Accreditation No: LAB 254

Awarded to

High Voltage and Short Circuit Laboratory, NTDC, Rawat, Islamabad, Pakistan.

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **16-02-2022** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2017.**

The accreditation requires regular surveillance, and is valid until **15-02-2025.**

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

PAKISTAN NATIONAL ACCREDITATION COUNCIL

16-02-2022
Date

Sd.
Director General

Testing Laboratory.

Accreditation Scope of High Voltage and Short Circuit Laboratory, NTDC, Rawat, Islamabad, Pakistan.

Permanent laboratory premises [X]

Materials/Products tested	Testing field (e.g. environmental testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference
High Power (HP) Section			
Distribution Transformers 3-phase (5 to 1000) kVA	Electrical Testing	Load Loss Test (Copper Losses)	IEC – 60076-1:2011 IEC – 60076-2:2011 IEC – 60076-5:2006 NTDC Specification DDS- 84:2020 (11/0.415 kV) NTDC Specification DDS-71:2004 KE Specification K/R&D/DT – 28 Rev (05):2018 NTDC Specification P – 41:81
		No Load Loss Test (Iron Losses)	
		Measurement of Winding Resistance Test	
		Turn Ratio Test	
Distribution Transformers 3-phase (5 to 1000) kVA	Electrical Testing	Short Circuit Test	IEC – 60076-1:2011 IEC – 60076-2:2011 IEC – 60076-5:2006 NTDC Specification DDS- 84:2020 (11/0.415 kV) NTDC Specification DDS-71:2004 KE Specification K/R&D/DT – 28 Rev (05):2018 NTDC Specification P – 41:81
		Temperature Rise Test	

16-02-2022
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Sd.
Director

High Voltage (HV) Section			
Distribution Transformers 3-phase (5 to 1500) kVA	Electrical Testing	Lightning Impulse Voltage Withstand Test	IEC-60060-1:2010 IEC-60076-1:2011 IEC 60076-3:2018 NTDC Specification DDS-84:2020
		Applied Voltage Test	
		Induced overvoltage withstand test	
15 kV Power Cable and Accessories (Termination Kits and Joints) 1. 11 kV 2. LT (415/600/ 1000 V)	Electrical Testing	Lightning Impulse Voltage Withstand Test	IEC 60060-1:2010 IEC 60502-2:2014 IEC 60502-4:2010 IEC 60230:2018 IEC 61442:2005 IEEE 48:2020 P-184:86 P-29:2010 DDS-41 KE Spec No. 145:2012 KE Spec No. 235, 236
		Power Frequency Dry Voltage Withstand Test	
		DC Voltage Withstand Test	
Medium Voltage Switchgear Panel (1 to 33) kV	Electrical Testing	Lightning Impulse Voltage Withstand Test	IEC 60060-1:2010 IEC 62271-1:2017
11 kV Dropout Cut Out	Electrical Testing	Lightning Impulse Voltage Withstand Test	IEC 60060-1:2010 IEC 60282-2:2008 DDS-49:2009 KE Spec No. 176
		Power Frequency Dry Test	
11 kV Busbar Insulation Tubing	Electrical Testing	AC Voltage Withstand Test	IEC 60684-2:2011

16-02-2022
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Sd.
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Oil Testing Section			
Transformer Oil	Chemical Testing	Dielectric Strength	IEC-60156:2018
		Flash Point	ISO 2719:2016 (AMD-1:2021)
		Dielectric Dissipation Factor @ 90 °C	IEC-60247:2004
		Resistivity	IEC-60247:2004
		Water Content	IEC-60814:1997
		Color	ASTM D1500:2017

16-02-2022
Date

Sd.
Director