

Certificate of Accreditation

Certificat d'accréditation



Kinectrics Inc. Transmission and Distribution Technology

800 Kipling Avenue, Unit 2, Toronto, ON, M8Z 5G5

having been assessed by the Standards Council of Canada (SCC) and found to conform with the requirements of ISO/IEC 17025:2017 and the conditions for accreditation established by SCC is hereby recognized as an

ACCREDITED TESTING LABORATORY

for the specific tests or types of tests listed in the scope of accreditation approved by SCC and found on the SCC website at www.scc.ca.

ayant fait l'objet d'une évaluation du Conseil canadien des normes (CCN), et ayant été trouvé conforme aux exigences énoncées dans ISO/IEC 17025:2017 et aux conditions d'accréditation établies par le CCN, est de ce fait reconnu comme étant un

LABORATOIRE D'ESSAIS ACCRÉDITÉ

pour les essais ou types d'essais énumérés dans la portée d'accréditation approuvée par le CCN et figurant dans le site Web du CCN au www.ccn.ca.

SCC file number: / Dossier du CCN n° : 15725

Initial accreditation date: / Date de la première accréditation : 2006-11-16

Vice-President – Accreditation Services / Vice-président – Services d'accréditation

Issued on: / Délivré le : 2023-01-17

The validity of this certificate, including the date of last re-accreditation and its expiry can be confirmed by the accompanying Scope of Accreditation document in the Directory of Accredited Laboratories on the SCC website at www.scc.ca.

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. The accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF communiqué dated April 2017).

Pour vérifier la validité du présent certificat, y compris la date de la dernière réaccréditation et la date d'expiration du certificat, consulter la portée d'accréditation qui se trouve dans le répertoire des laboratoires accrédités dans le site Web du CCN au www.ccn.ca.

Ce laboratoire est accrédité conformément à la Norme internationale reconnue ISO/IEC 17025:2017. Cette accréditation démontre la compétence technique d'un organisme pour une portée définie et l'exploitation d'un système de management de la qualité de laboratoire (cf. communiqué conjoint ISO-ILAC-IAF date d'avril 2017).



Standards
Council
of Canada

Open a world of possibilities.

Conseil
canadien
des normes

Un monde de possibilités à votre portée.

Canada

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Legal Name of Accredited Laboratory: **Kinectrics Inc.**
Transmission and Distribution Technology

Contact Name: David Clarke

Address: 800 Kipling Avenue, Unit 2
Toronto, ON
M8Z 5G5

Telephone: +1 416-207-6539

Fax: +1 416-207-5717

Website: www.kinectrics.com

Email: dave.clarke@kinectrics.com

SCC File Number:	15725
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Electrical/Electronic Mechanical/Physical Thermal & Fire Resistance
Initial Accreditation:	2006-11-16
Most Recent Accreditation:	2022-05-24
Accreditation Valid to:	2026-11-16

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.

ELECTRICAL PRODUCTS AND ELECTRONIC PRODUCTS

Components and Assemblies:

Electrical Rotating Machines

IEEE 1043	IEEE Recommended Practice for Voltage-Endurance testing of Form-Wound Bars and Coils
IEEE 1310	IEEE Trial Use Recommended Practice for Thermal Cycle Testing of Form-Wound Stator Bars and Coils for Large Generators
IEEE 1553	IEEE Trial-Use Standard for Voltage Endurance Testing of Form-Wound Coils and Bars for Hydrogenerators

High Voltage Bushings

CAN/CSA 88.1	Power Transformer and Reactor Bushings Only for: Clause 10.2: Power Factor and Capacitance Measurement Clause 10.3: Dry, One-Minute Low-Frequency Withstand Voltage Tests Clause 10.4: Insulation Integrity
IEC 60137	Insulated Bushings for alternating voltages above 1000 V Only for: Clause 9.1: Measurement of dielectric dissipation factor and capacitance at ambient temperature Clause 9.2: Dry lightning impulse voltage withstand test (BIL) Clause 9.3: Dry power frequency voltage withstand test Clause 9.4: Measurement of partial discharge quantity
IEEE C57.19.00	IEEE Standard General Requirements and Test Procedure for Power Apparatus Bushings Only for: Clause 7.4.1: Capacitance (C1 and C2) measurement Clause 7.4.2: Power factor Clause 7.4.3: Rated frequency dry withstand test with partial discharge measurements

Lightning Arresters

IEC 60099-4	Part 4: Metal-oxide surge arresters without gaps for A.C.systems Only for: Design Tests: 8.3 Residual Voltage
-------------	--

Power Cables

AEIC CS2	Specification for Impregnated Paper and Laminated Paper Polypropylene Insulated Cable, High-Pressure Pipe - Type Only for: Clause 12.5: Electrical Tests Clause 12.6: Qualification Tests
----------	---

