ASME Codes and Standards Committee Handbook for Standardization & Testing Department

Revision 2

January 2014

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1.0 Introduction

1.1 STATEMENT OF PURPOSE

The purpose of the *ASME Codes and Standards Committee Handbook* is to provide a convenient easy-to-use reference that defines the roles and responsibilities of volunteers and staff as well as providing an overview of the standards development process. This handbook is designed to be used by new, as well as experienced, ASME staff and volunteers to quickly answer questions and provide guidance in what can be a sometimes frustrating and confusing environment. Sections and words in purple are changes for the Standardization & Testing Department.

1.2 ASME MISSION STATEMENT

1.2.1 Society Mission

To serve our diverse global communities by advancing, disseminating, and applying engineering knowledge for improving the quality of life; and communicating the excitement of engineering.

1.2.2 Standards and Certification Vision and Mission

- **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.

1.2.3 Standards and Certification Strategic Objectives

The ASME Board of Governors sets the Society's strategic direction. In turn, the Standards and Certification Board of Directors (BoD) sets the strategic objectives for codes, standards, and related conformity assessment activities. Supervisory boards then adapt the objectives to their area of responsibility and establish specific objectives and initiatives. A summary of the BoD current objectives are:

- Generate locally relevant engineering knowledge and expertise that enhances public safety and quality of life
- Increase ASME's impact around the Globe
- Expand global engineering workforce training
- Expand and diversify ASME energy technology resources
- Increase ASME's total number of "Qualified Content Contributors[1]"
- Expand S&C education in colleges and universities

1.3 ASME STANDARDS AND RELATED PRODUCTS

1.3.1 What is a Standard?

A *standard* is a set of technical definitions, instructions, rules, guidelines, or characteristics set forth to provide consistent and comparable results, including:

- Items manufactured uniformly, providing for interchangeability
- Tests and analyses conducted reliably, minimizing the uncertainty of the results

[1] Volunteers and others contributing to ASME's Content Inventory

- Design, fabrication, construction, assembly requirements and methodologies for facilities and equipment that provide provisions for safe operation

Standards, which can run from a few paragraphs to hundreds of pages, are written by experts. Standards are considered voluntary because they serve as guidelines, not having the force of law. ASME publishes its standards; certifies users of selected standards to ensure that they are capable of manufacturing products that meet those standards; and provides stamps that certified manufacturers place on their products, indicating that a product was manufactured according to a standard. ASME cannot, however, force any manufacturer, inspector, or installer to follow ASME standards. Their use is voluntary. By custom, some standards are called codes.

Some standards are referenced by jurisdictions, making the rules of such standards part of the law. When owners are required to follow such laws, they are obligated to write the requirements into their contracts and purchase orders. The contracts and purchase orders that reference ASME standards force compliance with the rules of the standards.

1.3.2 Cases and Interpretations

ASME produces two other publications that supplement its standards - cases and interpretations. Cases represent alternatives or additions to existing rules. Cases are written as a question and reply, and are usually intended to be incorporated into the code or standard at a later date. When referenced in a contract, requirements prescribed in cases are mandatory in the same sense as the text of the code or standard. However, users are cautioned that not all jurisdictions or owners automatically accept cases. The most common applications for cases are:

- to permit early implementation of an approved revision based on an urgent need
- to permit the use of a new material
- to gain experience with alternative or additional rules prior to incorporation directly into the code or standard.
- to clarify the intent of specific requirements

Interpretations provide clarification of the meaning of existing rules, and are also presented in question and reply format. Interpretations do not introduce new requirements. Any user of the code or standard may submit an inquiry to ASME for consideration and possible publication as an interpretation. Some Committees under the Standardization & Testing Department do not render interpretations. A complete list of Committees and whether they render interpretations may be found at:

http://cstools.asme.org/csconnect/FileUpload.cfm?View=yes&ID=210

1.4 ASME CONFORMITY ASSESSMENT PROGRAMS

1.4.1 ASME Accreditation Programs

ASME Accreditation means that the organization's competence to carry out specific conformity assessment tasks has been reviewed and accepted by ASME as meeting the requirements of the relevant ASME Standard. The Qualifications for Authorized Inspection (QAI), Qualification of Elevator Inspectors (QEI), and the Pressure Relief Device (PRD) portion of the Boiler & Pressure Vessel (BPV) program are ASME accreditation programs.

1.4.2 ASME Product Related Certification Programs

ASME certification related to products 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, and if applicable, continue to meet the requirements on which the certification is based.

A program may or may not involve the utilization of an ASME certification mark (e.g., Code Symbol Stamp). Where a mark is used, the identification of the supplier's conformance with the applicable standard shall be in the form of an ASME Certificate of Authorization.

1.4.3 ASME Personnel Certification Programs

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 the ASME Standard.

1.5 ASME TRAINING & DEVELOPMENT PROGRAMS

ASME Training & Development is recognized as a leader in training for engineers and technical professionals. The specialist courses are tailored to the needs of industry professionals and combine academic rigor with applications to real-world situations.

ASME Training & Development provides educational opportunities covering numerous engineering and technical disciplines and offers them in many different ways (platforms) both on and offline. Instructors are experts in their fields with some of them having even authored the codes and standards that they teach.

Available training formats are as follows:

Public Courses – more than 100 courses ranging from fundamental to advanced levels, all led by industry experts
Seminars and Workshops – intensive industry-specific events focusing on short presentations covering the latest technologies and their practical applications
In-Company – a customized training program delivered at a company's site, anywhere in the world
eLearning – comprehensive portfolio of eLearning programs featuring numerous instructor-led courses and self-study Assessment-Based courses
Licensed courses – ASME partners with Authorized Training Providers and Instructors around the globe to deliver ASME training courses
Certificate Programs – understanding the increasing need by both individuals and corporations to have credentialed personnel, ASME offers a selection of Certificate Programs delivered through live courses and via the web

ASME Training & Development is recognized as an Authorized Provider of Continuing Education and Training by IACET, complying with the ANSI/IACET-2007 Standard. ASME Training & Development is continually developing new courses to meet constantly changing professional and industry needs

The guiding principles of ASME Training & Development are reflected in the depth and breadth of quality, highly accessible courses and training programs, specifically developed to boost technical

competence and heighten managerial expertise.

Available courses can be viewed at: www.asme.org/shop/courses

1.6 PRINCIPLES OF OPERATION

ASME's standards development process is characterized by the following key principles:

- Openness
- Transparency
- Balance of Interest
- Due Process
- Consensus

See para. 7.1.1 for an explanation of these principles.

2.0 Role of the Volunteer

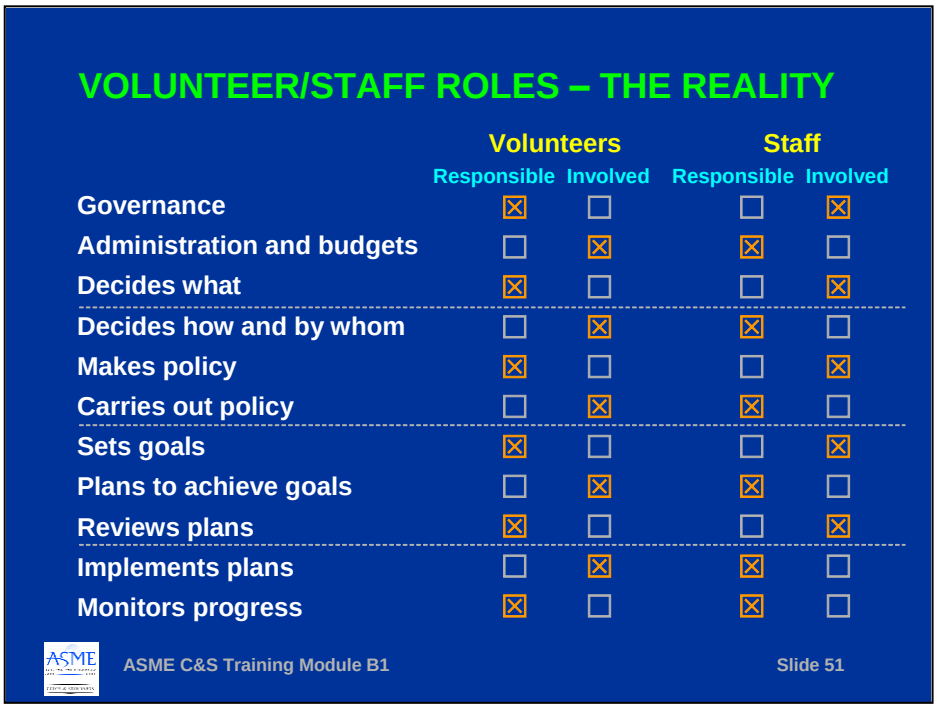
2.1 BENEFITS AND ROLES

Volunteers are individuals who donate time and their knowledge and expertise for the development and maintenance of ASME codes and standards. Employers may provide at least some of the time and pay the expenses for individual member volunteers. The volunteer does not serve solely to promote the interests of his/her employer. The volunteers and their employer do greatly benefit from the standards development activity by way of:

- Greater understanding of rules
- Advanced notice of impending changes to codes and standards
- Opportunity to influence revisions based on best practice of a company, agency or organization.
- Development of project management and leadership skills
- Work with internationally recognized experts

Many first time volunteers believe that the role of the volunteer within ASME Standards and Certification is to develop and maintain the technical rules. Although this is a large part of most volunteers' activity, volunteers work alongside with ASME staff in all areas of the society's codes and standards business. Table 2-1 below illustrates the important role volunteers have in the area of governance and setting policy for ASME.

