DEVELOPMENT OF STF INPUT COUPLERS FOR ILC

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Abstract

High power tests of the STF-Phase 1 cryomodule was carried out at KEK-STF (Superconducting RF Test facility) in 2008. Vacuum leaks at the cold ceramic window of STF-1 input couplers were found in the disassembly of the cryomodule after warm-up. It was considered that the vacuum leaks might be caused by the thermal cycles. Structures of brazing parts at a ceramic disk was investigated to reduce the thermal strain. The STF-2 input couplers with an improved brazing structure for S1-Global cryomodule was designed after the thermal cycle tests of the sample RF windows. The results of the thermal cycle tests of the sample RF windows and the high power performance of the improved STF-2 input couplers will be reported.

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