ANSI /ICEA S-108-720	Standard for extruded insulation power cables rated above 46 through 345 kV Only for: Clause 10.1: Cable qualification tests
ANSI/SIA A92.2	Vehicle-Mounted Elevating and Rotating Aerial Devices Only for: Table 1, Category A and Category B [Except for: Unit Rating 765 kV] Clause 5.4.2.1. Test Procedures for Category A and Category B Aerial Devices
AS/NZS 1429.1	Electric cables - Polymeric insulated Part 1: For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) Only for: Table 3.1: Tests on Cable. Pass Criteria, Category and Reference [Except for: Melt flow index]
AS/NZS 5000.1	Electric cables - Polymeric insulated Part 1: For working voltages up to and including 0.6/1 (1.2) Only for: Table 6: Tests on Cable Pass Criteria, Category and Reference [Except for: Vertical flame propagation, Acid and corrosive gas emission, Melt flow index]
CSA C225-00 (R 2005)	Vehicle-Mounted Aerial Devices Only for: Table 1, Category A and Category B [Except for: Unit rating, 765 kV] Clause 5.4.2.1. Test Procedures for Category A and Category B Aerial Devices
IEC 60502-1	Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1.2$ kV) up to 30 kV ($U_m = 36$ kV) - Part 1: Cables for rated voltages of 1 kV ($U_m = 1.2$ kV) and 3 kV ($U_m = 3.6$ kV) Only for: Clause 17: Type Tests, Electrical Clause 18: Type Tests, Non-Electrical [Except for Clauses: 18.10, 18.12, 18.14, 18.17, 18.18, 18.19, 18.21, 18.22]
IEC 60502-2	Power cables with extruded insulation and their accessories for the rated voltages from 1 kV ($U_m = 1.2$ kV) up to 30 kV ($U_m = 36$ kV) - Part 2: Cables for rated voltages from 6 kV ($U_m = 7.2$ kV) up to 30 kV ($U_m = 36$ kV) Only for: Clause 18: Type Tests, Electrical [Except for Clause 18.2] Clause 19: Type Tests, Non-Electrical [Except for Clause: 19.10, 19.12, 19.14, 19.18, 19.19]

IEC 60840*	Power cables with extruded insulation and their accessories for rated voltages above 30 kV (Um = 36 kV) up to 150 kV (Um = 170 kV) - Test methods and requirements Except for: Clauses 12.5.5, 12.5.7, 12.5.8.12.5.15, 12.5.16, 12.5.17, 12.5.19 Only for: Clause 12 - Type Tests on Cable Systems, Clause 16.3 - AC voltage test of the insulation (on-site testing)
IEC 62067*	Power cables with extruded insulation and their accessories for rated voltages above 150 kV (Um = 170 kV) up to 500 kV (Um = 550 kV) - Test methods and requirements Except for: Clauses 12.5.5, 12.5.7, 12.5.8, 12.5.15, 12.5.16, 12.5.17, 12.5.19] Only for: Clause 12 - Type Tests on Cable Systems, Clause 16.3: AC voltage test of the insulation (on-site testing)
IEEE 48	IEEE Standard for Test Procedures and Requirements for Alternating Current Cable Terminations used on Shielded Cables Having Laminated Insulation Rated 2.5kV through 765kV or Extruded Insulation rated 2.5kV through 500kV Only for: Clauses 8.4.1.1, 8.4.1.2, 8.4.1.2, 8.4.1.5, 8.4.1.6, 8.4.1.7, 8.4.1.8, 8.4.2, 8.4.3

Insulators

ANSI C29.1	Tests Methods for Electrical Power Insulators Only for: Clause 4: Electrical Tests Clause 5: Mechanical Tests
CAN/CSA C411.1	AC Suspension Insulators Only for: Clause 6: Type Tests
CAN/CSA-C411.4	Composite Suspension Insulators for Transmission Applications Only for: Clause 5: Design Tests Clause 6: Type Tests
IEC 60383-1	Insulators for overhead lines with a nominal voltage above 1000 V - Part 1: Ceramic or glass insulator units for a.c. systems - Definitions, test methods and acceptance criteria Only for: Type tests for suspension cap and pin insulators

IEC 61109 and amendment No.1	Composite insulators for a.c. overhead lines with a nominal voltage greater than 1000 V - Definitions, test methods and acceptance criteria Only for: Clause 10 Design Tests Clause 11 Type tests
------------------------------	--

Wiring and Related Products:

Overhead Lines - Connectors & Hardware

ANSI C119.4	Connectors for use between aluminum-to-aluminum or aluminum-to-copper bare overhead conductors Except for: Clause 4.3.1.2 Current Cycle Resistance Stability – CCST Clause 4.3.2.2 Current Cycle Temperature Stability – CCST Clause 4.3.3 Copper System Thermal Stability Clause 6.3.1.5.2 Current and Temperature Condition – CCST Clause 6.3.2 Static Heating Stability Test
IEC 61284	Overhead Lines – Requirements and Tests for Fittings Except for: Clause 13.5.3: Joints of class B Only for: Clause 13: Heat Cycle Tests, Clause 14: Corona and radio interference voltage (RIV) Tests
IEC 61854	Overhead Lines – Requirements and Tests for Spacers Only for: Clause 7.1 Visual Examination Clause 7.2 Verification of Dimensions, Materials and Mass Clause 7.5 Mechanical Tests Clause 7.7 Electrical Tests

