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SCOPE OF ACCREDITATION

KINECTRICS INC.
Transmission and Distribution Technology
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Accredited Laboratory No. 610
(Conforms with requirements of ISO/IEC 17025:2005)

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CLIENTS SERVED: Electrical Utilities and Equipment Manufacturers

FIELDS OF TESTING: Electrical/Electronic, Mechanical/Physical, Thermal & Fire Resistance

SCOPE ISSUED ON: 2018-06-30

ACCREDITATION VALID TO: 2022-11-16

Field of Testing: Electrical/Electronic, Mechanical/Physical, Thermal & Fire Resistance "some tests are available on-site".

ELECTRICAL PRODUCTS AND ELECTRONIC PRODUCTS

Components and Assemblies:

(Electrical Rotating Machines)

Standards Council of Canada Accredited Laboratory No. 610

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
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(Lines Fittings)

IEC 61284	Overhead Lines - Requirements and Tests for Fittings Only for: Clause 13: Heat Cycle Tests [Except for: Clause 13.5.3: Joints of class B] Clause 14: Corona and radio interference voltage (RIV) tests
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(Power Cables)

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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 A92.2-2009	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 ($U_m = 36$ kV) up to 150 kV ($U_m = 170$ 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
IEC 62067	

Standards Council of Canada Accredited Laboratory No. 610

Power cables with extruded insulation and their accessories for rated voltages above 150 kV ($U_m = 170$ kV) up to 500 kV ($U_m = 550$ 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

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
Only for: note: On-site testing available

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

(Connectors)

ANSI C119.4

Connectors for use between aluminum-to-aluminum or aluminum-to-copper bare overhead conductors
Except for: Clause 4.2.2 CCST Resistance

NEMA CC1	Clause 4.3.2 CCST Temperature Clause 6.6.2 CCST Method Clause 6.8.2 CCST Temperature conditions Clause 6.8.4 CCST Method elevated temperature current stabilization Clause 6.9.3 CCST current cycle-OFF period Clause 6.12.2 Evaluation by the CCST method Electric Power Connection for Substations Only for: Clause 3: Test Methods
(Line Hardware)	
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
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 60794-1-24	Optical fibre cables Part 1-24: Generic specification Basic optical cable test procedures Electrical test methods
IEC 60794-4-10	Except for: Clause 3 Method H1: Short Circuit Test Clause 4 Method H2: Lightning Test Method for Optical Aerial Cables Along Electric Power Lines Optical fibre cables Part 4-10: Family specification Optical ground wires (OPGW) along electrical power lines

Standards Council of Canada Accredited Laboratory No. 610

	Except for: Clause 8.3.2 Tensile Performance
	Clause 8.3.3 Stress-Strain Test
	Clause 8.3.4 Breaking Strength Test
	Clause 8.3.5 Sheave Test
	Clause 8.3.6 Aeolian Vibration Test
	Clause 8.3.7 Creep Test
	Clause 8.3.8 Low Frequency Vibration Test (Galloping Test)
	Clause 8.3.9 Temperature Cycling
	Clause 8.3.10 Water Penetration
	Clause 8.3.11 Short Circuit
	Clause 8.3.12 Lightning Test
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 (2009)	IEEE Standard for Testing and Performance for Optical Ground Wire (OPGW) for use on Electrical Utility Power Lines Except for: Clause 6.4.3.8 - Salt Spray Corrosion Test
(Lines Spacers)	
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

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 Rating and Standard Specification for Face Protective Products
ASTM F2621	Standard Practice for Determining Response Characteristics and Design Integrity of Arc Rated Finished Products in an Electric Arc Exposure

Standards Council of Canada Accredited Laboratory No. 610

ASTM F2675-13	Standard Test Method for Determining Arc Ratings of Hand Protective Products Developed and Used for Electrical Arc Flash Protection
ASTM F887-12	Standard Specification for Personal Climbing Equipment, Section 23; Electrical Arc Performance
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

Notes:

ISO/IEC 17025: General Requirements for the Competence of Testing and Calibration Laboratories (ISO/IEC 17025-2005)

Elias Rafoul, Vice President
Accreditation Services

Date: 2018-06-30

Number of Scope Listings: 45
SCC 1003-15/725
Partner File #0
Partner: None