



ASME's Impact on Global Safety

84th General Meeting of the National Board

Bernard E. Hrubala, Governor

ASME
SETTING THE STANDARD

Contents

- The Beginning
 - When & Why
- The Outcome
 - Results “Global Out Reach”
 - Impact
- The Future

ASME Codes & Standards

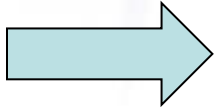
Vision

- Develop the best, most applicable codes, standards, and conformity assessment programs in the world for the benefit of humanity.

Mission

- Involve the best and the brightest people from all around the world to develop, maintain, and promote the use of these ASME products and services world about.

Contents



- The Beginning
 - When & Why

- The Outcome
 - Results “Global Out Reach – Impact”
 - Changes

- The Future

ASME Standards and Certification

- 1884 First Standard Issued
- 1914 Boiler Code
- 1916 Stamping for boilers started in United States and Canada

- TODAY
 - 50 Consensus Committees
 - 700 Committees
 - 6 Supervisory Boards
 - 500 + Standards

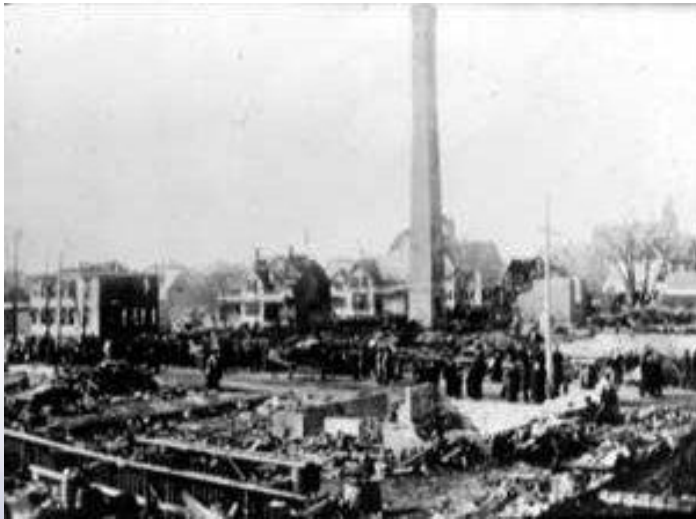
ASME Codes and Standards

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

Safety

- Industrialization
 - Increase in mechanization led to an increase in accidents
- Boiler Explosions
 - Steamship Sultana: Boiler explosion killed approximately 1800 people
 - 1200 people were killed in the U.S. between 1898 and 1903 in ~1900 separate explosions
 - 58 killed in the 1905 fire tube boiler explosion in Brockton, Massachusetts

Safety



1st National Board General Meeting 1921

Three Objectives/Principles

1. One uniform code of rules
2. One Stamp
3. One standard of qualification and examination

Prior to 1970

- Only manufacturers in U.S. and Canada
- Certificates of Authorization & Stamps
 - ✓ Inspection agreement
 - ✓ AI employed by State or Municipality or U.S. or Canadian Province, or Insurance Company.
 - ✓ AI qualified by examination under the rules of any State or Province of Canada that has adopted the Code
 - ✓ A report was also required from State or Province indicating that the manufacture is qualified

The Beginning

July 22, 1970 USA vs. ASME and National Board

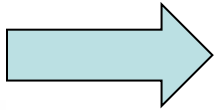
- First non-profit organizations challenged for violating the Sherman Antitrust Act (1890)
- Barrier to Trade – Excluded Manufactures outside USA

June 13, 1972 Consent Decree

- Required ASME and NB to make stamps available to foreign manufactures who meet the same safety and technical requirements as US manufactures.
- Required NB to accept data reports.

