

DARRAH's

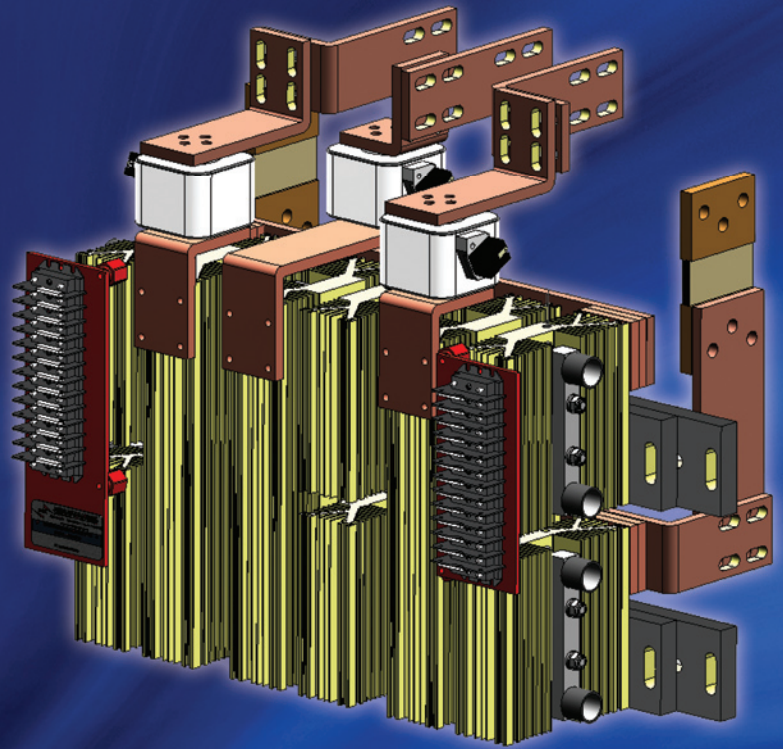


Operational Test for Air Cooled Darrex™ Excitation Systems

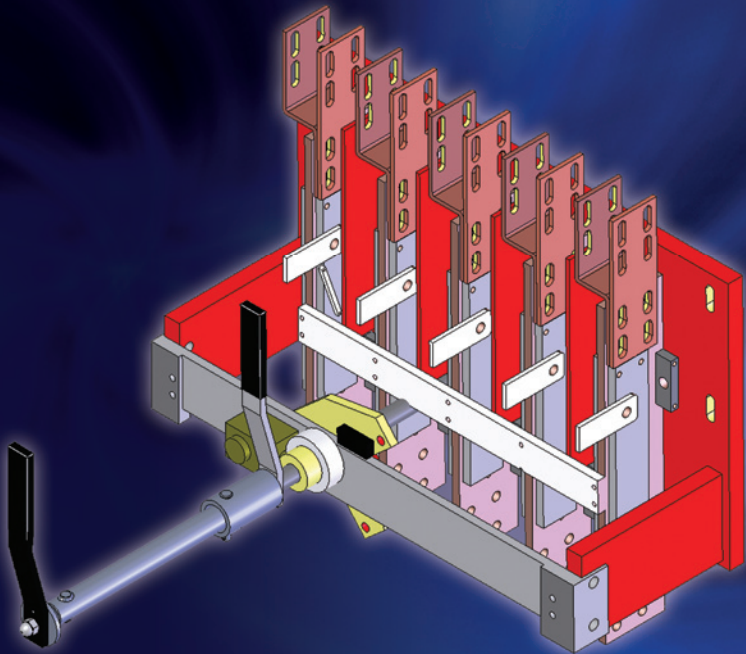
DARREX AIR™ is a drop in replacement Air Cooled Three Phase Diode Bridge and 5-Pole Disconnect Switch for the aging GE Alterrex™ water cooled excitation systems.

The Diode Bridge and Switch are state of the art designs that directly mount to the original equipment cubicle (doghouse) using existing mounting rails and A.C. / D.C. bus bars.

DARREX AIR™ bridges and switches were designed to be operated in parallel.



Independent testing, with actual line and load conditions, were performed at Eaton's Belmont laboratory, to prove the "load break" capability of the 5-Pole Disconnect Switch.



The DARREX AIR™ conversion eliminates the maintenance reliability and safety issues associated with existing water cooled diode rectifier bridges while meeting and exceeding D.C. voltage and current requirements.

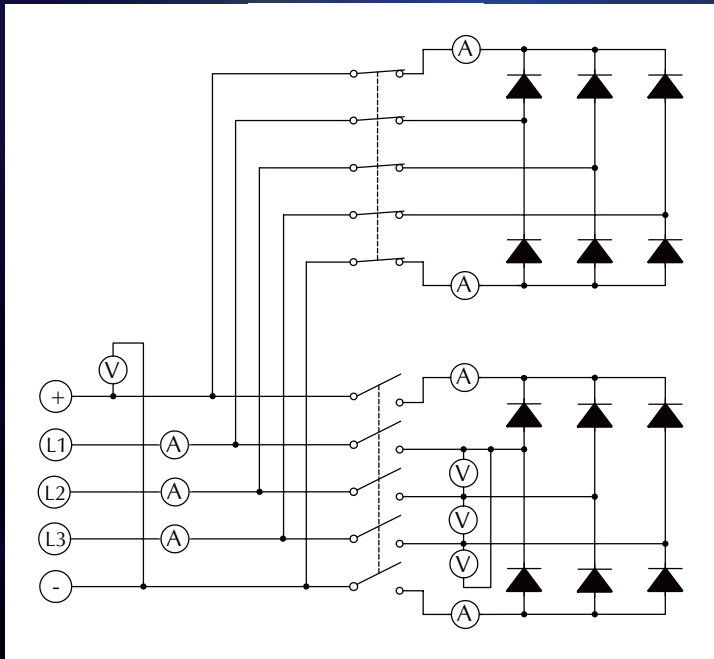
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Bulletin 7402



Test Circuit



For the test, two Darrah diode bridges with 5-Pole switches were connected in parallel to a 4000 Amp load.

600 Volts, Three Phase A.C. Input was applied.

The two bridges were sharing the 4000 Amp, 782 Volt load. A single switch was opened and closed with load applied. The full load transferred to the remaining bridge in the circuit as the switch was opened.

During switch operation, there was no significant arc or flash.

A.C. and D.C. voltages and currents were measured and recorded during the test.

In conclusion, all test data substantiates that, the DARREX AIR™ 5-Pole disconnect switch can be operated safely for isolation purposes with at least on other bridge operating in the circuit.

Actual Test Conditions

AC Line Voltage:	600 Volts, 3 Phase
AC Line Current:	3200 Amps
DC Output Voltage:	782 Volts
DC Output Current:	3922 Amps

DARREX AIR™ is a trademark of Darrah Electric Company.
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