



Jayasree Reva Phoenix Metrology Pvt. Ltd.

Calibration | Inspection | Testing | Training | Services

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



Hardness Machine Metrology | Training Brochure

INTRODUCTION

We use imported blocks for calibrating hardness testing machine to get accurate results and better uncertainty. Apart from the indirect calibration of hardness testing machines by means of reference blocks, also a direct method can be applied for calibration. In this case, the test force, the indenter, the depth-measuring device and the testing cycle have to be calibrated.

COURSE FEATURES

Training course covers the following contents:

- Practical & Theoretical Training of Hardness Machine Calibration
- Specific Criteria & Guidelines Hardness Machine 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



Rockwell Hardness Machine



Brinell Hardness Machine

TRAINING MATERIAL



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

PRINCIPLE | THEORY

The Rockwell hardness test is one of several common indentation hardness tests used today, other examples being the Brinell hardness test and Vickers hardness test. Most indentation hardness tests are a measure of the deformation that occurs when the material under test is penetrated with a specific type of indenter.

CALIBRATION RANGE

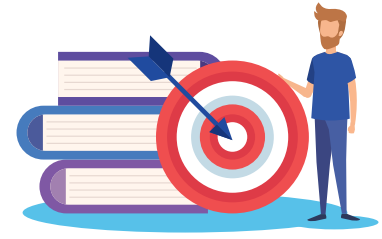
- Rockwell Hardness Testing Machine
- Micro Vickers Hardness Testing Machine
- Vickers Hardness Testing Machine
- Brinell Hardness Testing Machine
- Portable Leeb Hardness Testing Machine
- Shore Hardness Tester (Durometers)

EXPECTED PARTICIPANTS

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



OBJECTIVES OF HARDNESS 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: Hardness Machine 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.

- Hardness Machine Laboratory



WORKSHOP & TEAM EXERCISES

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

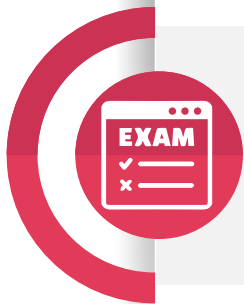
- Hardness Machine Laboratory



GRADED EXERCISE

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

- Hardness Machine 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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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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