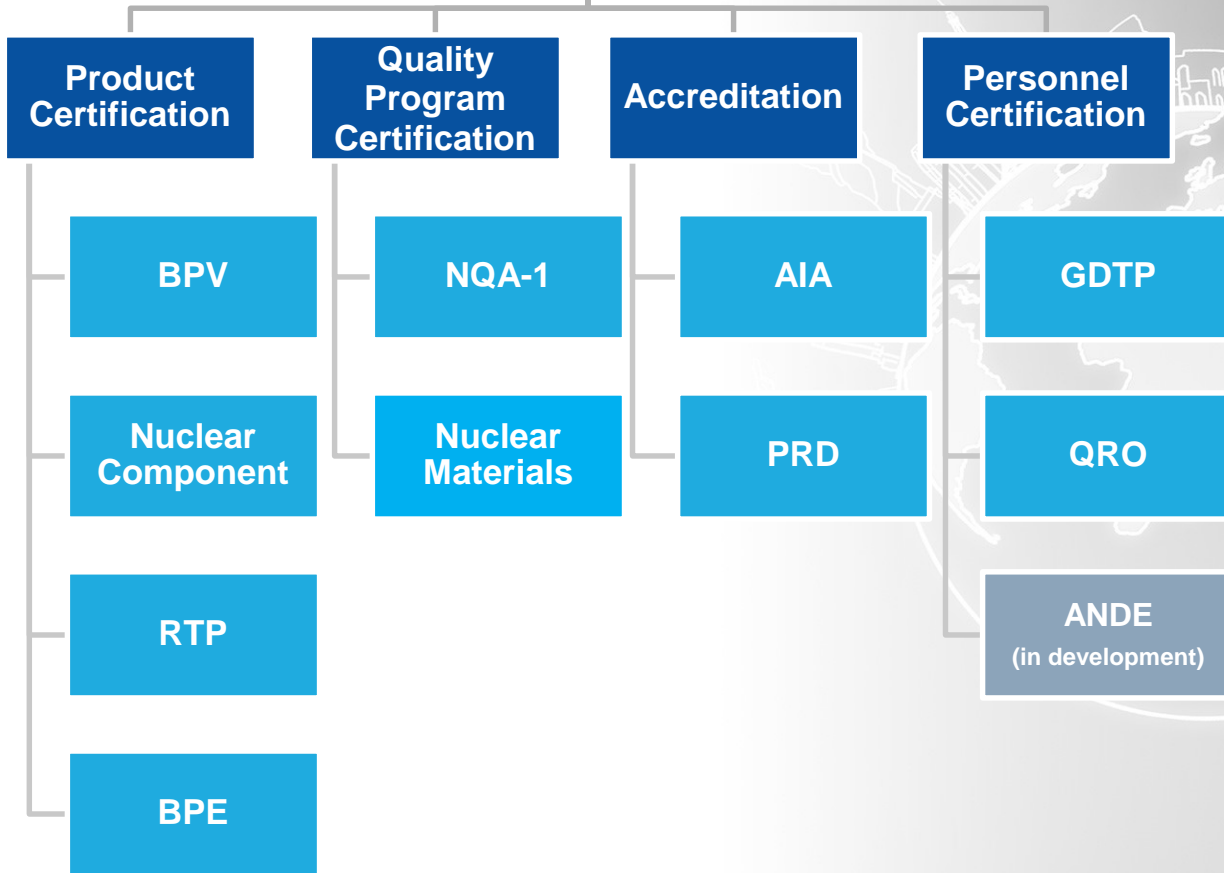


# ASME's Certification & Accreditation Programs



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# Conformity Assessment Programs



# ASME Accreditation Programs

# Authorized Inspection Agencies

Accredited Authorized Inspection Agencies (AIAs) are responsible for performing inspections during the manufacturing/fabrication of ASME pressure equipment for certificate holders.

- Jurisdictional Authorities
- Insurance Companies
- Independent Third-Party Inspection Organizations

# Authorized Inspection Agencies

- Third-party inspection has been required by the ASME Boiler & Pressure Vessel Code since its inception
- Requirements defined in the ASME QAI-1 Standard for Authorized Inspection and RCI-1, Rules for Commissioned Inspectors
- AIAs required to be accredited by ASME since 1992 for nuclear applications and 1997 for boilers and pressure vessels



# Pressure Relief Devices Testing Laboratories Accreditation (PRD)

Accreditation for laboratories that perform capacity certification tests of pressure relief devices manufactured in accordance with the ASME Boiler and Pressure Vessel Code (BPVC).