Table 2-1



2.2 ADVANCEMENTS IN THE VOLUNTEERING PROCESS

The earliest ASME committees were made up of members (volunteers) who carried out the majority of the work via attendance at meetings. At one time, almost all committee members resided in

North America, and attendance at meetings was expected. All communication was facilitated through hand and typewritten documents, distributed by hand at meetings or by the postal service.

Today, ASME standards are used worldwide, making it important to establish and maintain committees represented by stakeholders from around the world. This creates obvious challenges in terms of communication, meeting attendance, etc. One of the major steps taken by ASME to address these challenges was the development of C&S Connect, a web based tool used by volunteers and staff in all phases of the document development process. This tool allows volunteers from around the world to participate on ASME committees, and provides a robust communication solution for both proposal and balloting processes. The use of C&S Connect along with increasing use of virtual meetings (teleconferences and webcasts) have greatly accelerated the time to market of standards development.

The second area where ASME has made significant changes in its process is the recognition of multiple membership and participant classifications. These classifications provide an opportunity to recognize an individual's ability and in some cases constraints in participating on codes and standards committees. To continue to function according to the five key principles (openness, transparency, balance of interest, due process, and consensus) in an international community, different membership and participant classifications were needed. Table 2-2 summarizes different member and participant classifications including their roles and responsibilities within the committee structure.

Table 2-2: Member and Participant Classifications

Member Classification	Description	Expectations (1)	Privileges
Member	An individual that is self sponsored or sponsored by an employer(4), representing a particular interest category, and capable of attending all scheduled meetings. May be a member of a standards committee, and/or one of its subtier committee(s).	1. Attend scheduled meetings [Attendance or absence at committee meetings affects quorum at meetings.] 2. Participate on all ballots 3. Take on work assignments as directed by committee Chair 4. Actively participate in committee discussions	1. Listed on committee roster in AS-11 and standard membership listing 2. Receives complimentary copies of standard(s) pertinent to committee work 3. Full access to C&S Connect and all of its features
Delegate (2)	Represents a group or an individual company located outside the U. S. and Canada. Must be fluent in English, and have a working knowledge of the technical aspects of the committee's work. Delegates may be appointed to standards committees, and all of its subtier committees. A delegate is not a member of the consensus committee[3].	1. Attendance at scheduled meetings optional; participation via teleconference desired.[Attendance or absence at meetings does not affect quorum at meetings.] 2. Relative to the standards committee, participate on a first consideration ballot. 3. Participate on all review and comment ballots 4. Take on work assignments as directed by committee Chair	1. Listed on committee roster in AS-11 and standard membership listing 2. Receives complimentary copies of standard(s) pertinent to committee work 3. Full access to C&S Connect and all of its features.
Contributing Member	An individual that is self sponsored or sponsored by an employer and whose contribution to a committee is in the form of technical comment and review of proposals. Attendance at committee meetings is neither expected nor required. In addition the frequency of technical comment and review of items is by matter of agreement between the Contributing Member and the committee Chair	1. Attendance at scheduled meetings optional; participation via teleconference optional. [Attendance or absence at meetings does not affect quorum at meetings.] 2. As a Contributing Member, does not vote (approved/not-approved) on committee ballots. 3. Has the option to participate on all review and comment ballots.	1. Listed on committee roster in AS-11 and standard membership listing as "Contributing Member". 2. Full access to C&S Connect and all of its features. 3. Complimentary copies of standard(s) provided per discretion of committee Chair.

Table 2-2: Member and Participant Classifications (Continued)

Member Classification	Description	Expectations (1)	Privileges
Alternate	An individual that is self sponsored or sponsored by an employer who substitutes for an existing committee member at meetings or to vote on ballot(s) when necessary.	Same expectations as the member. Approved/Not Approved votes counted in final tally only if alternate's member does not submit vote, though any comments will be considered.	1. Receives the same privileges as the member
Representative	When a member is unable to attend a meeting or portions of a meeting, he or she may ask a Representative to sit in for them at the meeting. The Representative may participate in all committee business, with the exception of standards actions.	N/A	N/A
Interested Party(5)	An individual who has expressed interest in the work of one or more committees, and by agreement with the committee Chair and ASME Staff receives committee correspondence (Agendas, minutes, etc.)	1. Does not vote on committee ballots. 2. By mutual agreement may be assigned a committee work item by the Chair.	1. Receives committee correspondence in the form of agendas, minutes, etc.

Notes to Table 2-2:

(1) The Chair of each committee is expected to evaluate the performance of the members making up the committee based on the expectations identified in the Table. For example the following are possible performance criteria for volunteers serving on ASME committees:

Attendance	75% of all meetings
Participation on Ballots for Approval	90%
Participation on review/comment ballots	75%
Completion of assignments	

(2) The intent of the ASME Delegate Program is to allow representatives of organized groups of interested experts, located outside of the U.S. and Canada, to participate in the ASME codes and standards development process. The Delegate Program is for organizations that have a specific technical interest in an ASME code or standard, including trade and manufacturers' associations, user groups, national standards

committees, or any other organizations responsible for oversight of a particular industry. The group of experts can be from an individual company or organization with a clearly defined interest in participating on ASME committees.

Each group must be open to membership by qualified experts who wish to join. When applying to ASME for appointment of a Delegate, the group must describe its organization and purpose in writing. The group shall provide to ASME the names and affiliations of the technical experts that will be working with the Delegate to provide the group's input to the ASME committee. Periodically, this information will be updated.

Each group must select a single individual (Delegate) to represent its interests and provide collective group comments on committee standards actions. Delegates must have fluency in the English language and a working knowledge of the technical aspects of the committee's work. Delegates may request appointment on the Standards Committee and any of its subtier committees. For more information on the Delegate program and other information on Participating on ASME Codes & Standards Committees, please see the Further Reading List below.

(3) The standards committee is made up of members, delegates, and contributing members. The consensus committee is a subset of the standards committee, and is made up of those members authorized to vote on first and recirculation ballots that ultimately count towards approval of a standards committee action in accordance with the ANSI Accredited Procedures. (See 7.2.5)

(4) In their standards committee activities these members participate, including voting, as individuals rather than as representatives of their employer or of any other organization.

(5) Relevant staff and volunteer leadership shall determine whether there is a need for an interested party to sign an ASME Participation Acknowledgment Form (PAF), based on the anticipated extent of participation by, and types of documents made available to, the interested party.

2.3 FURTHER READING

1. ASME Delegate Program
   http://www.asme.org/Codes/DevelopmentCommittees/Delegate_Program_Guidelines.cfm

2. The Benefits of Participating in ASME Codes & Standards Activities
   go.asme.org/GetInvolved

3. Guide to Procedures for ASME Codes and Standards Development Committees
   http://cstools.asme.org/csconnect/pdf/CommitteeFiles/7611.pdf

4. Detailed Training Information for ASME Codes & Standards Volunteers
   http://cstools.asme.org/trainingmodules.cfm

5. Articles from the June 2009 issue of Mechanical Engineering (and/or other ASME CNS history background info)
   http://memagazine.asme.org/Articles/2009/june/

3.0 Role of ASME Staff

3.1 PRIMARY ROLE

The primary role of staff assigned to boards and committees is to implement actions that are required to meet the objectives of the board or committee on a continuing basis. Working under broad lines of policy established by the board or committee, the staff:

- Initiate programs,
- Actively engage in the work, and
- Make operating decisions necessary to carry forward the programs in a dynamic and efficient manner

3.2 PRIMARY STAFF INVOLVED

(a) Conformity Assessment Staff
(b) Standards and Certification Technical Staff
(c) ASME Publishing Staff
(d) Standards Technology, LLC Staff
(e) Training & Development Staff

3.2.1 Conformity Assessment Staff

In general, Codes and Standards Conformity Assessment Staff provides Standards Committees reporting to the Board on Conformity Assessment with the necessary support for the process of development of standards actions, interpretations, cases, as well as for related administrative actions (e.g. membership, procedures), and Conformity Assessment Committees with the necessary support relating to accreditation, product certification and personnel certification actions(issuance, renewal, revision, suspension and termination), and other actions for operation and maintenance of the programs. This includes auditors, procedures, scheduling, financial, and other aspects of conformity assessment activities with applicants, including communication with applicants.

3.2.2 Standards and Certification Technical Staff

In general, Standards and Certification Technical Staff (staff engineers) provides committees and subordinate groups with the necessary support for the process of development of standards actions, interpretations, cases, as well as for related administrative actions (e.g. membership, procedures). S&C Technical Staff support (i.e. Staff Secretary) is normally provided at Standards Committee and major Subcommittee levels only.

The technical expertise needed to develop consensus resides with the volunteers, therefore, the role of S&C Technical Staff is normally to provide administrative support. However, depending on the experience of the relevant staff person, it may also be appropriate for S&C Technical Staff to provide technical support (e.g. drafting for committee consideration proposed technical requirements or responses to comments; researching and drafting for committee consideration proposed replies to requests for interpretation).

Specific committee-related responsibilities of S&C Technical Staff include the following:

- Project Management: Process requests and recorded votes for standards actions, interpretations, cases, membership actions, and procedural revisions; serve as Project Administrative Manager for actions proposed for committee approval; interface with ASME

Publishing Staff to manage schedule for issuance of standards actions and related material;

- Administrative: Schedule meetings and prepare and distribute agendas and minutes; maintain committee/subordinate group membership; receive and maintain all committee and subordinate group documents in accordance with S&C record retention requirements;

- Additional Support: Correspond with interfacing organizations or individuals in the name of the committee; provide guidance to volunteers on ASME procedures and policies; provide guidance to volunteers on legal implications of codes and standards activities, and consult with ASME Legal Counsel, as necessary.