Contents

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Challenges Ahead

- Develop process and procedures for enabling foreign manufactures obtain certification
 - Authorized Inspection Agencies
 - National Board
 - Review and Survey Teams

Drivers

- Inherent desire for safety
 - ✓ Owners and Users
 - ✓ Government (rules and regulations)

ASME's Established Principles

- Openness
- Transparency
- Impartiality
- Relevance
- Consensus
- Consistent with Principles of WTO Technical Barriers to Trade Agreement

Impact

- A means of meeting jurisdictional and regulatory safety objectives on a global basis
 - ASME Standards accepted in over 100 countries as a means of meeting regulatory requirements.
- BPVC facilitates trade and conduct of business
- Provides a means for enterprises of any size and geographic location to equally compete in a global market environment
- Leading code across an array of industries throughout the world

Economic Impact

The international language of commerce is standards. Adherence to agreed-upon product or service specifications underpins international commerce, enabling trillions of dollars of goods to flow across borders, regardless of the spoken language of any business parties. The common acceptance of standards is fundamental to the success of robust, fair, and free trade. Without standards, it would be difficult to imagine the tremendous volume and complexity of international trade.”

Donald L. Evans, Secretary of Commerce
from Standards and Competitiveness:
Coordinating for Results (2004)

Results

- Referenced in national regulations of:
 - India
 - Nigeria
 - South Africa
 - Colombia
- Current translations by others in Chinese, French, Japanese, & Korean
- ASME Spanish version of Section I

Adoption of ASME Standards

- U.S. State and Local Laws
- Canadian Provincial Laws
- U.S. Code of Federal Regulations
 - Coast Guard
 - Dept of Transportation
 - Nuclear Regulatory Commission
 - Occupational Safety and Health Administration
 - Department of Defense
 - General Services Administration
 - Department of Energy
 - National Aeronautics and Space Administration

International Participation

- 5075 standards committee members
- 15% are from outside the U.S.
- Over 50 countries are represented

International Participation

- Individual Experts/Members
- Delegate Program
 - Allows international participants who have travel and language barriers to access the ASME standards system
 - Groups of experts nominate an individual with English skills as their Delegate, representing their interests
 - 20 Delegates [Australia, China (2), Germany (1), India (2), Italy (7), Japan (3), Korea (3), UK]

International Participation

- Contributing Member Program
 - Developed to allow international participants who have travel and English skills to access the ASME standards system
 - Experts are appointed to committees associated with their expertise and interests
- International Interest Review Group
 - Provides access to the ASME committee process for representatives of regulatory authorities that accept ASME standards as a means of meeting their regulatory requirements

International Participation

- International Working Group
 - Engages participation of members in a common geographic location who would otherwise be unable to meet the attendance expectations of committees that meet principally in the U.S. and Canada.

International Participation

- International Working Groups
 - Have all privileges and benefits of ASME standards committee participation.
 - Have C&S Connect accounts and “full” member access.
 - Vote on IWG proposals and administrative matters.
 - Are required to vote when the IWG is included on a ballot distribution.
 - Are permitted to comment when the IWG is included in Review & Comment distributions.

