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**Assessing Detonator Health Using Rogowski Coil Data** PETER SCHULZE, TY BROOKS, DOUG TASKER, MATT BISS, DANIEL PRESTON, Los Alamos National Laboratory — The Rogowski coil is commonly employed to measure rapid changes of electrical currents, especially in high power applications. Here we report the use of the coil to reveal subtle details of exploding bridgewire (EBW) detonator initiation and how the initiation is affected by aging. Detonator accelerated aging studies are aimed at understanding aging mechanisms and enabling predictive capabilities for aging. Rogowski Coil data from detonator accelerated aging studies offer a wealth of information regarding the electrical health of detonator, which is an important and complementary part of a comprehensive accelerated aging study. Herein we present the results of a variety of accelerated aging tests in detonators (thermal cycling, low power current damage, etc.) and the results that the Rogowski Coil affords us and how they inform us about the condition of the detonator.

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