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Test stand for routine thermal conductivity measurements of SRF cavity material.

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Thermal conductivity of SRF cavity material influences Q factor in many different ways. RRR and grain size are insufficient to characterize quality of the material and additional control of thermal conductivity is required. We have developed a test stand to perform regular thermal conductivity measurements of samples from cavity material sheets from 1.6 to ≈ 10 K. Thermal conductivity of C101 copper measured with the test stand is consistent with NIST model. We report thermal conductivity of fine grain and single grain samples and comparison with results obtained by other authors.

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