLARD, A. MOSNIER, CEA Saclay, Gif/Yvette, France; G. BIENVENU, J.C. BOURDON, T. GARVEY, J. LE DUFF, J. MARINI, G. MACE, R. PANVIER, N. SOLYAK^{*}, LAL, Orsay, France; A. LE GOFF, S. MAISSA, T. JUNQUERA, IPN, Orsay, France - The TESLA input coupler must transfer about 200 kW of RF power to the beam and handle power levels up to 1 MW in short pulses for high peak power processing of the cavity. Some critical components, like the waveguide to coaxial transition, the cold window or the copper plated bellows have been studied. A power test set up, equipped with various RF and optical diagnostics has been developed to check the power capability of the different devices.

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