Air Switches & Disconnects

Manitoba HYDRO INTERNATIONAL

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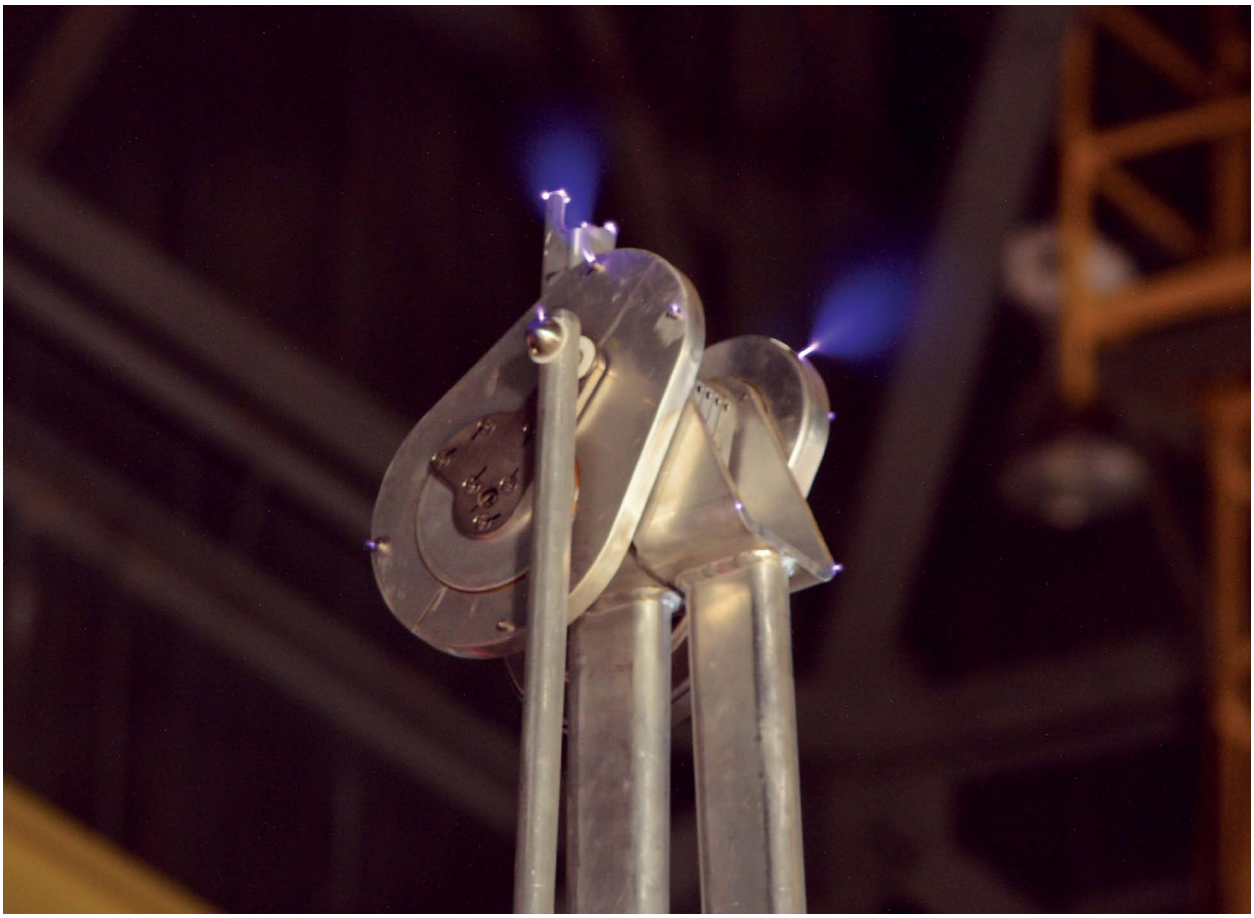


Long exposure photograph taken of the open switch arm on a 362 kV air switch. Streamer discharges are visible.

Air Switches & Disconnects (Dielectric Tests)

Manitoba Hydro International Ltd. provides high voltage testing of air switches and disconnects in accordance with industry standards. For new switch designs, testing is required to demonstrate that designs meet the electrical performance criteria specified in IEC and IEEE Standards. Testing is also performed to prevent in-service failures, which may pose a safety hazard to staff, damage to equipment, or jeopardize service reliability.

We offer dielectric type tests for air switches and disconnects including:

- HVAC and HVDC dielectric withstand tests;
- Wet withstand and switching impulse test capability in accordance with IEEE 4 standard requirements;
- Radio influence voltage (RIV) tests under HVAC and HVDC applications;
- Lightning impulse and switching impulse withstand (bias) voltage tests.

