

High Power RF Processing of Couplers, Windows, and Cavities for the SNS Linac

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High power RF processing of RF components has been performed at the Spallation Neutron Source (SNS) for installation, commissioning, and operations support of its linac accelerating cavity structures. SNS linac employs various types of accelerating structures: the normal conducting RFQ, drift tube linac (DTL), and coupled cavity linac (CCL) cavities and the superconducting RF linac (SCL) 6-cell cavities. The DTL and the CCL use the rectangular waveguide coupler windows and the RFQ and the SCL use the coaxial window couplers. At the beginning of the construction of the SNS, some couplers were processed at the partner laboratories of the SNS project; since then all types of couplers including new developments are routinely RF conditioned efficiently in the SNS test facility. The RF systems, components, and results of the RF processing in the SNS will be presented.

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