Module B - Process
Revised in entirety to conform with revised C&S Policy 20, Policy on Conformity Assessment. Revised to remove details on individual programs.

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B9. ASME Conformity Programs
Objectives

This submodule will describe ASME’s conformity assessment programs.
AGENDA

I. Conformity Assessment
II. Accreditation
III. Certification
IV. Registration
V. Conformity Assessment Program Management
WHY CONFORMITY ASSESSMENT?

• Conformity Assessment Process ensures
  – Products, services, or systems have the required characteristics
  – Characteristics are consistent from product to product, service to service, or system to system
  – Individuals can be evaluated to determine whether they meet the qualification requirements of an ASME standard

The Importance of the Conformity Assessment Process

One of the most important uses of codes and standards is within a conformity assessment process. A conformity assessment process provides a means to ensure that:
Products, services, or systems have the required characteristics
These characteristics are consistent from product to product, service to service, or system to system
Individuals can be evaluated to determine whether they meet the qualification requirements of an ASME standard

This is essential where public health and safety are impacted, as is the case with many of ASME’s standards.
Conformity Assessment

We will be using the definitions for the ISO/IEC 17000 standard. The first edition of ISO/IEC 17000 Conformity assessment — Vocabulary and general principles was published in 2004. While this was their first stand-alone document on the subject, conformity assessment terminology had been included in ISO/IEC Guide 2 for several decades, but in a more limited form. The definitions in Guide 2 were generally accepted internationally, and now the more specific ISO/IEC 17000 terminology and concepts have been gaining increasing worldwide acceptance. It is expected that the ISO/IEC 1700:2004 definitions will be relied upon for future WTO documents.
“First party” is sometimes incorrectly referred to as “self-certification.” This term should be avoided.

An example of “second party” is a company auditing one of its suppliers.

ASME functions in the areas of “third part” conformity assessment.
Accreditation

The ISO/IEC definitions are not particularly straightforward since the ISO format is to have definitions build upon each other. The example here is that the term “attestation” is used in the definition of “accreditation” and then later defined.

The key point regarding accreditation is that it only applies to the attestation of a conformity assessment body (e.g. testing, inspection, or certification body). You cannot “accredit” a manufacturer as we used to do prior to changes made in 2006.
ASME ACCREDITATION

• Applicability
  – Organizations which perform some type of conformity assessment activity

• ASME Accreditation Programs:
  – Inspection organizations (ASME QAI-1 Standard for Qualifications of Authorized Inspection)
  – Organizations that certify elevator inspectors (ASME QEI-1 Standard for Qualification of Elevator Inspectors)
  – Pressure Relief Device Laboratories (PRD)

ASME Accreditation
ASME Accreditation

Accreditation process:
ASME uses on-site reviews by an audit team to determine whether or not an applicant should be accredited.

Formal recognition:
If accreditation is approved, ASME will issue the supplier a Certificate of Accreditation valid for a specified period, ranging from 3 to 5 years.
CERTIFICATION

- Definition (ISO/IEC 17000)
  - third-party attestation related to products, processes, systems or persons

attribution: issuance of a statement, based on a decision following review that fulfillment of specified requirements has been demonstrated

Certification

One of the problems with product certification is that many people view it only in terms of the manner in which it is carried out in the particular circumstances with which they are familiar. There are actually countless different approaches to product certification, each having legitimacy for its own particular application. For example, a certification systems may include any combination of the following elements (see ISO/IEC Guide 67 for further information):

- Testing
- Inspection
- Design appraisal
- Quality system audit
- Licensing of certification marks
- Surveillance of samples from the factory or on the open market
ASME CERTIFICATION

- Types of ASME Certification
  - Product certification
  - Personnel certification
  - Management system certification (registration)
ASME PRODUCT CERTIFICATION

- **Definition**
  - ASME product certification means that the capability to fulfill requirements in the applicable standard by the supplier has been reviewed and accepted by ASME
  
  - The supplier is responsible for ensuring that products meet the requirements on which the certification is based

ISO/IEC Guide 65, *General requirements for bodies operating product certification systems*, defines “supplier” as “the party that is responsible for ensuring that products meet, and if applicable, continue to meet the requirements on which the certification is based,” clearly indicating that this is not the responsibility of product certification body.
These programs used to be referred to as accreditation programs.
Certificates of Authorization are used in the boiler and pressure vessel (non-nuclear), nuclear components, and reinforced thermoset-plastic tanks (RTP) because ASME marks are applied to certified equipment.