The ASME Codes and Standards Web site contains a feature to search for relevant S&C Technical Staff members at:

http://cstools.asme.org/csconnect/CommitteePages.cfm?view=CFStaffSearch

3.2.3 ASME Publishing Staff

ASME Publishing Staff do not participate directly in committee activities but work with the S&C Technical Staff in preparation of manuscripts that accurately reflect the voted standards actions of the committee, and manage the processing of the manuscripts through the production and publishing stages, including review of proofs.

The Publishing Staff provides general guidance on style of ASME standards, and performs editorial review of standards in development for consistency in style, as well as for editorial accuracy.

3.2.4 ASME Standards Technology, LLC Staff

The ASME Standards Technology, LLC (ASME ST-LLC) was established as a separate legal entity, with ASME as the sole member, to carry out work related to newly commercialized technology. Primary objectives of the ASME ST-LLC are as follows:

- Initiate and manage research projects essential to developers of technical standards to address the related industry, governmental, and jurisdictional needs,
- Anticipate future codes and standards needs related to existing and emerging technology and bridge gaps between new technology and standardization,
- Develop new standards-related products and services beyond the traditional role of ASME Standards and Certification,
- Facilitate the development, dissemination and application of market-relevant engineering knowledge worldwide, and
- Manage the development of training programs on Codes and Standards working with ASME Training and Development and ASME Education Programs group with universities.

ASME ST-LLC staff works closely with ASME Standards and Certification Technical Staff in identifying and prioritizing potential projects that support C&S Committee standards development activities.

For ASME ST-LLC contacts and additional information on LLC activities and services, refer to:

http://stllc.asme.org/
http://cstools.asme.org/csconnect/pdf/CommitteeFiles/27082.pdf

3.2.5 ASME Training & Development Staff

ASME Training & Development Staff do not participate directly in committee activities but work with S&C Technical Staff to consider the need for new or updated courses; to make appropriate contacts for development of course content; and to consider potential course instructors.

4.0 How Does Someone Become a Participant?

4.1 WHO CAN BECOME A MEMBER

Any individual wishing to become a participant in the Codes & Standards development and maintenance process can apply for committee membership.

There are no fees or geographical restrictions associated with ASME Codes & Standards committee membership. Applicants for individual membership are selected based on their technical experience, interest classification, and ability to actively participate in committee activities. Members of committees need not also be members of ASME. Membership in ASME is encouraged but not required.

Volunteers are not compensated by ASME for their time or travel expenses. Volunteers are often sponsored by their employers, but some use their personal time and pay their own expenses. However, in their standards committee activities, all members participate, including voting, as individuals rather than as representatives of their employer or of any other organization.

4.2 SELECTION/ACCEPTANCE CRITERIA

To ensure that ASME's codes & standards are developed in accordance with the procedures accredited by the American National Standards Institute (ANSI), individual membership appointments are based on various criteria, including:

- Experience and technical qualifications,
- Ability to actively participate in committee activities,
- Business interest of the organization, if any, that financially supports the member's committee participation (interest classification),
- The balance of interests existing in the committee, and
- The limit on the number of members for a committee.

At the discretion of the committee, applicants may be requested to attend one or more meetings prior to being considered for membership and/or participate on a subtier committee for an established duration before being considered for other committee membership.

4.3 WHICH COMMITTEE TO APPLY TO

Many of ASME's standards development committees consist of a broad range of subtier committees, including subcommittees, subgroups, working groups, special working groups and project teams needed to support the development, update and maintenance of the wide range of ASME's codes and standards. ASME seeks the participation of all parties having an interest and technical expertise in specific areas covered by ASME's codes and standards.

4.3.1 Committee Has a Need

Standards Committees and their subtier committees looking for volunteers may be found under the link "Call for Participants" on ASME's website at:
go.asme.org/Call4Participants

4.3.2 Existing Committees

A list of all existing committees is given on ASME's website at:

http://cstools.asme.org/csconnect/CommitteePages.cfm

Table 4-1 gives a list of all existing Standards Committees under the Board on Standardization and Testing with a short description of their scope of activity.

Limits to numbers of members and member qualifications vary by committee, and there may not be openings on the desired committee at the time of submission. For committees with subtier committees (e.g., subcommittee, technical committees, divisions, working groups, task groups), applying to a specialized working group is generally preferred for a first application.

Table 4-1: ASME Board on Standardization & Testing
Codes and Standards Committees (1)

Management and supervision of the dimensional, design, application, drafting, performance test codes and miscellaneous standards activities of the Society, as designated by the Council on Codes and Standards. The standards developed by groups managed by the board are intended to be submitted to the American National Standards Institute to become American National Standards.

- **AED Aerospace and Advanced Engineering Drawing Standards**
  Develop advanced practices unique to aerospace and other industries. Develop and maintain standards and supplements to the standards currently under the jurisdiction of the Y14 standards committee on engineering drawings and related documentation practices.

- **A112 Plumbing Materials and Equipment**
  The recommendation of suitable standards, or the development of standards where none exist, for performance requirements, composition, dimensions, and/or mechanical and physical properties of materials, fixtures, devices, and equipment used or installed in plumbing or mechanical systems.

- **B1 Screw Threads**
  Standardization of screw threads, taps and gages, including terminology, symbols, forms, designations, standard and special series, the dimensional limits for these series, thread gages and gaging, principles for determining dimensional limits of threads and thread gages and acceptability requirements. Not included are certain specialized screw threads such as those for fire hose couplings.

- **B5 Machine Tools - Components, Elements, Performance, and Equipment**
  The standardization of machine tools, cutting tools and of the elements of machine tool construction and operation relating primarily to their use in manufacturing operations, including work and tool holding elements, driving mechanisms that constitute an inherent part of the machine tool, components and associated appurtenances; nomenclature, designations, sizes, capacities, and tests for accuracy of machine tools and of work and tool holding parts or elements; movements and adjustments of machine tool elements; and parts and elements for adjusting, guiding, and aligning work or tools, including slots and tapes, but excluding perishable tools, punches, dies and screw taps.

Table 4-1: ASME Board on Standardization & Testing Codes and Standards Committees [1] (Continued)

- **B18 Standardization of Bolts, Nuts, Rivets, Screws, Washers, and Similar Fasteners**
  Standardization of dimensional, physical, and performance requirements for the specification and manufacture of bolts, nut, rivets, screws, washers, and similar fasteners.

- **B32 Metal and Metal Alloy Wrought Mill Product Nominal Sizes**
  The standardization of metal and metal alloy wrought mill product nominal sizes and establishment of a standard series or a number of standard series of nominal sizes.

- **B29 Committee on Chains, Attachments, and Sprockets for Power Transmission and Conveying**
  Standardization of chains, attachments, and sprockets for power transmission and conveying.

- **B40 Committee on Standards for Pressure and Temperature Instruments and Accessories**
  The preparation and promulgation of standards for pressure and temperature instruments and accessories.

- **B46 Classification and Designation of Surface Qualities**
  Classification and designation of surfaces according to quality of surface.

- **B47 Gage Blanks**
  To simplify gage design through the adoption of standard blanks and components for various common types of dimensional control gages, and to append with further related data.

- **B73 Chemical Standard Pumps**
  The development of standards for horizontal, end suction, and vertical in-line centrifugal pumps for chemical process and vertical wet pit volute pumps.

- **B89 Dimensional Metrology**
  The calibration, performance evaluation, uncertainty evaluation, and specification of dimensional measuring instruments and gages and the methods of their use for measuring various geometric characteristics such as lengths, plane surfaces, angles, circles, cylinders, cones, spheres, and tori, as well as profiles.

  B107 Hand Tools and Accessories
  Establish standards for hand tools and accessories. These standards provide performance and safety requirements. These requirements encompass the elements of design, use, performance, tolerances, and configurations of, including but not limited to, wrenches, pliers and snips, screwdrivers, striking and struck tools, snips, and torque instruments. The standards will include consideration of various classes and types of hand tools, and accessories. They will also include any tests that are needed to determine conformance with the performance and safety requirements.

- **EA Industrial System Energy Assessment Standards Committee**
  Development of standards for conducting energy improvement assessments of the following

Table 4-1: ASME Board on Standardization & Testing Codes and Standards Committees [1] (Continued)

industrial systems: steam systems, compressed air systems, process heating systems, and pumping systems.

- **HST Hoists - Overhead**
  Performance standards for overhead hoists; in particular, air and electric wire rope and chain hoists, and hand chain and manually lever operated chain hoists. The standards will include, where applicable, terminology, hoist and trolley service classifications, and mechanical and electrical data.

- **MFC Measurement of Fluid Flow in Closed Conduits**
  Standardization of rules and methods for the measurement of fluid flow in closed conduits, including terminology and definitions; rules for construction, installation, and conditions under which measurements are to be made; rules for collection, evaluation, and interpretation of measurement data, including errors.

- **Performance Test Codes Standards Committee**
  The Performance Test Code Standards Committee develops codes, supplements and other types of documents, which provide rules and procedures for the planning, preparation, execution, and reporting of results for performance tests and evaluations.

- **RAM Reliability, Availability, and Maintainability of Power Plants**
  Provides the practices and procedures of assessing the reliability, availability, and maintainability of equipment and systems applicable to plants in the power (other than nuclear) industry.

