

# ASME Codes & Standards

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## What we do

- Develop, maintain, and promote the use of ASME codes, standards, and conformity assessment programs world-about involving diverse participants whose expertise will result in the best codes, standards, and conformity assessment programs for the well being of humanity.

# Background

- Vision Statement: To be the world leader in codes, standards, and conformity assessment programs associated with mechanical engineering
- First code published in 1884
- First accreditation mark issued in 1914
- 600 Technical Codes and Standards
- 13 Conformity Assessment Programs

# Council on Codes and Standards

Board on  
Standardization

Board on  
Pressure Technology

Board on  
Performance Test Codes

Board on Safety  
Codes and Standards

Board on Nuclear  
Codes and Standards

Board on  
Conformity Assessment

# Standardization

- Dimensional standardization
- Drafting, symbols, abbreviations
- Metric standards
- Measurement standards  
[limits & fits, metrology, flow, etc]
- Examples
  - Y14.5M – Dimensioning and Tolerancing
  - MFC – Measurement of Fluid Flow in Closed Conduits
  - B1.1 – Screw Threads

# Pressure Technology

- Structural integrity
- New construction
- Boilers, pressure vessels, piping, valves
- Adopted by laws and regulations
- Related accreditation programs
- Post construction issue
- Examples
  - Boiler and Pressure Vessel Code
  - B31.3 – Process Piping
  - B16.5 – Pipe Flanges and Flange Fittings

# Performance Test Codes

- Performance testing of mechanical equipment (preservice and inservice)
- Performance monitoring
- Emphasis on accuracy and precision
- Utility and power industry codes
- Environmental codes
- Examples
  - PTC 22 – Performance Test Code on Gas Turbines
  - PTC 19.1 – Test Uncertainty
  - PTC 50 – Fuel Cell Power Systems Performance

# Safety

- Elevators, escalators, cranes, industrial trucks, etc.
- Adopted by laws and regulations
- Related accreditation program
- Examples
  - B30.3 – Construction Tower Cranes
  - B56.1 – Safety Standard for Low Lift and High Lift Trucks
  - A17 – Elevators and Escalators



# Nuclear

- Commercial power generation
- New construction
- Inservice inspection, operation and maintenance
- Adopted by laws and regulations
- Related accreditation programs

# Conformity Assessment

- 8 accreditation programs
- 5 certification programs
- ISO 9000 registration program

# ASME Codes and Standards

- Authorized Inspection
- Automotive Lifting Devices
- Boilers
- Chains
- Compressors
- Conveyors
- Cranes and Hoists
- Drawings and Terminology
- Elevators and Escalators
- Fasteners
- Flow Measurement
- Gauges
- High Pressure Systems
- Industrial Trucks
- Keys
- Machine Guarding
- Manlifts
- Metric System
- Nuclear Power
- Operator Qualification and Certification
- Pallets
- Performance Test Codes
- Piping
- Plumbing Products
- Pressure Vessels
- Pumps
- Reinforced Thermoset
- Screw Threads
- Steel Stacks
- Storage Tanks
- Surface Quality
- Tools
- Turbines
- Valves, Fittings, Flanges

# Consensus Process

- Transparency and Openness
- Balance of Interest
- Due Process

# ASME Boiler and Pressure Vessel Code

- Adopted by US State and Local Laws
- Canadian Provincial Laws
- US Code of Federal Regulations
  - U.S. Coast Guard
  - U.S. DoT Research and Special Programs Administration
  - Nuclear Regulatory Commission
  - Occupational Safety and Health Administration
- Also referenced by
  - U.S. Department of Defense
  - U.S. General Services Administration
  - U.S. Department of Energy
  - U.S. National Aeronautics and Space Administration
- Accepted in over 80 countries

# International Usage & Distribution

- ASME Codes & Standards are purchased directly by users in over 100 countries
- Translations – Chinese, French, German, Japanese, Portuguese, Russian, Spanish
- Boiler and Pressure Vessel Code International Sales
  - 25% - 1992 Cycle
  - 32% - 1995 Cycle
  - 39% - 1998 Cycle
  - 44% - 2001 Cycle

# Examples of Use for Mechanical Engineering Students

- This booklet contains eight articles that show different topics of ASME Codes and Standards
- Includes a section “Codes and Standards at a Glance”
- Distributed to 445 ASME Mechanical Engineering and Engineering Technology student sections

# ASME Professional Practice Curriculum

- Help engineering students and early career engineers become better prepared to enter the engineering profession and develop in their early years of practice
- Provide universities a tool to raise student awareness of issues, roles, and responsibilities of professional practice



Visit us at  
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Welcome

■ The ASME Professional Practice Curriculum

Module Title	Student Edition	Professional Edition
Studying Engineering	✓	✓
<u>Graduate Studies</u>	✓	✓
<u>Introduction to an Engineering Career</u>	✓	✓
<u>Mechanical Engineering and Multidisciplinary Thinking</u>	✓	✓
Dispersed Teaming		✓
<u>Engineering Ethics</u>	✓	✓
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Innovations	✓	✓
<u>Business Incubators</u>	✓	✓

Module Title	Student Edition	Professional Edition
<b>Project Management Series</b>		
<u>Project Management</u>	✓	✓
Project Scheduling		✓
Project Budgeting		✓
<u>Contracting Organizations and Options</u>		✓
<b>Product Lifecycle Management Series</b>		
<u>Product Planning</u>		✓
<u>Product Development</u>		✓
<u>Product Management</u>		✓

# Benefits of ASME Codes and Standards

- Enhance public safety
- Provide standardization for interchangeability
- Facilitate international trade
- Lessen the burdens of governments

# Q & A

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