

Abstract Submitted
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Dielectric flashover testing results and application to a study on magnetic flashover inhibition¹ ANDREW BENWELL, SCOTT KOVALESKI, University of Missouri - Columbia — Magnetic flashover inhibition (MFI) is being considered as a method to increase hold-off at water vacuum barriers. This technique would reduce the size and therefore inductance and cost of pulsed power machines. Self-generated MFI conditions are being tested at the Missouri - University Terawatt Test Stand (MUTTS). Although dielectric flashover tests have been performed many times, non-magnetic field flashover characteristics were obtained for future comparison to self-generated magnetic field experimentation. The non-magnetic field testing included effects from shielding triple points on zero degree and 45 degree insulators. A discussion of the status of the insulating barrier flashover testing at MUTTS will be presented. Future flashover tests will be conducted on the upgraded MUTTS facility. The new facility will be capable of producing high currents necessary for self-generated MFI experiments. An overview of the design for the MFI experiments on the new facility will be presented.

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