- **STS Steel Stacks**
  Standardization as it relates primarily to the design and construction of steel stacks, with or without lining and supports, and to the application of lining or cladding to such stacks, where required, and recommendation for their inspection and maintenance.

- **V&V Verification and Validation in Computational Modeling and Simulation**
  Coordinate, promote, and foster the development of standards that provide procedures for assessing and quantifying the accuracy and credibility of computational modeling and simulation.

- **WEP Water Efficiency Guidelines For Power and Other Industrial Facilities**
  Develop guidance documents to promote the efficient use of water in applications within power and other industrial facilities and to aid in evaluation of technical options. Topics include, but are not limited to, cooling systems, the use of fresh and non-fresh water resources, and innovative water reuse and water recovery technologies

- **Y14 Engineering Drawing and Related Documentation Practices**
  The development and maintenance of national standards for defining and documenting a product throughout its life cycle and related certification activities. This shall be accomplished by: 1) recognizing the continuing need for existing standards regardless of the source medium (e.g., paper, film, and digital) or method of preparation (e.g., manual or computer generated); 2) providing standardization where a variety of practices exist within

industry and government; 3) providing standards for new concepts and technologies; and 4) supporting and coordinating development and harmonizing of standards with responsible standardization bodies, including ANSI, ISO, and government agencies.

Notes to Table 4-1:

(1) The list is as of December 2013

4.3.3 Subcommittees, Technical Committees, Divisions, Working Groups

When a committee has been selected, the list of its subtier committees can be found on ASME's website page of corresponding Committee under C&S Connect (see Section 6.5.1). This same page enables access to additional information on the selected group. The basic list of subtier committees can be more simply seen by opening the list (+ symbol) on:

http://cstools.asme.org/csconnect/CommitteePages.cfm

In the front of each code or standard, a section which provides the list of members (volunteers) and ASME staff members involved in the development and maintenance. This list reflects the structure of the responsible committee and may include major subtier committees.

4.3.4 First Steps to Joining a Committee

It is recommended that a first time volunteer contact the ASME staff engineer prior to submitting the membership application package to ASME. Attending a committee meeting as a visitor prior to submission is also recommended. The ASME staff engineer will provide all information concerning date, location, hotel and schedule of the next meeting.

Contact references of the appropriate staff engineer may be found on the corresponding committee page at:

http://cstools.asme.org/csconnect/CommitteePages.cfm

Or at:

http://cstools.asme.org/csconnect/CommitteePages.cfm?view=CFStaffSearch

4.4 JOINING AN ASME COMMITTEE

A formal request must be sent to the Secretary or Chair of the committee which an individual desires to join. First time applicants must complete the following forms and forward them to ASME:

- Completed Personnel Form (PF-1)
- Resume or a completed biographical profile form
- Signed Participation Acknowledgment Form (PAF)
  (Needed only for those who do not already have one on file)

These forms can be downloaded from:

go.asme.org/joinCS under “How to Join”

Upon receipt, the application is acknowledged by the appropriate staff engineer and distributed to the appropriate committee membership for consideration. ASME Staff is not responsible for making appointment decisions.

The signed Participation Acknowledgment Form (PAF) recognizes that the new member agrees to comply with ASME Society Policies P-15.7 Ethics, P-15.8 Conflicts of Interest, P-14.6 Society Name, Seal, Emblem, Initials, Titles, Identification, and Certificates, and P-15.9 Policy Against Discrimination, as well as ASME's copyright policies. No access is given to the "Members Only" part of C&S Connect before receipt by ASME of a signed PAF form, and until after the appointment has been approved.

ASME Society Policies are available on ASME'S web site at:
www.asme.org/about-asme/who-we-are/governance/asme-society-policies

4.5 VOLUNTEER TRAINING

To assist new committee members in becoming oriented with the development process, the following types of help may be provided.

4.5.1 Training Modules

ASME has created a set of training submodules to assist volunteers in their committee participation activities. Refer to para. 7.2.3 for additional details.

4.5.2 Mentor

When a first time volunteer is appointed to a committee or a subtier group, a member of this group may be designated to be the mentor of the new volunteer. The mentor will be the preferred contact person where answers to questions concerning process, organization, and logistics can be found.

4.5.3 Orientation/Training Session

Some committees offer orientation sessions at every meeting or on an as-needed basis. Other committees request members to review training session materials and bring any questions to meetings for discussion. The basis is the training modules that were developed and are maintained for this purpose. Training modules can be found at:

http://cstools.asme.org/trainingmodules.cfm

Basic training on the use of C&S Connect is also offered. Sometimes there are training sessions at meetings. Training is also available at:

http://cstools.asme.org/csconnect/News.cfm?AnnouncementFormID=2

4.6 VOLUNTEERING AT HIGHER LEVELS IN STANDARDS AND CERTIFICATION

The ASME's Volunteer Orientation and Leadership Training (VOLT) Academy ensures that ASME volunteers have the training needed to assume leadership positions of ever-increasing responsibility in the Society and that the skills gained from such leadership positions, in turn, enhance their professional careers.

More information on the VOLT Academy can be found on ASME's website at:

https://www.asme.org/about-asme/volunteer-resources/volt-academy

5.0 Committee Organization and Operation

5.1 ASME STANDARDS AND CERTIFICATION ORGANIZATION

ASME committees are organized in a hierarchical structure. As can be seen in Figure 5-1, all codes and standards committees ultimately report to the Council on Standards and Certification. Reporting directly to the Council are Supervisory boards for each of the technology sectors. Each supervisory board focuses on a particular area as follows:

- Standardization and Testing (ST)
- Safety Codes & Standards (SCS)
- Pressure Technology Codes & Standards (PTCS)
- Nuclear Codes & Standards (NCS)
- Conformity Assessment (CA)

5.2 SUPERVISORY BOARDS

The Supervisory Boards are responsible for creating and supervising the committees that develop new and revised standards or administer conformity assessment activities, which includes:

- Assessing the need for S&C activities
- Structuring the necessary committees
- Ensuring procedures for due process
- Approving and discharging committee personnel
- Approving codes and standards for ASME
- Developing and maintaining operations and strategic plans
- Hearing appeals
- Recommending the disbanding of a committee
- Directing research and development of technical information for C&S committees (via ASME Standards Technology, LLC)

5.3 STANDARDS COMMITTEE

Reporting to each Supervisory Board are several Standards Committees. It is the Standards Committee that is ultimately responsible for the development of the document in its final form. The Standards Committee is the group where the relevant technical expertise resides, the group within Standards and Certification that is responsible for developing consensus on proposed standards actions. However, most complex standards require expertise in numerous areas, thereby requiring a further sub tier of committees that report to the Standards Committee. The actual organizational structure of the Standards Committee will vary from one committee to the next.

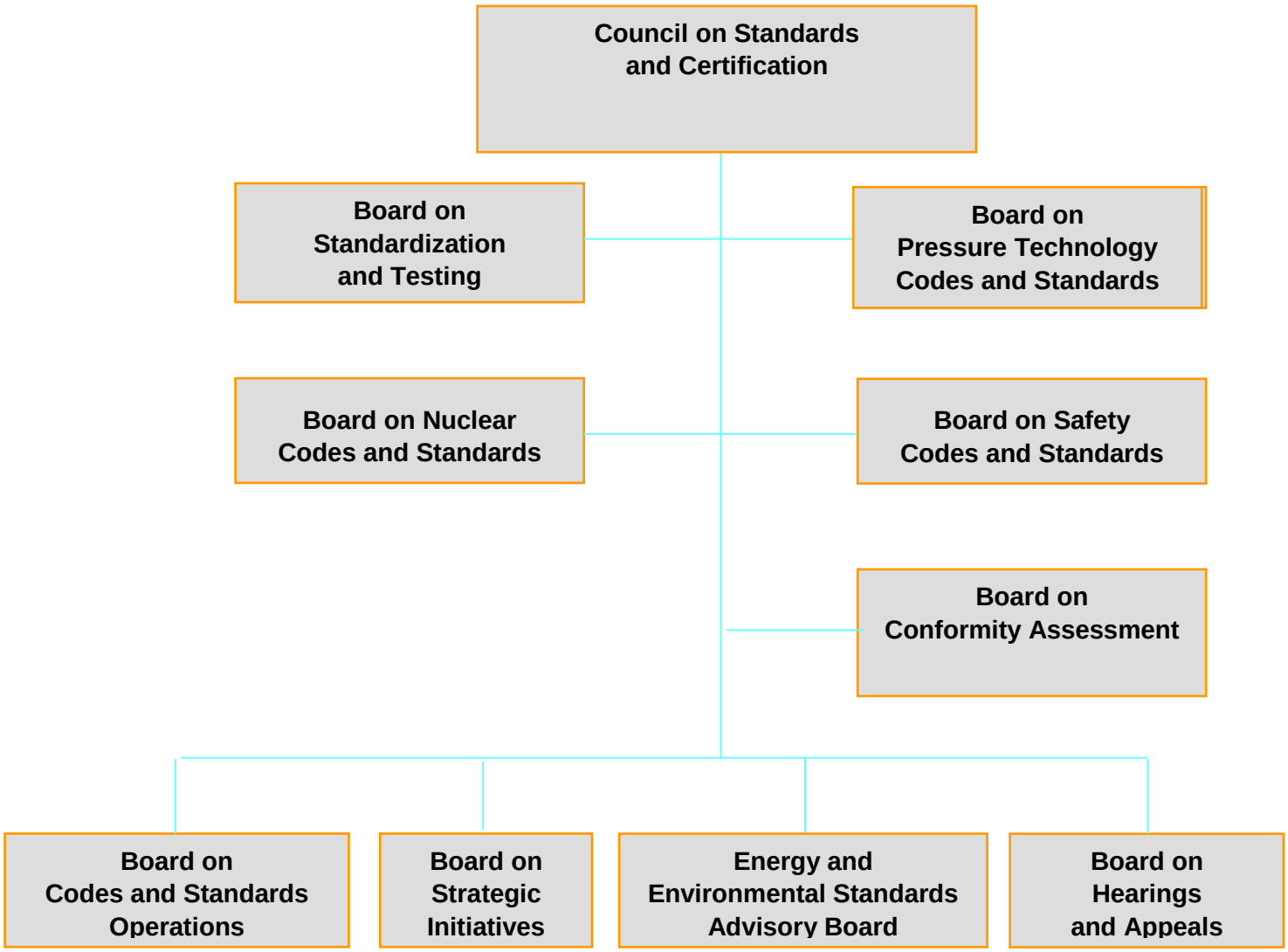
5.4 CONFORMITY ASSESSMENT COMMITTEES

These Committees report to the Board on Conformity Assessment and/or a Standards Committee.

