



Jayasree Reva Phoenix Metrology Pvt. Ltd.

Calibration | Inspection | Testing | Training | Services

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



Impact Machine Metrology | Training Brochure

INTRODUCTION

Charpy | Izod impact testing is a method for measuring the impact resistance and toughness of materials. The Charpy | Izod impact test involves striking a notched specimen with a pendulum, and measuring the amount of energy absorbed by the specimen as it fractures. This test is commonly used in the manufacturing industry to determine the impact resistance of materials, such as metals, plastics, and composites.

COURSE FEATURES

Training course covers the following contents:

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



Charpy Impact Testing Machine



Izod Impact Testing Machine

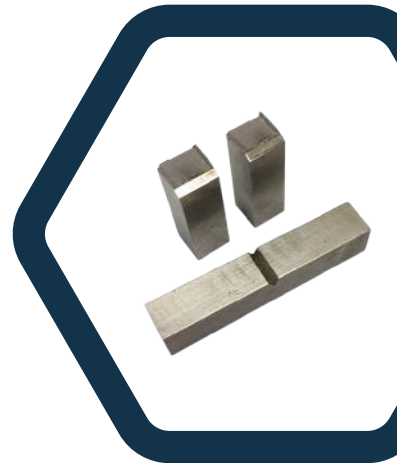
TRAINING MATERIAL



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

PRINCIPLE | THEORY

There are two types of tests to measure the impact value of a material that is Izod impact test and the Charpy impact test. Both the tests work on the same principle yet work on the different notches. Many industries use either of the test methods to analyze the material strength. These tests evaluate the amount of energy required or absorbed by the specimen when a weighted pendulum or hammer hits them. The calculated energy explains the measure of the toughness of the specimen. Both the testing machines work on the pendulum principle.



CALIBRATION RANGE

- Charpy Impact Testing Machine (0 to 300 J)
Direct & Indirect verification as per (ISO 148-2 / ASTM E23 / IS 3766 / BS 131-Part 4)
- Izod Impact Testing Machine (0 to 168 J)
Direct verification as per (ASTM E23 / IS 3766 / BS 131-Part 4)

EXPECTED PARTICIPANTS

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



OBJECTIVES OF IMPACT 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: Impact 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.

- Impact Machine Laboratory



WORKSHOP & TEAM EXERCISES

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

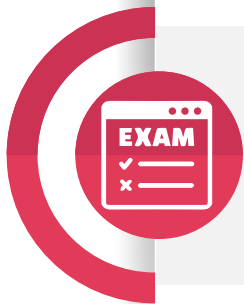
- Impact Machine Laboratory



GRADED EXERCISE

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

- Impact 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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