DEMONTABLE RESISTIVE JOINT DESIGN
FOR HIGH CURRENT SUPERCONDUCTORS
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ABSTRACT

Recent fusion reactor designs show the need for data on the resistance of demountable joints in superconductors. An experiment was set up to measure this resistance at different pressures. The resistance is calculated from the measured decay time of the current in a superconductive loop. This method proved to be much better than the usual volt-ammeter method. Calibrated compression washers were used to provide the pressure. A resistance of $1.5 \times 10^{-3} \Omega \text{cm}^2$ was achieved with silverplated joints 24000 psi. Data are provided for other contact materials.