The Conformity Assessment Committee has responsibility for issuing, renewing, revising, suspending and terminating Certificates of authorization/accreditation/ certification/acceptance. It also has various other administrative duties involved with conformity assessment.

Other Committees of an administrative nature such as the Committee on Conformity Assessment Activities also report to The Board on Conformity Assessment.

Figure 5-1: ASME Standards and Certification Organization



5.5 B1 COMMITTEE ON SCREW THREADS

For purposes of discussion we will focus on the B1 Committee on Screw Threads and its subtier organization.

The B1 Committee on Screw Threads is responsible for the standardization of screw threads and gages used in all types of manufacturing and construction. The group is also concern with the design and acceptability of such products. This includes customary and metric information. The organizational chart for the B1 structure is shown in Fig. 5-2.

Each Standards Committee is made up of a number of members, typically between 20 to 30. Two of the members are the officers of the committee (i.e., Chair, and Vice Chair), and a Staff Secretary who is assigned to the Standards Committee by ASME. Some Standards Committees elect to have two Vice Chairs.

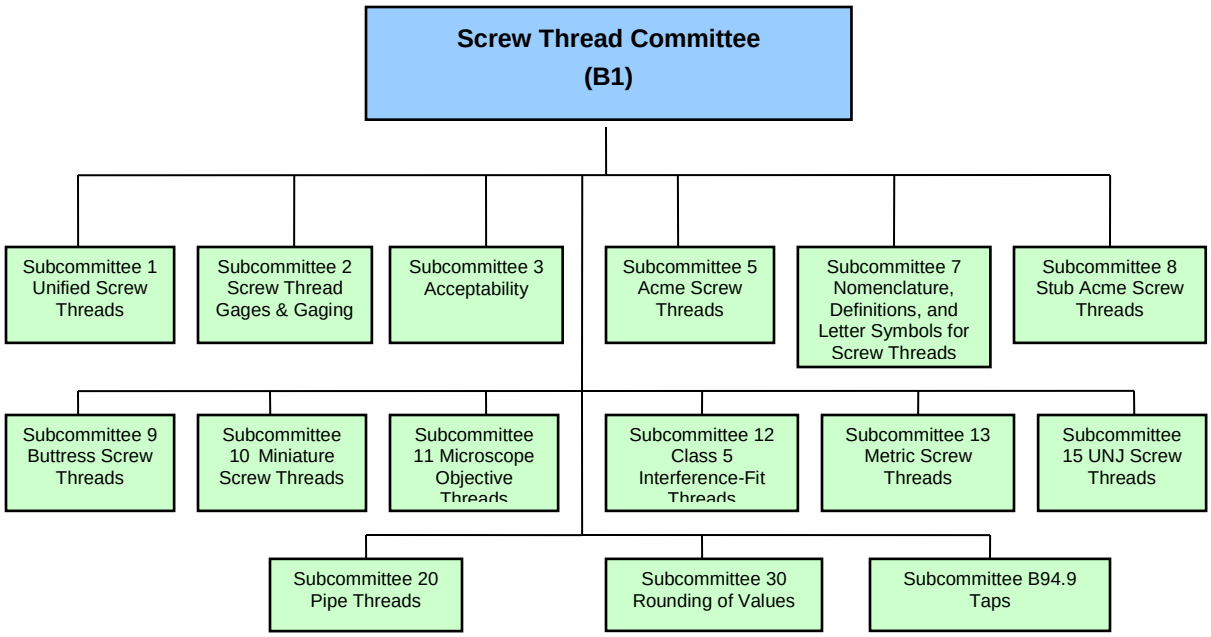
The Standards Committee Chair responsibilities include:

- Facilitate meetings (Robert‘s Rules of Order)
- Guide the committee members
- Follow codes and standards development process procedures
- Follow committee‘s operating and administrative procedures
- Monitor overall process for conformance to procedures and its effectiveness
- Work with Project Technical Manager and Project Administrative Manager to determine project team members

The Vice Chair is responsible to carry out the duties of the Chair in the event he/she is unable to fulfill their duties. The Staff Secretary prepares the agenda, initiates ballots, records minutes of the meeting, and assists in all other administrative areas of the committee. The Chair and Vice Chair are appointed for three-year terms and may serve a maximum of two consecutive terms.

Some Standards Committees also have an Executive Committee. The Chair and Vice Chair of the Standards Committee reverse roles within the Executive Committee. The Executive Committee is responsible to consider process and procedure improvements, membership, committee charters, creation of Project Teams, and provide recommendations to the full Standards Committee in Administrative session.

Figure 5-2



5.6 SUBTIER COMMITTEES

Most standards committees have a number of subtier committees reporting to it. It is within the subtier committees and the project teams that report to them that much of the development work takes place. There are several different types of subtier committees within ASME:

Subcommittee
- Project Team
  - Task Group

The number and type of subtier committees that report to a standards committee will vary depending upon the scope of responsibility of the standards committee. The subcommittees reporting to the B1 Committee on Screw Threads cover areas such as type of Screw Thread, Gages & Gaging, Acceptability and Taps. Each of these subcommittees has well defined areas of responsibility and is made up of members with the necessary expertise and interest in the committee work.

Subtier groups (subcommittees, working groups, project teams) have as a minimum a Chair and a volunteer Secretary, who is also a member that takes on the secretarial responsibilities. Subtier groups should also appoint a member to the position of Vice Chair, but this is not required.

6.0 How Does The Work Get Done?

6.1 WORK ITEMS – RECORD NUMBER

Work items are initiated by:

- ASME Committee; e.g. updating an existing requirement, editorial improvements, correcting errata, etc.
- User; e.g. request for a new size or test method via the issuance of a Case, request for interpretation of a requirement, etc.
- Supervisory Board and/or Executive Committee; e.g. development of new standard or major update of a standard.

Work items are assigned a unique record number (e.g. 08-235) by the staff secretary for purposes of tracking the item during its lifetime. This record number facilitates locating items on C&S Connect. Each year, ASME Standards and Certification assigns more than 2,000 record numbers to work items being handled by all of its committees.

Each record on C&S Connect contains information necessary to document the activity leading up to approval and subsequent publication. The ASME staff secretary and the Project Technical Manager are responsible for keeping this information up-to-date. Some of the fields that may be recorded on C&S Connect records are:

- Record number
- Responsible committee
- Project Manager – name and contact information
- Subject
- Proposal
- Explanation
- Summary of Change
- Attachments – proposal and supporting background files
- Ballot history
- Ballot results, including comments and responses

There are four types of Records on C&S Connect. A “Component” record is used for a change to a portion of a standard that is being proposed. In this case a revised edition to an existing standard is usually composed of many “Component” records. An “Entire Document” record is used when the entire document is being proposed or revised and will be voted on as one record. An “Interpretation” record is used for processing of inquiries on C&S connect. A “Code Case” record is used for processing to a Case or a new Case. It is currently limited to Code Cases for the Boiler & Pressure Vessel.

6.2 PROJECT MANAGER AND PROJECT TEAM

Committees with a broad scope of activity are divided into subtier technical committees (subcommittees, technical committees, divisions, project teams, task groups, etc.) each one of them dealing with specific aspects of the Code or Standard under their responsibility.

In many Committees, each standards action is handled at the lowest level of each organization by a Project Team. A Project Team consists of a project administrative manager (normally ASME Technical Staff), a Project Technical Manager (PTM), who is normally a technically knowledgeable committee member, and, as necessary, additional members who may be committee members or technically knowledgeable members of the public, including those responsible for requesting the action. The primary task of the Project Team is to develop one or more proposals. The selection process for project team members is approved by the consensus committee and controlled by the committee officers.

The PTM is responsible for managing the work with tasks such as setting a schedule, arranging for conferences, consulting with specialists, and working with Technical Staff to submit the proposal for review and comment or ballot on C&S Connect. Once comments on the proposal are received, the Project Team is responsible for responding to comments (including any public review comments) and deciding what changes to make to the proposal in response to the comments. Most proposals require multiple levels of balloting, with the potential for multiple sets of comments. The PTM is responsible for moving the proposal through the multiple levels.