Overhead Lines – Conductors & Fiber Optic Cables

BS EN 50182	Conductors for overhead lines - Round wire concentric lay stranded conductors: Only for: Clause 6.4: Properties of conductor [Except for Clause 6.4.9 Stringing Test] Clause 6.5: Properties of wires after stranding [Except for Clause 6.5.3 Welding of aluminum wires] Clause 6.6.1 Mass per unit length
-------------	--

ASTM B230	Standard Specification for Aluminum 1350–H19 Wire for Electrical Purposes Only for: Clause 7 Tensile Properties Clause 8 Bending Properties Clause 9 Resistivity Clause 10 Density Clause 11 Diameter Clause 12 Joints
ASTM B498	Standard Specification for Zinc-Coated (Galvanized) Steel Core Wire for Use in Overhead Electrical Conductors Only for: Clause 8 Tensile Test Clause 9 Wrap Test Clause 10 Coating Test Clause 11 Adherence of Coating Test Clause 14 Dimensions and Permissible Variations
IEC 60794-1-21	Optical fibre cables Part 1-21: Generic specification. Basic optical cable test procedures Mechanical test Methods Except for: Clause 3 Method E1: Tensile Performance Clause 5 Method E3: Crush Clause 6 Method E4: Impact Clause 10 Method E6: Repeated Bending Clause 11 Method E7: Torsion Clause 14 Method E10: Kink Clause 15 Method E11: Bend Clause 18 Method E14: Compound Flow (Drip Clause 23 Method E18B: Sheave Test Clause 24 Method E19: Aeolian Vibration
IEC 60794-1-22	Optical fibre cables Part 1-22: Generic specification Basic optical cable test procedures Environmental test methods Except for: Clause 3 Method F1: Temperature Cycling Clause 7 Method F5: Water Penetration [Except for Method F5A]
IEC 60794-1-401	Optical fibre cables - Part 1-401: Generic specification - Basic optical cable test procedures - Electrical test methods - Short-circuit test (for OPGW, OPPC and OPAC), Method H1
IEC 60794-1-402	Optical fibre cables - Part 1-402: Generic specification - Basic optical cable test procedures - Electrical test methods – Lightning test (for OPGW, OPPC and OPAC), Method H2

IEC 60794-4-10	Optical fibre cables Part 4-10: Family specification Optical ground wires (OPGW) along electrical power lines
IEC 61089	Round Wire Concentric Lay Overhead Electrical Stranded Conductors Only for: Clause 6.5: Type tests Clause 6.6: Sample tests
IEC 61395	Overhead Electrical Conductors - Creep Test Procedures for Stranded Conductors
IEEE 1138	IEEE Standard for Testing and Performance for Optical Ground Wire (OPGW) for use on Electrical Utility Power Lines

ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety:

Personal Protection

(Arc-Flash Testing)

ASTM F1959/F 1959M	Standard Test Method for Determining the Arc Rating of Materials for Clothing
ASTM F2178	Standard Test Method for Determining the Arc Rated Eye or Face Protective Products
ASTM F2621	Standard Practice for Determining Response Characteristics and Design Integrity of Arc Rated Finished Products and Evaluating other Products in an Electric Arc Exposure
ASTM F2675	Standard Test Method for Determining Arc Ratings of Hand Protective Products Developed and Used for Electrical Arc Flash Protection
ASTM F887	Standard Specification for Personal Climbing Equipment, Only for: Section 22; After exposure to an Electrical Arc
IEC 61482-1-1	Live working - Protective clothing against the thermal hazards of an electric arc - Part 1-1: Test methods - Method 1: Determination of the arc rating (ATPV or EBT50) of flame resistant materials for clothing

IEC 61482-1-2	Live working - Protective clothing against the thermal hazards of an electric arc - Part 1-2: Test methods - Method 2: Determination of arc protection class of material and clothing by using a constrained and directed arc (box test)
---------------	--

(Safety Equipment)

ASTM D1048	Standard Specification for Rubber Insulating Blankets Only for: Clause 9: Electrical Requirements Clause 18: Electrical Tests
ASTM D120	Standard Specification for Rubber Insulating Gloves Only for: Clause 11: Electrical Requirements Clause 18: Electrical Tests
ASTM F496	Standard Specification for In Service Care of Insulating Gloves and Sleeves Only for: Clause 7: Electrical Tests [Except for: Clause 7.6 Sleeve tests]
CAN/ULC-60903 (IEC 60903)	Live Working - Gloves of Insulating Material Only for: Clause 8.4.1: Dielectric Tests - General Clause 8.4.2 Dielectric Tests - AC Test Procedure

Number of Scope Listings: 48

Notes:

ISO/IEC 17025:2017: General Requirements for the Competence of Testing and Calibration Laboratories

* These test methods can be performed on-site as per RG-Lab.

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
Vice-President, Accreditation Services
Publication on: 2022-05-25