# ASME Product Certification

# Product Certification

Provides companies the ability to certify their products.

Certificate holders may:

- Increase the quality and safety of their products.
- Enable business in the global marketplace.
- Achieve production efficiencies.
- Use an ASME Certification Mark on their product.





# Boiler & Pressure Vessel (BPV) Certification

Conforms to the rules governing the design, fabrication, assembly, and inspection of boiler and pressure vessel components during construction.

# Boiler & Pressure Vessel Certification Offerings

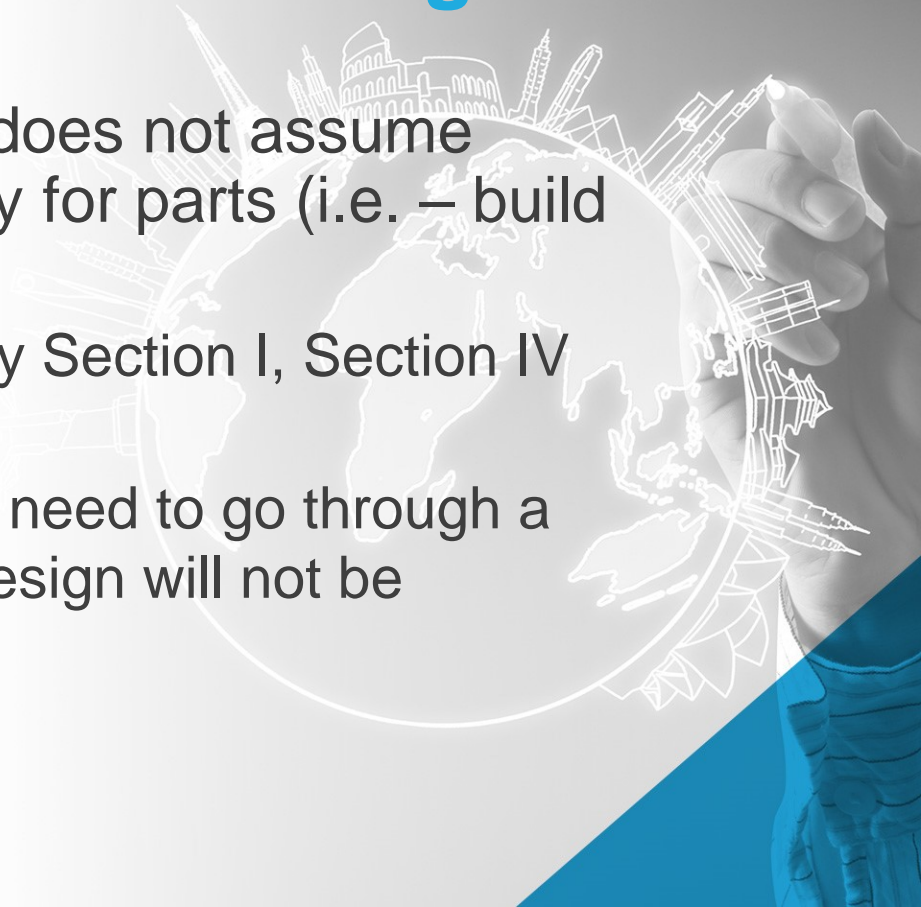
- Section I – Power Boilers
- Section IV – Heating Boilers
- Section VIII – Pressure Vessels
- Section X – Reinforced Plastic Vessels
- Section XII – Transport Tanks

# Boiler & Pressure Vessel Certification History

1916	Certification Program Started
1968	Program changed to be based on QA/QC requirements
1972	Certification first offered internationally
Today	ASME's largest program 6,800+ certificate holders in 75 countries

# Newest Scope – PRT Designator

- PRT Manufacturer does not assume design responsibility for parts (i.e. – build to print)
- Currently approved by Section I, Section IV and Section XII
- Manufacturer will still need to go through a Joint Review – but Design will not be implemented



# Boiler & Pressure Vessel Certification

*“Being certified by ASME has helped my company sustain growth in a challenging manufacturing economy by enabling us to provide better engineered products for the transportation industry.”*

UV Doron  
President, Exosent Engineering



# Boiler & Pressure Vessel Certification

*“When I interact with others in the field, use of the ASME mark means that we will speak the same language, have the same technical basis, and all points are clearly defined.”*

Christophe Saul

Head of Design, Körting Hannover AG  
GERMANY

# Nuclear Component Certification

Conformity Assessment Program recognizing a company's capability to meet and fulfill the specific requirements of Section III of the ASME Boiler and Pressure Vessel Code for items installed in nuclear facilities.