In the nuclear materials program, no mark is used so a Quality System Certificate is issued. The nuclear components program also has a provision for the issuance of a Quality Program Certificate where no mark is used.
ASME PERSONNEL CERTIFICATION

• Definition
  – ASME personnel certification means that an individual’s qualifications have been reviewed, proficiency has been demonstrated, and the individual has been accepted by ASME as meeting all requirements of an ASME Standard.
  – ASME Certification is not intended as an assertion or implication that ASME accepts any responsibility for the compliance, or liability for the consequences of noncompliance, of any individual’s performance under the issued certification. Such responsibility and liability remain with the individual or employer.

Certification should not be confused with “licensing” which is typically a government function.
ASME PERSONNEL CERTIFICATION

- ASME Personnel Certification Programs
  - Municipal waste incinerator operators (QRO)
  - Hazardous waste incinerator operators (QHO)
  - High capacity fossil-fuel fired facility operators (QFO)
  - Geometric Dimensioning and Tolerancing Professionals (GDTP)
ASME Certification (cont’d)

Certification process:
To evaluate whether or not an applicant meets the requirements, ASME will typically determine whether the applicant has the required education or experience and will give an oral or written examination to test the applicant’s knowledge.

Formal recognition:
If ASME approves certification, it will give the applicant a certificate or certification card valid for a period of 3 to 5 years.

Benefits of certification:
In some cases, certification serves as a means of conforming with government regulation, such as those established by the U.S. Environmental Protection Agency (EPA).
In all cases, it shows that an individual has demonstrated his or her competence to perform a certain activity, which may be beneficial to both the individual and employer.
ASME Registration (ASME ISO 9000 Registration)

Applicability:
ASME Registration is actually the ISO 9000 Registration program, in which ASME acts as a “Registrar” for certain companies whose products or services are related to mechanical engineering.

Meaning of registration:
“Registration” is sometimes referred to as “quality system certification.” ISO 9000 Registration certifies that a company’s quality management system meets standards developed by the International Organization for Standardization (ISO).
Pop Quiz #1

Answers:
- Product certification
- Registration (or quality system certification)
- Personnel certification
- Accreditation
Which program(s) review the applicant's quality management system?

- Accreditation
- Product Certification
- Personnel Certification
- Registration

Pop Quiz #2

Answer: a, b, & d
Conformity Assessment Program Management

Board on Conformity Assessment:
ASME conformity assessment activities are supervised by the Board on Conformity Assessment
Conformity Assessment Program Management (cont’d)

Conformity Assessment Committees:
Some CA programs are managed by committees reporting directly to the Board on Conformity Assessment.
Conformity Assessment Program Management (cont’d)

Conformity Assessment Subcommittees:
Other Conformity Assessment programs are managed by a subcommittee of the related Standards Committee. Boiler and Pressure Vessel Accreditation is an example. It is managed by a subcommittee of the Boiler and Pressure Vessel Code Standards Committee.
If a Standards Committee reporting to a Board other than Conformity Assessment is considering an addition, revision, or deletion of requirements in a standard related to accreditation or certification, they must notify the Board on Conformity Assessment of their plans and seek the Board’s input.
CSP 58 states: “Proposed alternative requirements (e.g. code cases) which will impact ASME conformity assessment programs (i.e. accreditation, registration, and certification programs) of an ASME code or standard shall be reviewed jointly by the responsible supervisory board and the Board on Conformity Assessment (BCA).
The proposed alternative requirements shall be submitted to BCA at the same time they are submitted for standards committee vote.
All comments, as a result of the above review, shall be submitted to the standards committee. Standards committee members shall be given the opportunity to change their vote after considering the BCA comments and responses from the Project Team.
Current ASME CA programs

Although all Conformity Assessment programs have at least a dotted-line relationship with the Board on Conformity Assessment, this chart shows the supervisory board responsible for oversight of the criteria upon which the accreditation or certification program is based (with the exception of ISO 9000).
REFERENCES

- Codes and Standards Policy CSP-5, Code Symbol Stamps and ASME Markings*
- Codes and Standards Policy CSP-19, ASME Designee and ASME Designated Organization*
- Codes and Standards Policy CSP-20, Policy on Accreditation, Certification and Registration*
- Codes and Standards Policy CSP-53, Policy on Protection of ASME Marks*

REFERENCES (cont’d)

- Codes and Standards Policy CSP-58, Alternative Requirements Impacting Conformity Assessment*
- ISO/IEC 17000 Conformity Assessment – Vocabulary and general principles
- Conformity Assessment Web site
  - www.asme.org/cns/accreditation/index.html

*Available on C&S Web site at
http://cstools.asme.org/csconnect/CommitteePages.cfm?
Committee=A01000000&Action=7609

References (cont’d)