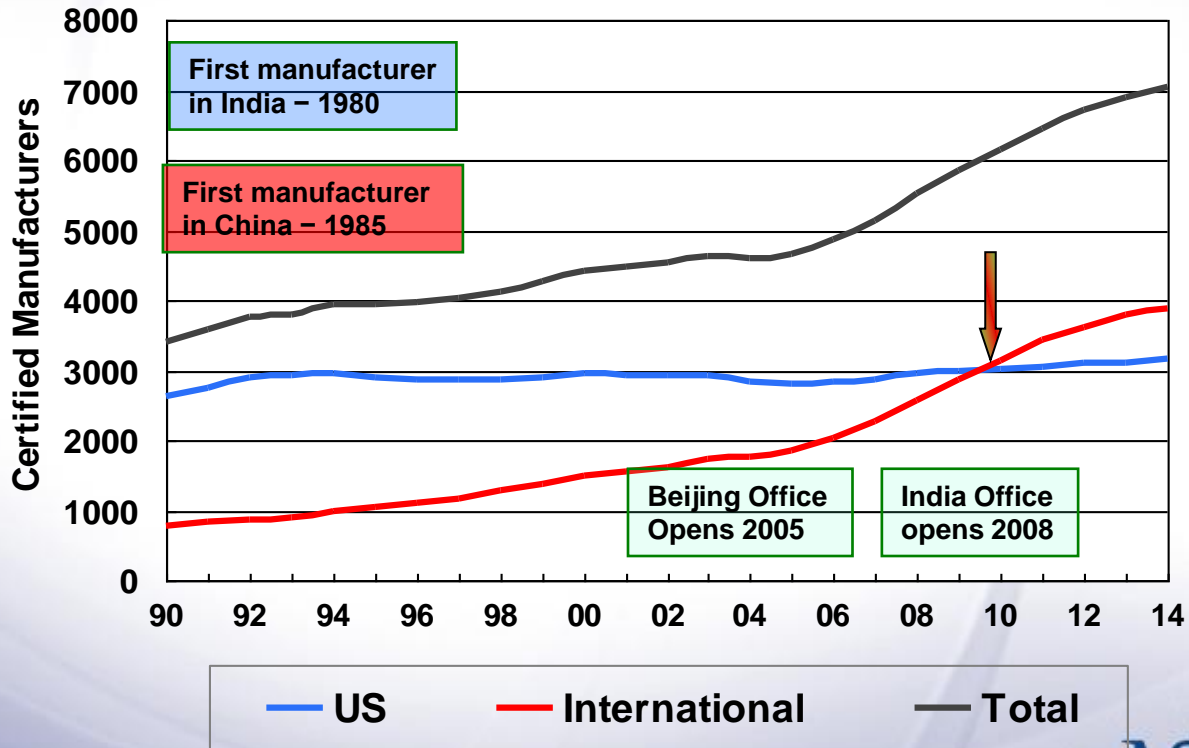
Current IWGs

- Korea - Section III
- China - Sections II and III.
 - Sections VIII and XI (being considered)
- Germany Section III
- India - B31 Standards (B31.1, B31.3, B31.4, B31.8, & B31Q)
 - Section III (being considered)
- Italy – Section VIII

Typically the groups meet prior to Code Week or committee meetings several times per year. Local support from industry associations, research institutes and regulatory authorities whose experts populate the Groups.

Global Impact

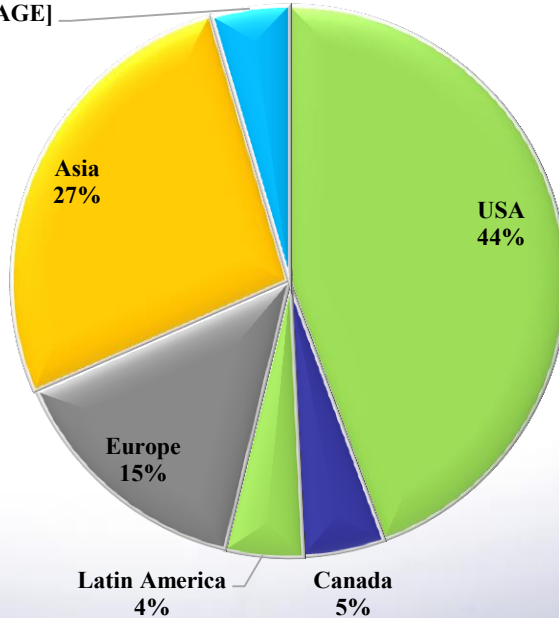
Certified Boiler & Pressure Vessel Manufacturers