# Nuclear Component Certification

## Scope of Code Activities

<b>N</b>	Construction of vessels, pumps, valves, piping systems, storage tanks, core support structures, concrete containments, and transport packaging
<b>NA</b>	Field installation and shop assembly of parts and components
<b>NPT</b>	Fabrication of parts, appurtenances, welded tubular products, and piping subassemblies
<b>NS</b>	Fabrication of supports
<b>NV</b>	Construction of pressure relief valves
<b>N3</b>	Construction of transportation and storage containments
<b>OWN</b>	Authorization for the Owner of a Nuclear Facility to prepare and file the data report on the completed pressure retaining system.

# Quality Assurance Program Certificates

- Issued to an organization that has documented a Quality Assurance Program and whose ability to staff, equip, or otherwise implement the described Quality Assurance Program has been evaluated and accepted by ASME.
- Implementation of the program is not required.
- Can convert to Certificate of Authorization and issued a stamp after a successful implementation audit.

# Nuclear Component Certification

*“The ASME Certificates and Certification Mark provides a recognized level of assurance to customers and regulators that the Quality Assurance Program and products meet an industry standard of excellence.”*

Lisa Plante  
Supervisor, Quality Systems,  
Westinghouse Electric Company





# RTP Certification

Conformity Assessment Program recognizing a company's capability to meet and fulfill the specific requirements of the ASME RTP-1 Standard, "Reinforced Thermoset Plastic Corrosion-Resistant Equipment"

# Bioprocessing Equipment (BPE) Certification

Conformity Assessment Program recognizing a company's capability to meet and fulfill the specific requirements of the ASME BPE Standard, "Bioprocessing Equipment."

# Bioprocessing Equipment (BPE) Certification

- Equipment used in bioprocessing, pharmaceutical, and personal care product industries as well as other applications with relatively high levels of hygienic requirements.
- Certification current limited to manufacturers of tubing and/or fittings.
- Program will be expanded to include additional components.

# Bioprocessing Equipment (BPE) Certification

- Voluntary Certification Program
- Developed to address the problems industry had with weldability, fit and finish.
- QA Program Requirements are addressed in Part CR-Certification.
- Required Codes/Standards
  - BPV Section V, Nondestructive Examination
  - BPV Section IX, Welding, Brazing, and Fusing Qualifications
  - B31.3 Process Piping
  - CA-1 Standard Conformity Assessment Requirements
- The certificate is valid for a 5 year period.
- 2 Interim Audits are performed during the certification period.
- Authorizes the Certificate Holder to Apply the Certification Mark through Designated Oversight by a Certified Individual.

# Bioprocessing Equipment (BPE) Certification

*“For our company’s growth, it was important that we were able to demonstrate the quality of our entire organization—supply chain, production, engineering, quality assurance—and certification from ASME was a clear choice.”*

Gilad Norman  
Sales & Marketing Manager, EGMO  
Israel



# **Quality Program Certification Programs**



# Nuclear Material Organization Certification

Conformity Assessment Program recognizing a material organization's capability to meet and fulfill the specific requirements of Section III of the ASME Boiler and Pressure Vessel Code (BPVC) for materials used in nuclear components.

# Nuclear Material Organization Certification

Quality System Certificates (QSC) are issued to recognize a material organization's capability of manufacturing and supplying material to N-type Certificate Holders.

- Bars, fasteners, castings, forgings, plates, fittings, flanges, tubular products
- Wire, rod, billets, ingots
- Welding material
- Concrete reinforcing bars, prestressing components

# Nuclear Material Organization Certification

*“Being certified by ASME helps Yingliu Group to enhance our quality management and expand our nuclear business.”*

Anhui Yingliu Group  
Mount Holyoke Casting Co. Ltd.  
Anhui, China

# Nuclear Quality Assurance (NQA-1) Certification

Conformity Assessment Program recognizing a company's capability to implement a Quality Assurance Program in accordance with the ASME NQA-1 Standard for the supply of items or services that provide a safety function for nuclear facilities.



