



CERTIFICATE OF ACCREDITATION

This is to attest that

CTC GLOBAL INC.
2026 MCGAW AVENUE
IRVINE, CALIFORNIA 92614, U.S.A.

Testing Laboratory TL-952

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date October 21, 2022



A handwritten signature in black ink, reading "Raj Nathan".

President

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

CTC GLOBAL INC.

www.ctcglobal.com

Contact Name Thomas Parsons

Contact Phone +1-949-533-2034

Accredited to ISO/IEC 17025:2017

Effective Date October 21, 2022

Composite Core Physical	
ASTM B987	Standard Specification for Carbon Fiber Thermoset Polymer Matrix Composite Core (CFC) for use in Overhead Electrical Conductors <ul style="list-style-type: none">• Visual Inspection• Diameter/Density• Galvanic Layer Thickness• Ultimate Bend Test• Heat Exposure• Heat Stress
ASTM D2303	Standard Test Methods for Liquid-Contaminant, Inclined-Plane Tracking and Erosion of Insulating Materials <ul style="list-style-type: none">• Brittle Fracture Test
ASTM D3916	Standard Test Method for Tensile Properties of Pultruded Glass-Fiber-Reinforced Plastic Rod <ul style="list-style-type: none">• Ambient Tensile Properties• Elevated Temperature Tensile Strength
ASTM D4475	Standard Test Method for Apparent Horizontal Shear Strength of Pultruded Reinforced Plastic Rods by the Short-Beam Method
ASTM D5117	Standard Test Method for Dye Penetration of Solid Fiberglass Reinforced Pultruded Stock
CIGRE 426	Guide for Qualifying High Temperature Conductors for Use on Overhead Transmission Lines <ul style="list-style-type: none">• Oven Aging/Thermal Cycling• Diameter/Density• Ultimate Bend Test• Tensile Strength• Tensile Elongation• Tensile Modulus of Elasticity• Heat Exposure• Brittle Fracture Test
IEC 62818	Conductors for overhead lines - Fiber reinforced composite core used as supporting member material <ul style="list-style-type: none">• Visual Inspection• Oven Aging/Thermal Cycling• Diameter/Density• Galvanic Layer Thickness

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	<ul style="list-style-type: none"> • Ultimate Bend Test • Tensile Strength • Tensile Elongation • Tensile Modulus of Elasticity • Torsion Test • Crush Test • Porosity and Fiber Matrix Repartition • Fiber Volume by TGA • Arrhenius Test
Composite Core Thermal	
ASTM B987	Standard Specification for Carbon Fiber Thermoset Polymer Matrix Composite Core (CFC) for use in Overhead Electrical Conductors <ul style="list-style-type: none"> • Heat Exposure • Heat Stress
ASTM D3916	Standard Test Method for Tensile Properties of Pultruded Glass-Fiber-Reinforced Plastic Rod <ul style="list-style-type: none"> • Elevated Temperature Tensile Strength
ASTM D5423	Standard Specification for Forced-Convection Laboratory Ovens for Evaluation of Electrical Insulation <ul style="list-style-type: none"> • Specimen Drying • Sample Drying • Heat Ageing • Isothermal Ageing • Temperature Cycling
ASTM D7028	Standard Test Method for Glass Transition Temperature (DMA Tg) of Polymer Matrix Composites by Dynamic Mechanical Analysis (DMA)
ISO 11358-1	Plastics — Thermogravimetry (TG) of polymers — Part 1: General principles <ul style="list-style-type: none"> • Fiber Volume by TGA
Conductor Physical	
ANSI C119.4	American National Standard for Electric Connectors-Connectors for Use between Aluminum-to-Aluminum and Aluminum-to-Copper Conductors Designed for Normal Operation at or Below 93 deg. C and Copper-to-Copper Conductors Designed for Normal Operation at or Below 100 deg. C <ul style="list-style-type: none"> • Conductor Splice and Dead-End Tensile Test
ASTM B263	Standard Test Method for Determination of Cross-Sectional Area of Stranded Conductors
ASTM B557	Standard Test Methods for Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products <ul style="list-style-type: none"> • Conductor Strand Tensile
ASTM B609	Standard Specification for Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes
ASTM B857	Standard Specification for Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductors, Coated-Steel Supported (ACSS/TW) (Section 7) <ul style="list-style-type: none"> • Conductor Lay Length

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IEC 61284	Overhead lines - Requirements and tests for fittings <ul style="list-style-type: none">• Conductor Splice and Dead-End Tensile Test
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