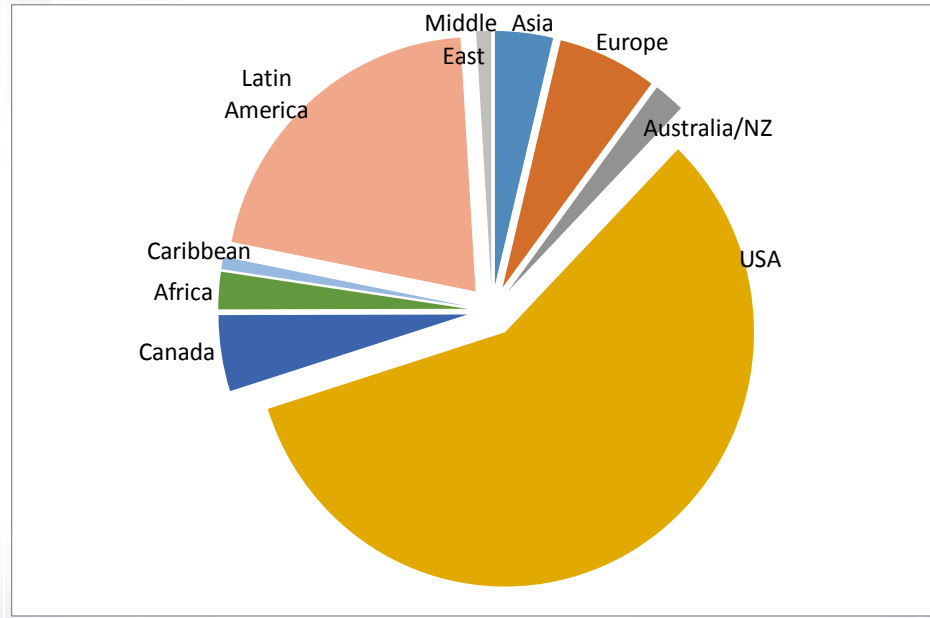
Global Impact

Certified Boiler & Pressure Vessel Manufacturers

[CATEGORY
NAME]
[PERCENTAGE]



ASME Training Global Reach



Over 8,000 Participants
from over 100 countries

National Board – International

Endorsements

- Eight Countries
 - ✓ 726 A
 - ✓ 245 B
 - ✓ 197 N
 - ✓ 53 NS

Total all Endorsements 1,993

11 Classes outside USA since 2010

National Board – International

Repair Stamps

- Sixty-One Countries

Top Five

India	118
Mexico	105
UAE	101
Italy	48
KSA	48

First issue December 1975

Total Active 1079

Change and Impact

- 1972 - France 1st Manufacturer certification outside NA
- 1973 – UK 2nd Manufacturer certification outside NA
- 1973 - Guide for evacuation from stalled elevators
- 1973- ASME Committee on Qualifications for Authorized Inspection
- 1983 - Metric Units
- 1991 - Binational elevator and escalator electrical standard with CSA
- 1992 - First Authorized Inspection Agency accredited

Change and Impact

- 1995 - Qualifications for Authorized Inspections QAI-1
- 1999 - C&S voted 1 of 10 engineering feats that advanced the quality of life over last 100 years
- 2007 - Binational Code (A17.1/CSA B44.7)
- 2007 - Performance based design code (A17.7/CSA B44.7)
- 2009 - Authorized Inspection Agency qualifications expanded to Third Party Inspection Organization
- 2011 - Single Mark