# Nuclear Quality Assurance (NQA-1) Certification

- Voluntary program
- Certificate valid for 3 years
- 2 interim audits required during the 3-year certification

## Benefits

- Fairness and Impartiality
- Provides confidence in the technical integrity of the product or service
- Meets the regulatory and market needs of regions to facilitate international trade

# Nuclear Quality Assurance (NQA-1) Certification

*“We have been able to secure millions of dollars in contracts based solely on our company having an NQA-1 Certificate. Recently we were awarded a contract because one of the requirements was to be NQA-1 Certified by ASME.”*

Doug Sayer  
President and Chairman, Premier Technologies  
Blackfoot, Idaho

# Certification Process

**STEP 1:**  
Preparation  
and  
Application

**STEP 2:**  
Program  
Demonstration

**STEP 3:**  
Issuance of  
Certificate

**STEP 4:**  
Maintenance  
and Renewal

# Step 1: Preparation and Application

- Obtain required standards.
- Enter into an agreement with an Authorized Inspection Agency (if required).
- Prepare the quality program to be compliant with the applicable standards and train personnel to implement that program.
- Go to [go.asme.org/certification](http://go.asme.org/certification) to find specific resource documents and access CA Connect to apply for an ASME Certificate.

## Step 2: Program Demonstration

- Program Manual Review
- Entrance Meeting/Facility Tour
- Implementation
- Team Closed Meeting
- Exit Meeting





## Step 3: Issuance of Certificate

- All open deficiencies issued during the survey must be corrected and addressed within 30 days or as recommended by the ASME survey team.
- Failure to correct and close out these deficiencies within the agreed upon time frame may result in ASME's decision to withhold certification.

## Step 4: Maintenance and Renewal

- Most certificates are valid for three years (BPE = 5 years; H (Cast Iron/Cast Aluminum and UM = 1 year).
- Based on the standard and certification requirements, additional audits may be required.
- At the end of the certification period, certificate holders will receive information about the renewal process.

# CA Connect

- ASME's online system for managing certification and accreditation programs.
- Used to apply for new/renewal certification.
- Provides an easy-to-use way to access existing applications, submit change requests, view invoices, and accept survey/audit dates.
- Faster and easier to use than ever.

[caconnect.asme.org](https://caconnect.asme.org)

# Personnel Certification



# Geometric Dimensioning and Tolerancing Professionals (GDTP)

Personnel certification program recognizing an individual's capability to meet qualifications in accordance with the requirements of the ASME Y14.5 Standard.



# Geometric Dimensioning and Tolerancing Professionals (GDTP)

- Certification Levels:
  - Technologist: No experience required
  - Senior: 5 years of documented experience in the field of GD&T
- Recertification
  - Every 3 years
  - Verification of involvement with GD&T at least 24 of the previous 36 months
- Internationally available

# Geometric Dimensioning and Tolerancing Professionals (GDTP)

- Currently based on the 1994 edition of the Y-14.5 Standard
  - Exam is under development to the 2009 edition.
- Technologist Exam
  - 100-150 questions
  - 4 hours
  - 75 % grade to pass (50% min score in each category)
- Senior Exam
  - 100-150 questions
  - 6 hours
  - 80% grade to pass (50% min score in each category)

The background features a stylized illustration of a hand holding a pen, drawing a globe. The globe is outlined in white and contains faint outlines of various city skylines, including the Colosseum and the Eiffel Tower. The hand is positioned on the right side of the globe, with the pen tip touching the globe's surface. The overall color scheme is blue and white, with a blue geometric pattern in the top-left corner and a blue diagonal band in the bottom-right corner.

# Resource Recovery Facility Operators (QRO)

Personnel certification program  
recognizing an individual's capability to  
perform or direct operations of facilities  
that combust Municipal Solid Waste

# ASME Non-Destructive Examination (ANDE)

Personnel certification program  
recognizing an individual's capability to  
perform non-destructive examination  
and quality control inspection in  
accordance with the ANDE-1 Standard.

# ASME Non-Destructive Examination (ANDE)

- Developed based on industry concerns that NDE continues to demonstrate considerable **inconsistent performance** in both round robin studies and as experienced by industry in the **failure to detect** or properly identify material degradation conditions.
- In many cases, flaws have been missed resulting in **component failure** in operating plants.



# ASME Non-Destructive Examination (ANDE)

- Develop training, experience and assessment requirements through job task analysis (JTA) with subject matter experts (SME) to achieve:
  - Standard descriptive experience requirements
  - Centralized written examination database
  - Standard performance-based practical examinations with realistic flawed samples simulating field conditions

# ASME Non-Destructive Examination (ANDE)

- Launched ANDE-1 Standard in November 2015
- Requires written and practical assessments
  - Ultrasonic (UT) written exam is schedule to launch in summer 2016
  - Practical exam will launch following the written exam
  - Demonstrated proficiency
- Visit [go.asme.org/ANDE](http://go.asme.org/ANDE) for updates on program status and more information

**Questions?**

**Thank you!!!**

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