ISO/IEC-17025 Accredited Testing Service Provider >>>

HIGH VOLTAGE & MECHANICAL TESTING LABORATORY (HVMT)

INTRODUCTION

EMCO Industries is a public listed company on PSX incorporated in 1954. EMCO is the market leader in the manufacturing and supply of high voltage electrical porcelain transmission line insulators and substation equipment for the Pakistan market as well as for various export markets.

HVMT Lab is defined part of EMCO since 1991, and this laboratory is working impartially as fully independent and recognized testing station with over 30 years of continuous experience in the high voltage & mechanical testing. Laboratory has qualified and competent staff which is well familiar with the national and international testing standards and procedures. **HVMT Lab has been accredited in accordance with the requirements of ISO/IEC-17025 as an independent accredited testing laboratory under Pakistan National Accreditation Council (PNAC) as Lab # 350 under defined scope (Scan QR).**

COMPLETE TESTING SCOPE

- High voltage testing i.e., power frequency, lightning impulse, switching impulse, chopped impulse, steep impulse, artificial pollution tests.
- High current testing i.e., temperature rise test.
- Radio interference, partial discharge having faraday cage, tan delta & capacitance measurement, insulation/winding/contact resistance, surface resistivity.
- Mechanical testing i.e., tensile, bending, cantilever, compression, electro-mechanical, thermal-mechanical.
- Others i.e., porosity, temperature cycle, galvanizing, hardness, surface roughness tests.
- Instrument transformer routine testing.
- Oil testing i.e., moisture analysis, breakdown voltage, dissolved gas content, tan delta.

COMPLETE TESTING FACILITIES

- Power frequency voltage testing: A=**600kV**, B=**350kV**, C=**300kV**, D=**10kV**.
- Impulse voltage testing: A=**1800kV/180kJ**, B=**1000kV/30kJ**.
- Radio interference voltage testing: A=**50kV**.
- Partial discharge testing: A=**600kV**, B=**300kV** having background noise ≤3pC.
- High current testing: A=**2000A**.
- Mechanical testing: A=**50ton (universal)**, B=**50ton (horizontal tensile)**.
- Thermal-mechanical testing: **-30˚C to +70˚C** with A=**20ton (vertical tensile)**.
- Porosity testing: A=**35MPa**.
- Temperature cycle testing: **5˚C to 95˚C**.
- Oil testing: **80kV** breakdown voltage, **90˚C** tan delta, **0µg-100mg** moisture.
- Artificial pollution testing: Solid layer and salt fog methods.

TEST SPECIFICATIONS

Products are tested according to the national and international standard specifications i.e., IEC, ANSI, ASTM, IEEE, BS, DIN, NGC (Formerly NTDC), KE & WAPDA etc along with specifications from national utilities. All technical parameters and requirements are kept under review during testing.

TEST PRODUCTS

Testing services include testing of all types of distribution & transmission line insulators i.e., disc type, pin type, spool/shackle, guy strain, LT/HT bushing, dropout cutout, rail contact, line post, long rod type, distribution transformer, cable etc. and grid station equipment i.e., station post, surge arrester, disconnector switch along with earthing switch, circuit breaker, instrument transformers, panels etc. In addition to that, RTV coated insulators, multiple types of line/grid hardware and other products in the relevant field are also being tested.

EQUIPMENT CALIBRATIONS

All testing equipment are calibrated from National Metrological Institute of Pakistan (NMIP) Islamabad, Al-Mezan Laboratory Lahore and PCSIR Laboratories Lahore etc. Proficiency testing has been done by IFM Quality Services, Australia.

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EMCO FACTORY ADDRESS (WHERE HVMT LAB IS LOCATED):

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GALLERY

1800kV/180kJ Lightning Impulse Generator

600kV/2A Power Frequency Transformer

1000kV/30kJ LI Generator, 350kV/0.43A PF Transformer, 300kV/0.18A PD Free PF Transformer

Control Unit for Power Frequency Transformer

Pakistan National Accreditation Council
Ministry of Science & Technology
Government of Pakistan
Islamabad

PNAC

Certificate of Accreditation

is awarded to

High Voltage & Mechanical Testing Laboratory (HVMT Lab)
EMCO Industries Limited, Sheikhupura Raod,
Lahore-Pakistan

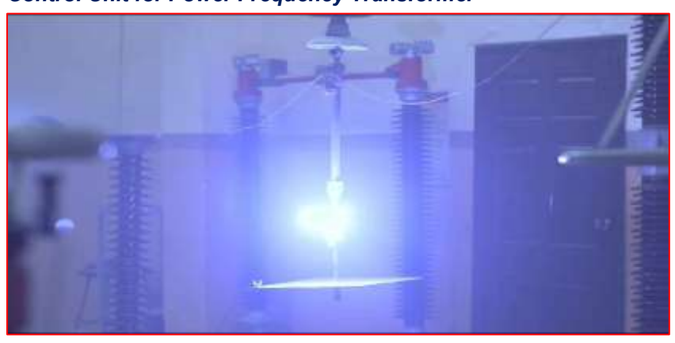
in accordance with the requirements of ISO/IEC 17025:2017
The accreditation is subject to regular surveillance and compliance
to the requirements of PNAC.
For scope of accreditation, see appendix.

Accreditation Certificate Number: LAB 350

Date of Issue: 15-10-2025
Director General
Valid until 14-10-2028

Certificate of ISO/IEC-17025 for HVMT Lab

50Ton Universal Mechanical Testing Machine



Steep Wave of Front Impulse Test

Artificial Pollution Test i.e., Salt Fog , Solid Layer

Website: www.emco.com.pk (followed by HVMT tab), **PNAC Accredited Scope :** https://pnac.gov.pk/pdfFiles/LAB-350