



### Jayasree Reva Phoenix Metrology Pvt. Ltd.

Calibration | Inspection | Testing | Training | Services

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



## Pressure Metrology | Training Brochure

#### INTRODUCTION

Pressure calibration is the comparison of the output of a pressure gauge or other measuring device against a standard instrument of higher accuracy. A typical commercial calibration uses the manufacturer's pressure gauge or transmitter calibration procedure and is usually performed with a reference standard of at least 4 times the accuracy as the instrument under test or with a lower combined standard measurement uncertainty than the device under test.



#### **COURSE FEATURES**

Training course covers the following contents:

- Practical & Theoretical Training of Pressure Calibration
- Specific Criteria & Guidelines Pressure 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





Digital Pressure Calibrator

Pressure Transmitter



**Digital Manometer** 



### TRAINING MATERIAL

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

#### **PRINCIPLE | THEORY**

Pressure calibration is the comparison of the output of a device used to measure pressure with that of another pressure measurement device, or pressure measurement standard. This usually involves plumbing the device under test (DUT) to the standard device and generating a common pressure in the measurement circuit.

#### CALIBRATION RANGE

- Digital Pressure Calibrator (-1 to 1400 bar | 2500 bar | 4000 bar)
- Digital Absolute Pressure Gauge (0 to 4 bar abs)
- Digital Manometer | Diffi-Pressure Gauge (-0 to -5000 to & 0 to 5000 mmH20)
- Analog Pressure | Vacuum | Compound Gauge
- Digital Pressure Gauge
- Pressure Chart Record
- Pressure Transmitter
- Pressue Switch

#### **EXPECTED PARTICIPANTS**

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







JRPM

#### **OBJECTIVES OF PRESSURE 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: Pressure 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





Theoretical training on the basics of the subject.

- Pressure Laboratory

#### **WORKSHOP & TEAM EXERCISES**

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

- Pressure Laboratory

#### **GRADED EXERCISE**

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

- Pressure Laboratory

#### **FINAL EXAMS**

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



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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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



# **CONTACT US**

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