

## PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Trench Limited Coil Division

71 Maybrook Drive, Scarborough ON, M1V 4B6 Canada

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

## ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Acoustic, Electrical and Thermodynamic Testing (As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen President

Perry Johnson Laboratory Accreditation, Inc. (PJLA) 755 W. Big Beaver, Suite 1325 Troy, Michigan 48084 Initial Accreditation Date: September 5, 2019 *Issue Date:* March 30, 2022 *Expiration Date:* March 30, 2024

Accreditation No.: 91657

Certificate No.: L22-249

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: <u>www.pjlabs.com</u>



Certificate of Accreditation: Supplement

## **Trench Limited Coil Division**

71 Maybrook Drive, Scarborough, ON M1V 4B6 Contact Name: Jayakumar Harinathan Phone: 647-925-9710

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Acoustic <sup>F</sup>	All Inductors (TCC)	Acoustic (Sound) Measurement	TP-13007-A / TETP 7.16/ IEC 60076-10- 2016, Form 129 & Applicable Customer Spec.	50 dBA to 100 dBA
Electrical <sup>F</sup>		RDC Winding measurement	TETP 7.4, Form 129 & Applicable Customer Spec.	0.002 Ω to 25 Ω
		Inductance and loss	TETP 7.38, Form 129 & Applicable Customer Spec.	0.1 mH to 10 H 1 mW to 200 KW
		High frequency resistance and impedance	TETP 7.2 & Applicable Customer Spec.	1 mΩ to 1 GΩ 25 Hz to 5 MHz
		Full Wave Impulse Testing (1.2/50 µs)	TP-13000-A / TETP 7.9, Form 129 & Applicable Customer Spec.	100 kV to 3 200 kV
		Full Wave Impulse testing (250/2 500µs)	TP-13000-A / TETP 7.9, Form 129 & Applicable Customer Spec.	100 kV to 3 200 kV
		Turn to Turn Test	TP-13001-A / TETP 7.8, Form 129 & Applicable Customer Spec.	0° to 180°
		Hi-Pot Test (AC/DC)	TP-13004-A / TETP 7.6/7.45, Form 129 & Applicable Customer Spec.	10 kV to 1 000 kV
		PD Measurement (Coils)	TETP 7.52, Form 129 & Applicable Customer Spec.	0 pC to 1 000 pC
		PD Measurement (TRVMD capacitors)	TETP 7.5, Form 129 & Applicable Customer Spec.	0 pC to 1 000 pC
		RIV Measurement	TETP 7.23, Form 129 & Applicable Customer Spec.	0 μV to 2 500 μV
		Cap and DF Measurement (TRVMD capacitors)	TETP 7.49, Form 129 & Applicable Customer Spec.	0 pF to 20 000 pF 0 % to 0.05 %
		SFRA Measurements	TETP 7.53, Form 129 & Applicable Customer Spec.	Record Only



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Thermodynamic	All Inductors (TCC)	Temperature rise testing (1ph, 3ph, DC)	TP 13008A / TETP 7.19, 7.24, 7.29, Form 129 & Applicable Customer Spec.	0 °C to 300 °C

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer<sup>F</sup> would mean that the laboratory performs this testing at its fixed location.

