

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Legal Name of Accredited Laboratory: **LABORATOIRE D'ESSAIS HAUTE TENSION HYDRO-QUÉBEC**

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SCC File Number:	15304
Provider:	BNQ-EL
Provider File Number:	27580-1
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Electrical/Electronic
Initial Accreditation:	1996-10-02
Most Recent Accreditation:	2022-11-21
Accreditation Valid to:	2024-10-02

Remarque: La présente portée d'accréditation existe également en français, sous la forme d'un document distinct.

Note: This scope of accreditation is also available in French as a separately issued document.

List of testing capabilities :

Testing type	Voltage	Remark
Current impulse	0 à ± 40 kA 8/20 μ sec.	
Lightning (voltage) impulse	0 à ± 5000 kV	
Switching impulse	0 à ± 2700 kV 0 à ± 1600 kV	dry wet
AC voltage	0 à 2100 kV 0 à 1000 kV	dry wet
DC voltage	0 à ± 1200 kV	50 mA à 1200 kV 100 mA à 800 kV dry and wet
Partial discharges and RIV	0 à 1200 kV c.a.	
Capacity and tg δ	0 à 1200 kV c.a.	
Heat-run test	0 à 6000 A	Function of the test object impedance

Testing object limitation :

Object	Voltage	Power	Frequency
Power transformer and shunt reactor:			
1 phase Transformer	800/O 3 kV	1200 MVA	50/60/180 Hz
3 phases Transformer	800/O 3 kV	800 MVA	50/60/180 Hz
HVCC Transformer			50/60/180 Hz
1 phase Reactor	765/√ 3 kV	110 MVAR	50/60/180 Hz
3 phases Reactor	550/√ 3 kV	250 MVAR	50/60/180 Hz
Special tests	Up to 800/√ 3 kV	15 MVA	Compensation up to 280 MVA, 25 à 210 Hz

N.B.: Power transformer and shunt reactor tests (for the 1 phase and 3 phases transformers up to 765 kV rated voltage, 1 phase shunt reactors up to 765 kV and 3 phases shunt reactors up to 550 kV rated voltage).

ELECTRONIC AND ELECTRICAL PRODUCTS

TESTS SUBJECT TO ACCREDITATION BY THIS LABORATORY

Power Transformers tests:

- Resistance measurement
- Load losses and impedance measurement
- Heat-run test
- Audible sound measurement
- Lightning impulses test
- Switching impulses test
- Applied voltage test
- Induced voltage test with Partial Discharge measurement
- No-load losses and core excitation current measurement
- Excitation run test at 110%Vn
- On-load tap changer operation at rated current
- On-load tap changer operation at rated voltage
- Current transformer ratio measurement
- Zero sequence impedance

Power Reactors tests:

- Resistance measurement
- AC linearity test
- CC linearity test
- Losses and impedance measurement
- Heat-run test
- Audible sound measurement
- Vibration measurement
- Lightning impulses test
- Switching impulses test
- Applied voltage test
- Induced voltage test with Partial Discharge measurement
- Zero sequence impedance

High-voltage Equipment tests:

- AC withstand voltage at industrial frequency (dry or wet)
- CC withstand voltage (dry or wet)
- AC-Lightning impulses combined tests
- CC-Lightning impulses combined tests
- AC-AC withstand combined voltage
- AC-CC withstand combined voltage
- Heat-run test
- Thermal cycling
- Partial discharge and RIV measurement
- Capacity and tangent delta measurement

Lightning impulses test (dry and wet)
Switching impulses test (dry)

Notes

ISO/IEC 17025:2017: General requirements for the competence of testing and calibration laboratories

This document forms part of the Certificate of Accreditation issued by the Standards Council of Canada (SCC). The original version is available in the Directory of Accredited Laboratories on the SCC website at www.scc.ca.

Elias Rafoul
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