

Abstract Submitted
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A flow-through SQUID microscope for NDE of defects in superconducting wires¹ JOHN MATTHEWS, VIJAY VISWANATHAN, FREDERICK WELLSTOOD, University of Maryland — An integral component of MRI superconducting magnets is the LTS wire used to generate the magnetic field. These magnets are wound from km-long sections, and a single defect can adversely affect its performance. We have modified the nose cone of our high-Tc cryocooled SQUID microscope to enable fast NDE of long wires. A thin tube is positioned immediately beneath the SQUID chip, while a motor-controlled feed mechanism pulls the wire through the tube. We describe the design and operation of the flow-through system, and present measurement results.

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