Basic Dimensional Measurement Tools

Before workers can contribute to any measurement-based improvement efforts, they must be proficient in using and reading basic measuring devices. This program is a practical, efficient way to build workers’ skills and knowledge. Basic Dimensional Measurement Tools and Methods builds a solid foundation of skills that workers can use across a broad spectrum of applications. It forms the basis for mastering more advanced measuring tasks to ensure that you’ll get the most accurate measurements possible. With this program, workers will master the essentials of handling, applying and reading the most common gages on today's shop floors from steel rules to micrometers and height gages.

Who should attend: Production workers, Machine operators, and Inspection personnel

LEARNING OBJECTIVES

• INTRODUCTION - Introduction and key concepts
  o Variable and Attribute Measurements
  o Other Types of Measurements
  o 10:1 Rule
  o Temperature, Uncertainty, Unnecessary Accuracy
  o Gage Correlation
  o Gage Maintenance, Handling and Storage and Tool Care
  o Gage Selection Chart

• Fundamentals and Linear Tools
  o Key terms and concepts
  o Criteria for accurate measurements
  o Rules - steel, hook, bevel protractor, basic depth gages
  o Use of depth gages, inside and outside calipers, dial calipers and electronic calipers

• Micrometers and Dial Indicators
  o Outside, inside, vernier and electronic micrometers
  o Types of dial indicators
  o Dial indicating gages - calipers, depth gages

• Fixed Gages
  o Snap gages
  o Plug gages
  o Ring gages
  o Screw thread plug gages
  o Thread ring gages

• Surface Plate Equipment
  o Surface plate equipment
  o Gage blocks
  o Height gages - vernier, dial, electronic
  o Micrometer height gages
  o Surface plate accessories

• Miscellaneous Equipment
  o Surface Roughness Testers
  o Shape and Profile Measurement
  o Laser Designed Gaging
  o Optical Comparators

Hours: 16hrs  CEUs: 1.6
Location: Central Campus
Days: Wed & Thurs
Times: 8a.m. – 5p.m.
Date: TBD
Cost: $725 (Material Incl)

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