Jayasree Reva Phoenix Metrology Pvt. Ltd.

Calibration | Inspection | Testing | Training | Services

ISO 9001:2015 Certified | ISO/IEC 17025:2017 Accredited

Electro-Technical Metrology | Training Brochure

INTRODUCTION

Electro technical calibration may be performed on a wide range of instruments, including voltage and current meters, resistance meters, power meters, frequency counters, oscilloscopes, and signal generators. It is essential to calibrate these instruments regularly to ensure accurate and reliable measurements. Electro technical metrology utilizes multi-product calibrator (MPC) & 8.5 digital multimeter (DMM) to perform calibration of source and measure parameters.

COURSE FEATURES

Training course covers the following contents:

- Practical & Theoretical Training of Electro Technical Calibration
- Specific Criteria & Guidelines Electro Technical Calibration
- Estimation and Expression of Uncertainty in Measurement as per NABL 141
- Calibration and Measurement Capability (CMC) and Measurement Uncertainty in Calibration as per NABL 143
- Participation in Proficiency Testing Activities as per NABL 163
- Guidelines for Interlaboratory Comparison as per NABL 164

6.5 Digit Multimeter

Digital Oscilloscope

LCR Meter

Earth Tester

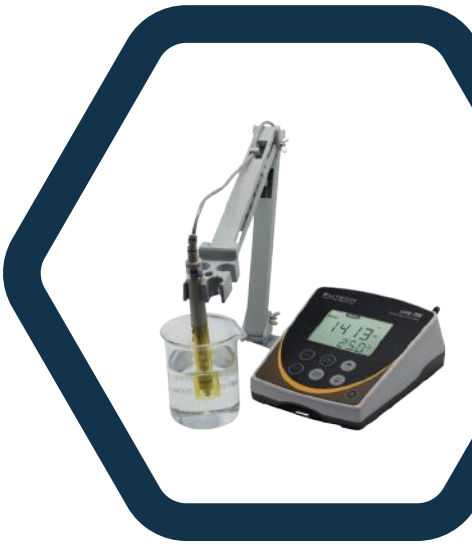
TRAINING MATERIAL

Material in soft for Electro Technical metrology as per ISO/IEC 17025: 2017, NABL oriented best-in-class training material traceable to National and International Standard requirements.

PRINCIPLE | THEORY

Electrical calibration refers to the process of verifying the performance of, or adjusting, any instrument that measures or tests electrical parameters. This discipline is usually referred to as dc and low frequency electrical metrology. Principal parameters include voltage, current, resistance, inductance, capacitance, time and frequency. Other parameters, including electrical power and phase, are also in this segment of metrology. Ratio metric comparisons of similar parameters are often performed to compare a known parameter to an unknown similar parameter.

CALIBRATION RANGE



- 6.5 Digit Multimeter
- Multi Function Calibrator
- Power Analyzer
- Digital Oscilloscope
- Data Acquisition System
- Stopwatch | Timer
- LCR Meter
- PH | Conductivity Meter
- Resistance | Capacitance | Inductance Box
- Current Source (1000A)
- Earth Tester | Insulation Tester

EXPECTED PARTICIPANTS

- Laboratory Managers
- Calibration and Testing Engineers
- Laboratory Engineers
- Quality Managers
- Metrology Professionals
- NABL Lab Engineers

OBJECTIVES OF ELECTRO TECHNICAL WORKSHOP

- Basic knowledge of calibration such as requirements of calibration, why do we need calibration, equipment selection, types of equipments, metrological traceability, selection of calibration agency etc.
- Understand requirement of ISO/IEC 17025:2017 requirements for measurement uncertainty.
- Understand theory of uncertainty of measurement, selection of uncertainty measurement factors, and calculation of measurement uncertainty.
- Understand the relevance of instrument measurement, including the use of instrument.
- Understand technical requirements and calibration method for relevant instruments.
- Preparation of calibration certificates and work sheet.

COURSE CONTENT

Course content covers the following topics:

- Comprehensive Trainer's Guide
- Power Point Presentation: Electro Technical Metrology
- Introduction to Measurements, Fundamental & Derived Units
- Standards Organizations and Document Standards
- Calibration Procedures | Methods | Processes
- Practical example from the trainer selecting the best solution
- Documentation Training as per ISO/IEC 17025: 2017
- Measurement Uncertainty
- Questions & Answers
- Practical examples from your business (In-house courses only)
- Summary & Review

WORKSHOP METHODOLOGY

TRAINING SESSION

Theoretical training on the basics of the subject.

- Electro Technical Laboratory

WORKSHOP & TEAM EXERCISES

Case studies from relevant industry samples taken up in line with the guidelines and formats.

- Electro Technical Laboratory

GRADED EXERCISE

Graded exercises to evaluate individual participant's progress during the course.

- Electro Technical Laboratory

FINAL EXAMS

Business as usual, we have a final examination to evaluate and certify the participants.

CONTINUING SUPPORT

We provide continuing support to new projects and provide project assistance based on client requirements.

CERTIFICATION

- Certificate of course completion to successful participants.
- Attendance for the entire duration of the course is compulsory.

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CC-2428

Dimensional | Pressure | Torque | Force | Hardness | Impact | Mass | Volume | Electro-Technical | Thermal | Acoustics | Acceleration & Speed | Fluid Flow | Optical | UTM | TTM | Tachometer | Anemometer | Durometer | Lux Meter | Push Pull Gauge | Rockwell | Brinell | Vickers | Micro Vickers | Mechanical Testing | Impact Testing : Mechanical Properties of Metals and Non-Metals

JAYASREE REVA PHOENIX 10 YEARS CALIBRATION & TESTING SERVICES

CONTACT US

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