Preparing the Proposal for revisions to an existing code or standard, the relevant existing material should be shown along with a clear indication of what is to be changed. For specific guidance on acceptable proposal formats, see the Guide for Presenting Proposed Revisions. The Guide can be found at:
http://cstools.asme.org/csconnect/CommitteePages.cfm?Committee=N10000000&Action=7609

For a new Code, Standard or Case, the complete document should be included in the proposal. The use of the C&S Writing & Style Guide 2010 is strongly recommended when developing proposed items. The Writing Guide can be found at:
http://www.cstools.org/WritingGuide/Cover_to_Documentation_Style_Guide.htm

Often Project Teams carry out their work in between formal meetings. ASME staff can arrange for teleconferences when needed, and C&S Connect can be used to distribute documents. Large documents may also be stored and retrieved from the "Committee File Sharing" resource on C&S Connect.

The proposal should contain the C&S Connect record number and the revision date in the header. In addition to showing changes to the existing code or standard, changes from a previous revision reviewed by the same group should be shown.

Sometimes a long explanation describing the rationale behind the proposal is helpful. This can be in the form of a technical paper, a business plan, or just a few paragraphs written by the Project Team. Such explanations are included as part of the proposal or as background material.

Approval Process In order for the item to move forward from group to group it is the responsibility of the PTM to ensure that this gets accomplished. Once the proposal is prepared, the PTM has options to accomplish this task. Before applying any of the options, the PTM must determine which groups will need to approve the item and then depending on the complexity of the item and the urgency, the PTM needs to develop a plan to move the item through the process. Committees usually adopt one or more of the following options as the normal approach, but the other approaches may be used. They sometimes require approval.

1) **Tiered Approval Process** – The proposal is reviewed and approved by each group one group at a time. This is a slow process and, when proposals are only considered at meetings, can further be limited by the numbers of meetings held by the groups as the item moves forward. To help expedite the processing of the item web or telephone conferences may be used to supplement face-to-face meetings.

2) **Simultaneous Approval Process** – The proposal is reviewed and approved by all groups at the same time. This approach is used for simple items and items that are urgent. If the item is not explicitly simple and clear it may draw disapprovals that could have more easily been handled using the tiered approval process.

3) **Broad Review and Comment Process** –The proposal is sent out by C&S Connect for review and comment to all the groups that will ultimately have to vote on the item. Comments are addressed, and then the item is balloted using either the tiered or simultaneous approval process. This option is usually applied to complex proposals. The advantages of this approach is that it gives all of the potential voters a look at the proposal in advance of casting a vote and allowing them an opportunity to provide input earlier in the process. This process may alleviate future disapprovals when the proposal moves forward for a vote. The disadvantage is that the proposal could receive so many comments that resolving them all in a timely manner may actually be slower than using the tiered process.

The consensus committee uses formal voting using C&S connect. C&S connect is also used at subtier levels, but a voice voting process is used by some subtier groups. The voice voting rules may vary from committee to committee among subtier groups, but usually approval by 2/3 of members present at a meeting is adequate to move a proposal to the next level.

The PTM controls the pace the item is moved through the approval process. If the project team responds to comments that are posted in a timely manner and puts forth the effort to communicate with the members of the responsible technical groups, the item can move fairly quickly. The consensus committee has the last technical vote in the process and the consensus committee members are the ones that ultimately have to agree on the item.

4) **Concurrent Voting Process** – Some Committee use a concurrent voting process, balloting two tiers at once. This is usually used when the lower tier has discussed the proposal and it was the sense of the PTM or the project team that the majority of the project team members are in agreement with the proposal. Some committees may ballot one tier for approval and submit the proposal to the upper tier for review and comment.

Submitting the Proposal It is important to provide the right information in a way that can easily be discovered by the reviewers when preparing a submittal. The information that should be provided includes:

1) Subject should be not more than one sentence that describes the area being addressed by the proposal.

2) Proposal should be not more than one sentence that describes what is being changed.

3) Explanation should be not more than one paragraph explaining why the proposal is being presented. When a longer explanation is provided, it should be referenced and included as part of the background material.

4) Committee Correspondence should contain any information that is generated as part of the project attached for future or historical purposes as the item progresses through the consensus process

Verifying Publishing of Approved Proposal It is important that actions are published as shown in the approved version of the proposal. If the PTM has an opportunity to review the manuscript being presented to the ASME publishing department, s/he should verify that the manuscript accurately reflects the approved proposal. In any case, the PTM should verify that the published version of the proposal is correct and notify the appropriate committee officers of any deviations.

References
1. C&S Writing and Style Guide 2010 (23KB)
http://www.cstools.org/WritingGuide/Cover_to_Documentation_Style_Guide.htm

6.3 MEETINGS

Standards Committees usually meet on a regular basis, usually one to four times per year. Agendas are sent to the members of the different committees prior to the meetings. For many committees, agendas are also accessible on C&S Connect on the committee webpage.

6.3.1 Subtier Groups

Subcommittees, Subgroups, Working Groups, Task groups or other Subtier Groups frequently hold their meetings during the same week in one location with the Standards Committee meeting. Alternatively, if members are unable to travel, a teleconference or web meeting may be scheduled in lieu of a face-to-face meeting. For members unable to attend, a conference phone may be arranged on a case-by-case basis by contacting the ASME staff at least one week prior to the meeting.

Proposals and background material are either attached to the agendas or provided as handouts at the meetings by the Project Technical Manager. They can also be found on C&S Connect under the record number of the item.

Depending on the organization, proposals approved by the Project Team, Subcommittee, etc., are then submitted to the Standards Committee for consideration.

6.3.2 Subcommittee

In some large organizations, the working groups, project teams, task groups, etc. report to a subcommittee, instead of directly to a standards committee. All items approved at the subtier level are considered by the subcommittee prior to being placed on a ballot to the standards committee. First consideration of items at the subcommittee level can be by ballot or live presentation at their meeting. Once a subcommittee has developed consensus on a proposal, it is submitted for ballot to the Standards Committee.

6.3.3 Standards Committee

The duties of a Standards Committee include:

- Develop and maintain standards within its charter.
- Achieve consensus for the action proposed on a standard.
- Ensure that duplication of standards is minimized.
- Make good faith efforts to resolve potential conflicts between existing American National Standards and candidate American National Standards.
- Provide for interpretations of standards within its charter, if applicable.
- Report status of standards within its charter at least annually to the cognizant board.
- Oversee the assignment of project teams for the development of proposed standards actions.

Most Standards Committees conduct their business using a combination of ballots and meetings. The Standards Committees also meet in administrative session to discuss personnel actions, meeting logistics, etc.

6.3.4 Board Specific Meeting Information

In the case of the BPV Standards Committees, they meet four times a year in technical session to discuss and resolve negatives and comments on balloted items, and consider issuance of interpretations and cases.

The B31 Standards Committee meets once a year to discuss standards (e.g. revisions) and administrative actions (e.g. procedures, personnel actions, meeting logistics). For standards actions, the minutes from the meeting are provided to the entire membership to provide an opportunity to comment, vote, or change on the action taken. The majority of the actions taken by the Committee are done through online balloting. Teleconferences are also held as needed.

The B18 Standards Committee meets twice a year to discuss current standards activity within each of the B18 Subcommittees. Administrative actions including membership, procedures, meeting logistics, etc. are also discussed. All standards actions are done through online balloting.

6.4 TELECONFERENCES/WEB CONFERENCES

In lieu of face-to-face meetings or when extra meetings are needed, a meeting can take place by teleconference or web conference at a date and time agreed among the participants or called by the committee officers. In that case all the necessary documents are sent by e-mail or are posted on C&S Connect prior to the conference. A call-in number and a pass code are provided.

6.5 C&S CONNECT

Most tasks carried out by volunteers are performed in C&S Connect. Only Codes & Standards members have access to C&S Connect which can be reached at:

http://cstools.asme.org/csconnect/index.cfm

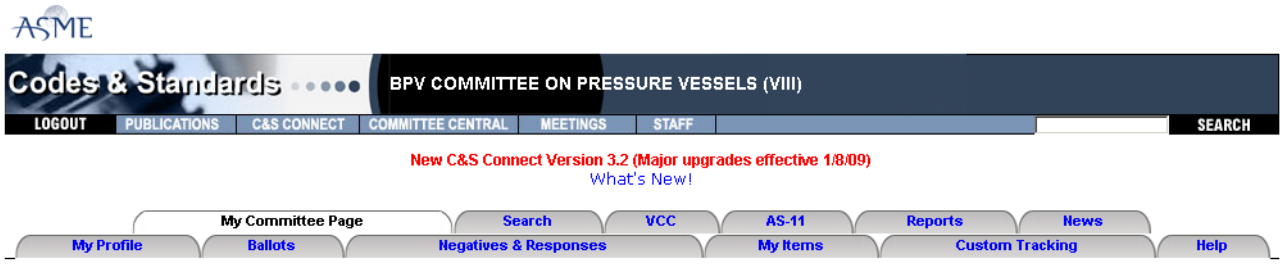
C&S Connect allows one to:

- Access all general information pertaining to a group
- Search records, ballots, and Cases.
- Send email to ASME volunteers and Staff
- Access ASME C&S Personnel Directory
- Print customized reports
- View one's profile
- Vote on ballots and withdraw negatives electronically
- View records

- Customize Item Tracking

Detailed instructions for using C&S Connect can be found at:
http://cstools.asme.org/csconnect/News.cfm?AnnouncementFormID=2

Also hands-on training for C&S Connect is often scheduled during ASME B&PV Code Weeks and other committee meetings. A telephone conference providing hands-on C&S Connect training for new members or a particular committee can also be arranged. Below is a brief synopsis of each of the major sections (Tabs) of C&S Connect.