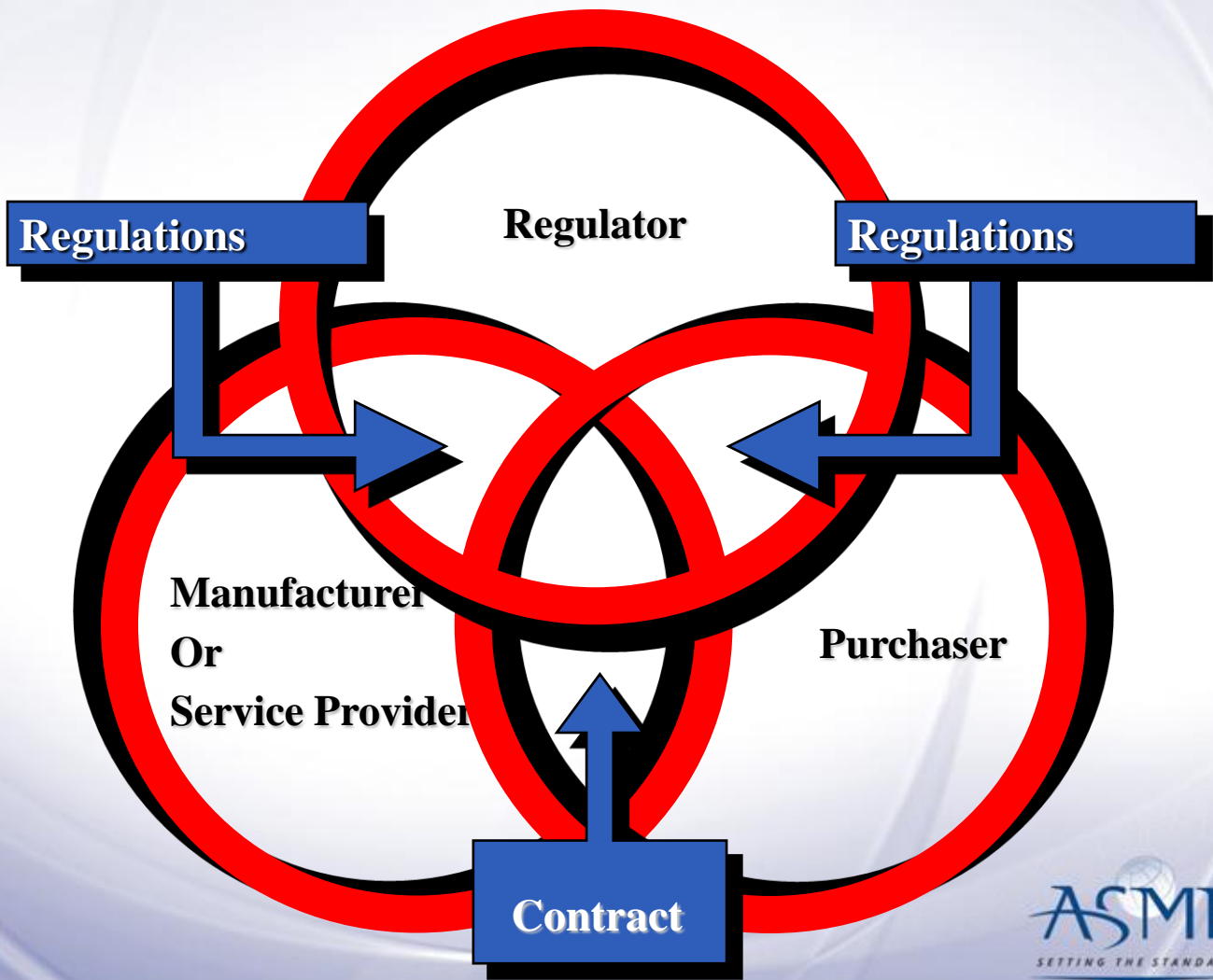
Regulations

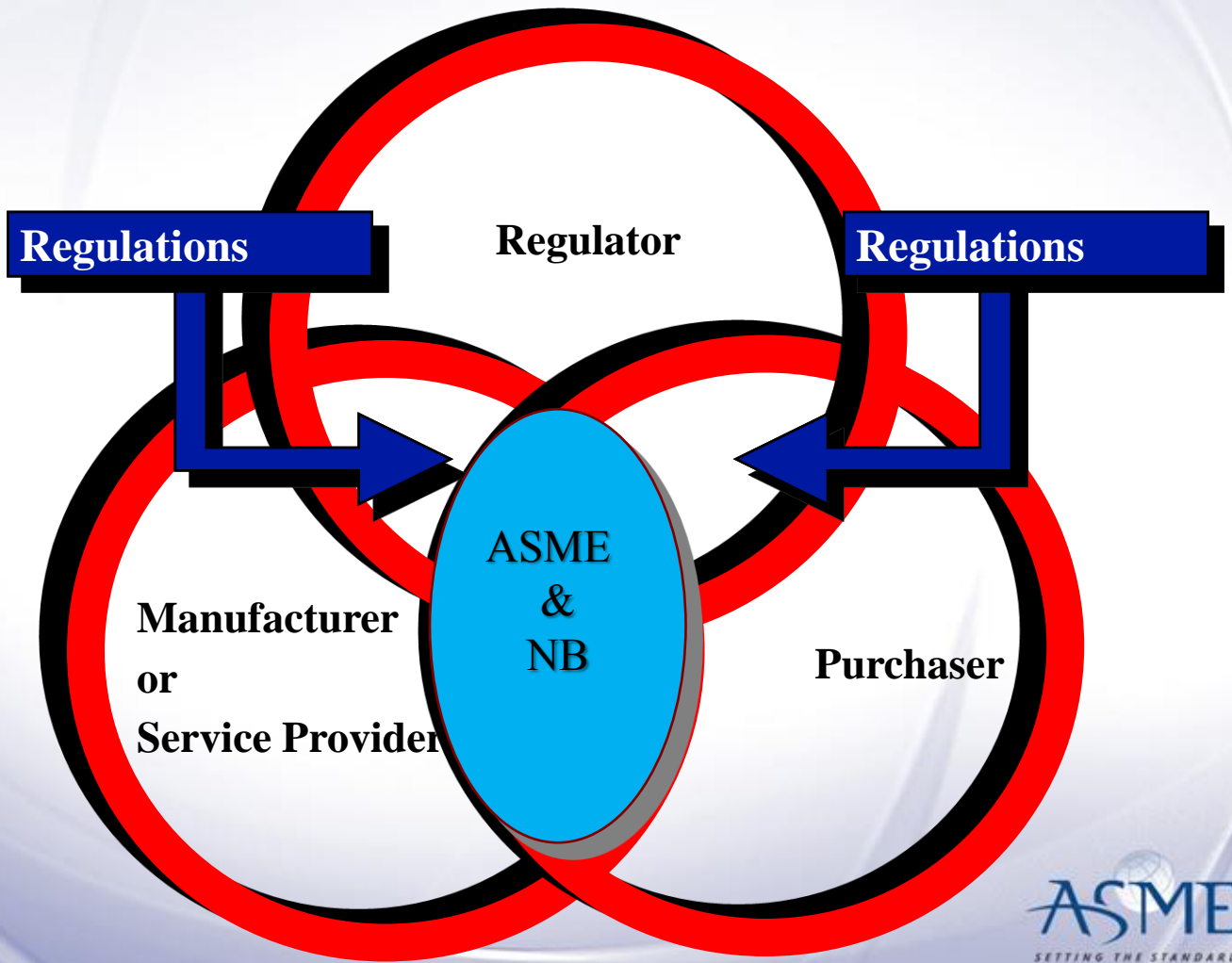
Regulator

Regulations

**Manufacturer
Or
Service Provider**

Purchaser





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The Future

Future

ASME will deliver locally relevant engineering resources to advance public safety and quality of life throughout the world.

Specifically, ASME will provide locally relevant standards, certification, technical information, and networking for business, government, academia and practicing engineers to positively impact the quality of life throughout the world.

Future – Adaptive and Responsive

- To easily integrate geographic variations – language, materials, etc.
- To be on the forefront of technological advances
- To technically alignment with other national codes
- To engage stakeholders involvement and contributions

Future

“ Only time will tell whether or not the steps we have and are taking today, will hold up as well and serve the industry as well as the decisions by our predecessors”

April 25, 1972

Leonard P. Zick



SETTING THE STANDARD

Just For Fun





NATIONAL BOARD
INSPECTORS SCHOOL
COLUMBUS, OHIO
ADVANCED TRAINING COURSE
OCT. 7 - 16 1979



AUTHORIZED INSPECTOR SUPERVISOR (B) COURSE
National Board of Boiler and Pressure Vessel Inspectors
March 19, 2015



SETTING THE STANDARD
