Industrial Mechanical Skills

Industrial Mechanical Skills is a two-week course designed to teach the basic concepts of mechanical equipment. All maintenance personnel from apprentice level to journeyman are encouraged to attend this course as it will provide them with the terminology and understanding of mechanical equipment basics and equipment interaction.

I. Piping Systems
   - Terminology
   - Safety
   - Piping Identification
   - Symbology

II. Piping Tools
   - Basic Tools
   - Pipe Bending

III. Piping and Tubing
   - Metal Piping
   - Forged Pipe
   - Welded Pipe
   - Non-metallic Piping
   - Tubing

IV. Fittings
   - Welded Connections
   - Flanged Connections
   - Threaded Connections
   - Joint Preparation

V. Valves
   - Valve Characteristics
   - Valve Types
   - Valve Operators
   - Valve Actuator Terms
   - Steam Traps

VI. Pumps
   - Terminology
   - Centrifugal
   - Positive Displacement

VII. Components
   - Expansion Joints
   - Moisture Separators
   - Lubricators
   - Temperature Measuring
   - Flow Measuring
   - Pressure Measuring

VIII. Brazing and Welding
   - ASME Section IX
   - Welding Processes
   - Welding Equipment
   - Brazing and Cutting

IX. Pipe Supports
   - Design
   - Hanger Types
   - Snubbers

X. Insulation
   - Principles of Insulation
   - Types of Insulation
   - Installation
XI. Alignment Fundamentals

- Types of Misalignment
- Causes of Misalignment
- Effects of Misalignment
- Misalignment Indications
- Alignment Tools