6.5.1 My Committee Page Tab

The “My Committee Page” tab can be accessed through "COMMITTEE CENTRAL" and enables access to Committee and Subtier group pages.

Future meeting dates, minutes, agendas, rosters, document status list, etc. can be retrieved from it. The charter of the committee and the contact information of the secretary (ASME staff member) are other interesting information posted on this page. "Committee File Sharing" gives access to a document management system that allows members to share files.

6.5.2 My Items Tab

The “My Items” tab lists all records for which the logged-in member is the Project Manager, either Technical or Administrative (Project Administrative Manager is usually the ASME staff secretary). Responses can be posted through this page to comments or negatives during a ballot.

6.5.3 Ballots Tab

The “Ballots” tab lists all open ballots for the logged-in member. This would include ballots for approval and also review and comment. Closed ballots may be accessed trough the Search Tab.

6.5.4 Search Tab

The “Search” tab is used to locate records, ballots and cases by their number or by other criteria such as keyword, project manager name, level, committee, standard, etc.

6.5.5 VCC Tab

The Volunteer Contact Center (VCC) tab provides a method for sending e-mails to other volunteers, committees, or a stored distribution list. So long as volunteers accurately maintain their profiles, including their current e-mail address, the VCC provides the most efficient, direct method for

sending e-mails concerning committee business.

6.5.6 AS-11 Tab

The AS-11 tab allows a volunteer to query the ASME membership database and locate contact information and committee assignments for all volunteers and ASME staff.

7.0 Process and Procedures

7.1 PROCESS

7.1.1 Standards Development

ASME's standards development process is characterized by the following key principles:

- Openness
- Transparency
- Balance of Interest
- Due Process
- Consensus

Openness
ASME's standards development process is open to participation, in some manner, by all materially interested parties. Participation is not restricted to U.S. citizens or residents, nor is membership in ASME required. ASME committee meetings at which standards issues are discussed are open to the public.

Transparency
Information regarding ASME standards development activities and processes is readily available to anyone interested.

Balance of Interest
No individual, organization, or interest category may dominate the process. The membership of committees responsible for establishing consensus on standards actions are required to be balanced among the committee's interest categories.

Due Process
Any materially interested party can submit their concerns with regard to an ASME standard, have those concerns addressed and responded to, and if not satisfied with the consideration of their concerns, has the right to appeal.

Consensus
Consensus does not require unanimous approval, but does require approval by more than a simple majority of all materially interested parties. Consensus also requires that attempts be made to resolve all objections related to the proposed standards action.

These principles of ASME's process are consistent with the principles established for international standards development by the World Trade Organization's Technical Barriers to Trade Committee.

7.1.2 Conformity Assessment

ASME's conformity assessment development process is characterized by the following key principles:

- Availability
- Confidentiality
- Balance of Interest
- Due Process

Availability

ASME Conformity assessment is available to all organizations and individuals that make proper application irrespective of their location, nationality, society, or trade association membership provided that the Applicant can demonstrate compliance with the required Code or Standard. However, applications may not be accepted from companies or individuals in some countries based on U.S. State Department restrictions and warnings.

Confidentiality
The business of ASME as it relates to Accreditation and Certification activities sponsored by ASME shall be strictly confidential. The unauthorized dissemination of information relating to ASME's Accreditation and Certification activities by those individuals assigned responsibilities for implementation of those activities is prohibited.

In no case, shall information received from a company or information concerning a company seeking accreditation or product certification , currently accredited or certified , or formerly accredited or certified by ASME be used other than for the purpose of processing and evaluating the application for or continued accreditation or certification of the company in accordance with the applicable procedures.

In no case shall information received from an individual, or information concerning an individual seeking personnel certification, currently certified, or formerly certified by ASME be used other than for the purpose of processing and evaluating the application for or continued certification of the individual in accordance with the applicable procedures.

In certification activities, the Certification Subcommittee and Standards Committee shall not be advised of the identity of an individual, unless it is required that the individual appear at a hearing, and not be advised of the individual's employer unless it is relevant to the decision that needs to be made.

7.2 PROCEDURES

7.2.1 ANSI Accreditation

ASME has been accredited by the American National Standards Institute (ANSI) as a developer of American National Standards using the Procedures for ASME Codes and Standards Development Committees. The current version of ASME's accredited procedures is available on ASME's Web site at: http://cstools.asme.org/csconnect/pdf/CommitteeFiles/25963.pdf

All ASME Committees must operate in accordance with the accredited procedures. All committees are also required to develop a Supplement to the accredited procedures, which refers to the current revision of the accredited procedures, but also may contain additional requirements necessary for that specific committee's operations. The Supplement provides information on areas of the procedures that might vary across committees, such as the committee charter, limits on number of members, relevant member interest categories, and procedures for determining subordinate group or project team membership. The Standardization & Testing Department has one Supplement rather than each standards committee developing and maintaining their own Supplement. The supplemental requirements are also directly incorporated into the ASME Codes & Standards Development Committee Procedures using track changes to easily differentiate the supplemental requirements. All of the supplemental changes are shown in red. If there is a need to add additional paragraphs, the numbering will coincide with the corresponding section of the Procedures for ASME Codes and Standards Development Committee with an "S" added before the number to

indicate it is a part of this Supplement and it is printed in Red.

The Procedures are titled “ASME Codes & Standards Development Committee Procedures With Supplemental Requirements for Committees Under the Jurisdiction of the Board on Standardization & Testing” and the current version is Rev. 8a dated November 2013 and can be found at:

http://cstools.asme.org/csconnect/FileUpload.cfm?View=yes&ID=40879

Committees may also develop written instructions (e.g. administrative guidelines) or policies in order to provide additional guidance as needed to facilitate committee operations. Such instructions shall not conflict with the committee’s Supplement, and require only standards committee approval.

An additional document - Guide to Procedures for ASME Codes and Standards Development Committees – has been created to provide guidance on selected topics addressed by these procedures. This document can be accessed at the Codes and Standards Web site at:
http://cstools.asme.org/csconnect/pdf/CommitteeFiles/7611.pdf

7.2.2 Codes and Standards Development Policies

ASME has also established a number of Codes and Standards policies, many of which provide additional guidance to standards development activities. The complete document of policies is accessible at the Codes and Standards Web site at:

http://cstools.asme.org/csconnect/pdf/CommitteeFiles/7614.pdf

Some of the policies relevant to the standards development process are:

- CSP-9 Codes and Standards Documentation
- CSP-11 Committee Participation Acknowledgement
- CSP-18 External Communication
- CSP-29 Committee Membership
- CSP-31 Voluntary Standards Use by Regulatory Authorities
- CSP-33 Interpretations
- CSP-38 Document Retention
- CSP-58 Referencing Patented Items and Trademarks in Codes and Standards

7.2.3 Training Submodules

ASME has also created a set of training submodules to assist volunteers in their committee participation activities. These submodules cover the general categories of Administrative, Process, and Legal, and are reviewed for updating on a regular basis. Continuous training of volunteers is encouraged, either as part of committee meetings, or by self-review of the training submodules, which are accessible at the Codes and Standards Web site at:
http://cstools.asme.org/TrainingModules.cfm

All new volunteers receive a CD-Rom containing up-to-date training modules

7.2.4 Procedural Requirements for Subordinate Groups

The Procedures for ASME Codes and Standards Development Committees primarily address the procedures required at the standards committee level. Specific procedural requirements for subordinate groups have been included in the Departments Supplemental Procedures.

The key standards committee actions addressed by these procedures are as follows:

- Approval of standards actions (i.e. new standard, revision to an existing standard, reaffirmation of an existing standard, or withdrawal of an existing standard)
- Approval of editorial actions
- Approval of personnel and administrative items
- Approval of responses to requests for interpretations

7.2.5 Approval of Standards Actions

Project Team - Each proposed standards action shall have an assigned project team to manage and prepare proposals for committee approval. The project team can be an existing group (e.g. subcommittee, division, technical committee etc.) or a selected group of individuals with the appropriate technical knowledge for the subject. The project team is responsible for reviewing and developing responses to comments submitted during the development process.

Review and Comment - After the project team has reached agreement on a draft proposal (a formal vote of the project team is not required but can be recorded; otherwise, determination by the Project Technical Manager of general acceptance by the project team is sufficient) and at appropriate stages during the development process, the proposal shall be provided for review and comment by technically affected parties, such as the relevant standards committee, subordinate groups, other standards committees, supervisory board members, and members of the public who have expressed interest. This review and comment can be conducted concurrently with a recorded vote of the standards committee or subordinate group.

Industry Review - Some committees (e.g., the Performance Test Codes) elect to send a draft standard for an Industry Review. The draft may be sent to a list of qualified persons outside of the Committee membership and/or to other appropriate ASME committee members for a technical review. One method to compile the list is to request that each member provide the name of qualified persons. The Committee may send the draft for Industry Review at any appropriate time, but typically when the draft document is approximately 90% complete, or concurrent with the standards committee ballot.

Subcommittee Vote - Some standards committees will have its relevant subcommittees consider and vote on standards action proposals for recommendation to the standards committee for approval. The Department Supplemental Procedures state that standards actions may proceed if the Subcommittee votes affirmative from at least 2/3 of the members voting. The Subcommittee negatives and comments need to be considered. Following consideration of the negatives and comments, and if the voting criteria has been met, the proposal then proceeds for standards committee approval.

Standards Committee Vote - All standards committee votes for standards actions are recorded in C&S Connect, ASME's web-based electronic voting system.