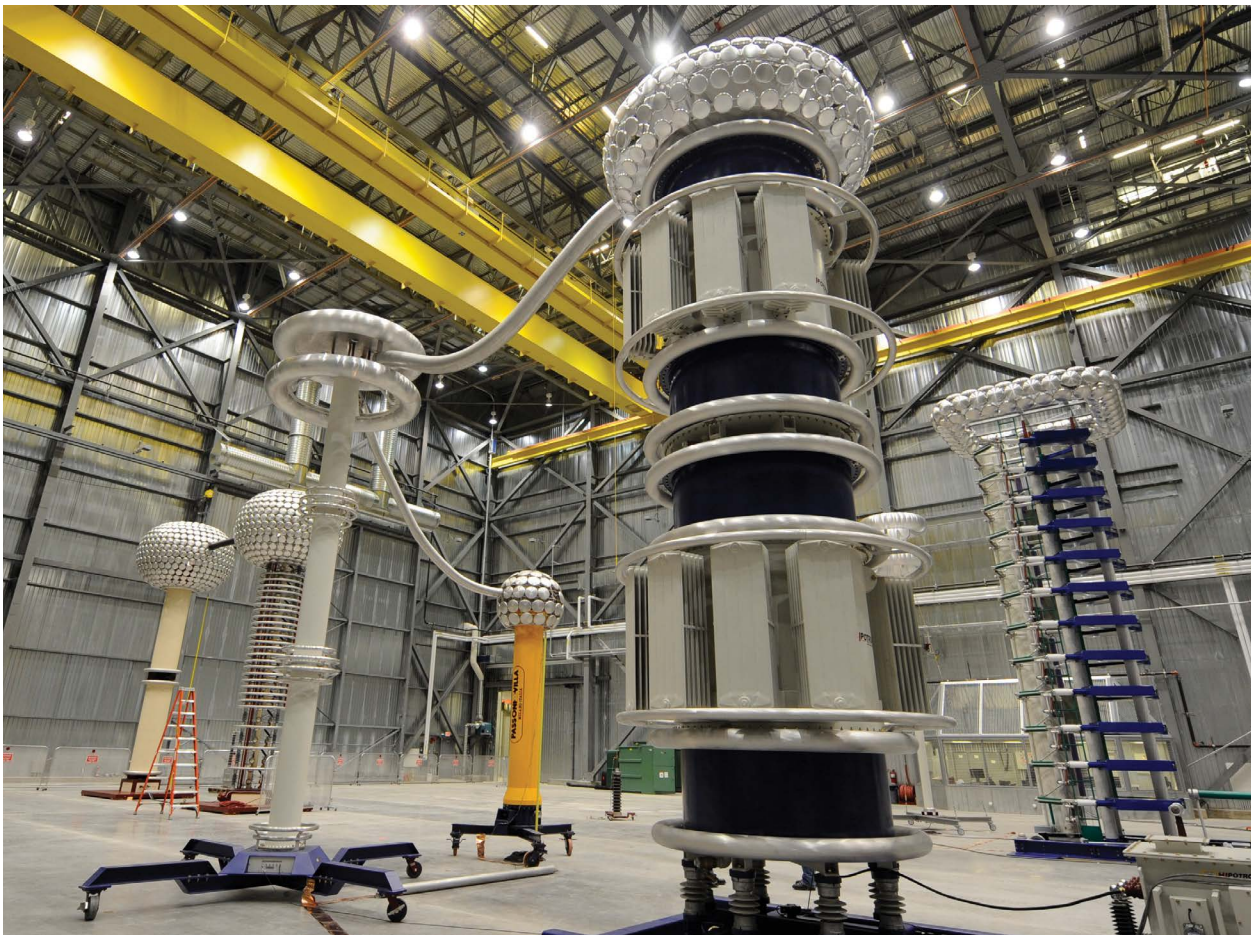
AC withstand test performed on a 362 kV AC ground switch.

Standards

We offer air switch and disconnect tests compliant with the following standards:

- IEC 62271-1 – High-voltage switchgear and controlgear – Part 1: Common specifications for alternating current switchgear and controlgear;
- IEEE C37.30.1 – Standard Requirements for AC High Voltage Air Switches Rated Above 1000V;
- ANSI/NEMA CC 1-2009 – Electric Power Connection for Substations.

Test Capabilities for Air Switches and Disconnects	
Capabilities	Voltage Rating
Direct Voltage with Polarity Reversal (DC)	± 1,200 kV
50/60 Hz Voltage (AC)	800 kV
Switching Impulse	± 1,300 kV
Lightning Impulse	± 2,400 kV



High Voltage Test Services

In partnership with Manitoba Hydro's High Voltage Test Facility, we provide commercial testing services for a wide variety of high voltage electrical equipment. All testing is performed at Manitoba Hydro's leading-edge facility, where services are tailored to meet each customer's specialized needs in accordance with IEEE, ANSI, IEC, and CSA standards.

Contact us today to discuss your testing requirements:

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Available in accessible formats upon request.

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