

Abstract Submitted
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Development of a New Pressure Measuring Technique for Examining Pressure Gradients in Solids ALEKSANDAR TADIC, MICHAEL RAY, Cal State Univ - Sacramento — A cryogenic pressure vessel was designed and created for the purpose of measuring pressure gradients within solid helium. Tests in the preliminary stage were performed in liquid nitrogen (77.2 K) at helium pressures up to 31 bars, using a piezo-resistive force sensor for the pressure measurement. The pressure vessel is made of OFHC copper with indium metal as a seal. Stainless steel capillary tubing provides a helium line and a wire feed-through. While the force sensor does react to the pressure change, the readings of the resistance are somewhat noisy and the setup could benefit from further noise reduction.

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