- **First Consideration Vote**: The standards committee receives the proposed standards action for vote, and also has access to the comments and responses recorded during the development process on C&S Connect. Members have the following voting options: approved, disapproved, abstain, and not voting (used for instances of conflict of interest). Members must submit comments related to the proposal to support disapproved votes, and

can provide comments along with approved votes. The relevant supervisory board is normally provided with the proposed standards action at this time for review and comment. All substantive comments are considered and responded to, and attempts must be made to resolve all disapproved votes.

According to ASME's accredited standards development procedures, a proposed standards action is approved on first consideration vote if the proposal is approved by at least 2/3 of the total committee membership (exclusive of any not voting or disapproved without comment responses); there are no unresolved disapproved votes or substantive supervisory board comments; and no changes have been made to the proposed standards action. Some Standards Committees have additional requirements. If changes are made, the project team may decide to conduct a recirculation vote.

- **Recirculation Vote**: Recirculation votes are required to review technical or editorial revisions made to the proposed standards action in response to comments; to review unresolved disapproved votes and/or substantive supervisory board comments; or to review unresolved objections received as a result of the ANSI public review and comment process. Depending on the extent and nature of the changes, the committee may elect to submit the proposed standards action, as revised, for another first consideration vote, in lieu of a recirculation vote of the technical revisions.

  According to ASME's accredited standards development procedures, a proposed standards action would be approved on recirculation vote if the proposal is approved by at least 2/3 of the consensus committee membership (exclusive of any not voting or disapproved without comment responses).

- **Public Review**: All proposed standards actions are required to be provided for a public review and comment period. The public review period can be conducted concurrently with the committee vote. The availability of the proposed standards action for public review and comment is announced in ANSI's Standards Action publication and on the Codes and Standards Web site. If the proposed standards action is available electronically, the comment period is 45 days; if not, the period is 60 days.

  All public comments must be addressed and responded to. If there are any unresolved public review objections, a recirculation vote must be conducted to give members an opportunity to change their votes based on support of the objections.

- **Supervisory Board Approval**: After committee approval, the proposed standards action is provided to the relevant ASME supervisory board for approval. Members of the supervisory board are provided with the results of the committee voting, and have access to comments and responses from the voting process on C&S Connect. If any public review comments are received, they shall also be provided to the board members, along with the responses to the comments.

  Supervisory board approval is based upon evaluation of the committee's compliance with its procedures in developing the proposed standards action, rather than on evaluation of the technical content of the proposal. Any objections from supervisory board members must be considered and responded to, and a recirculation vote of the board may be necessary if the

objection remains unresolved.

Standards actions without any unresolved consensus committee disapproved votes, substantive supervisory board comments, or public review objections may be administratively approved, at the option of the individual board, by delegating the board's responsibility for procedural review. Such review and declaration of administrative approval may be accomplished by responsible ASME staff or by a board-appointed review group, with no formal recorded vote of the board required.

- **ANSI Approval**: After supervisory board approval, the proposed standards action is submitted for ANSI approval. ANSI approval is also based upon an evaluation of ASME's compliance with its accredited procedures in the development of the proposal.

7.2.6 Approval of Editorial Actions

Any editorial revisions made to a proposed standards action as a result of consideration of comments require approval of the Consensus Committee.

7.2.7 Approval of Personnel and Administrative Items

Approval of personnel and administrative items (e.g. revisions to procedures) require approval of a majority vote of the committee via C&S Connect or a majority vote of committee members voting at a meeting, provided a quorum is present at the meeting.

7.2.8 Approval of responses to requests for interpretations

Interpretations are formal written responses to written (letter, fax, or e-mail) inquiries that are transmitted to the inquirer on ASME interpretation letterhead. Interpretations may be approved by either of the following methods:

- Committee or Cognizant Subcommittee
- Special Committee

Committee or Cognizant Subcommittee – If the committee or subcommittee is voting on the interpretation, no member interest category shall have a majority. The voting options are no objection, objection, and not voting. ASME's accredited standards development procedures require that, when the vote is taken at a meeting, no objection by at least 2/3 of the members present is required to approve the interpretation, provided that a quorum is present.

When the vote is taken other than at a meeting, all objections and comments shall be considered and responded to, and attempts made to resolve the objections. The responses shall be made available to the members of the committee or subcommittee. If technical changes are made to the proposed interpretation as a result of consideration of comments, members shall be given an opportunity to express opposition to the changes. If, after consideration, objections cannot be resolved, they shall be provided to the members, along with the responses, and the members shall be given an opportunity to change their original vote.

ASME's accredited standards development procedures require no objection vote by at least 2/3 of the members voting to approve the interpretation, provided at least ½ of the members vote.

Special Committee – A special committee shall have at least five members, one of which shall be

the ASME staff secretary responsible for the standard. The other members shall be members of the committee or subordinate group responsible for the standard, as appointed by the Chair of the standards committee or cognizant subcommittee. No member interest category shall have a majority on the special committee. The voting options are no objection and objection. Votes may be conducted at meetings or via C&S Connect. All objections and comments shall be considered and responded to, and attempts made to resolve the objections. If technical changes are made to the proposed interpretation as a result of consideration of comments, members shall be given an opportunity to express opposition to the changes.

Interpretations are approved when all members of the special committee vote no objection. If, after consideration, objections cannot be resolved, the interpretation shall be submitted to the consensus committee or cognizant subcommittee for consideration.

7.2.9 Cases

Some ASME Committees, including the Performance Test Code and A112 Plumbing Standards Committees, issue cases. Cases represent alternatives or additions to existing requirements. Cases are usually intended to be incorporated into the code or standard at a later date. When used, requirements prescribed in Cases are mandatory in the same sense as the text of the code or standard. However, users are cautioned that not all Jurisdictions or owners automatically accept Cases. The most common applications for Cases are:

(a) To permit early implementation of an approved revision based on an urgent need;
(b) To permit the use of a new material for construction;
(c) To gain experience with alternative or additional requirements prior to incorporation directly into the code or standard.
(d) To clarifying the intent of specific requirements

Cases are approved by ASME, but are not subsequently submitted for ANSI approval. Procedurally, Cases are handled like standards actions, except for the following:

- The Project Initiation System process is not followed.
- Announcement for public review in ANSI Standards Action is not done.
- The Case is not submitted for ANSI approval.

Cases are approved for use immediately following Supervisory Board approval and are usually made available on the applicable Committee Page on C&S Connect. For some committees, cases do not expire. Instead they exist until action is taken to annul them due to incorporation of their provisions into a standard, or because the cases are no longer needed. For the Standardization & Testing Department cases are required to be reviewed once every five years to determine whether the Case should be: a) annulled because it is no longer needed or has been incorporated into the standard, b) reaffirmed because it is still needed, but no changes are needed; or c) revised because it is still needed, but changes are necessary.

7.2.10 Robert's Rules of Order

On questions of parliamentary procedure not covered in ASME's procedures, Robert's Rules of Order shall be used - http://www.robertsrules.org/

Appendix 1 - Guidelines on Use and Future Maintenance

ASME Standards and Certification Board of Directors tasked Strategic Project Team 3 with *developing guidelines for mentoring of volunteers* with the goal of improving volunteer recruitment and retention. One of the projects SPT-3 undertook towards this goal was the development of a *Volunteer Handbook*, now called the "ASME Codes and Standards Committee Handbook". The purpose of this handbook is to provide in one package a convenient and easy-to-use reference that describes the standards development process within ASME, and the roles and responsibilities of volunteers and staff.

In the early stages of development of the handbook, it was debated at length as to how much detail to put into the handbook, and whether to produce a handbook that is *generic* and could be used by all volunteers, or to place detail in the handbook that would be specific to each area of the Standards and Certification organization (e.g. Pressure Technology). It was decided that a handbook would best serve volunteers if it did contain specific details for the area of Standards and Certification they are serving. The draft handbook prepared by SPT-3 was customized for Pressure Technology and contains roughly 85% generic material, and 15% specific to BPTCS committees. The other Supervisory Boards are encouraged to produce a Handbook for their volunteers and the purpose of this document is to highlight those sections of the handbook that would need to be customized by the other Supervisory Boards.

The handbook contains seven chapters covering the following topics:

1. Introduction
2. Role of the Volunteer
3. Role of ASME Staff
4. How Does Someone Become a Participant?
5. Committee Organization and Operation
6. How Does the Work Get Done?
7. Process and Procedures

Of these seven chapters, only Chapters 4, and 5 contain content specific to BPTCS committees. Below is a summary of the sections in these chapters that SPT-3 has identified as needing to be *customized* by other Supervisory Boards. If any of the other Supervisory Boards feel there are other sections that would be appropriate to customize to apply to their activities, they should so advise the ASME Continuous Improvement Committee.

CHAPTER	PARAGRAPH	SUBJECT
4	4.3.2	List of Standards Committees reporting to the Supervisory Board
5	5.5	This chapter describes the committee organization and operation, and is specific to each Supervisory Board. For the Pressure Technology version of the handbook, the BPV committees were used as the example to describe committee organization (standards committee and sub tier committees).
6	6.3.4	Board Specific Meeting Information. This paragraph describes some examples of committee meeting

		schedules, and the types of activities that take place at meetings. The examples used in this paragraph are PTCS committees, so other areas may want to revise to include examples of their committees.

7.3 MAINTENANCE OF THE ASME CODES AND STANDARDS COMMITTEE HANDBOOK

The ballot of the ASME Codes and Standards Committee Handbook produced numerous comments concerning future maintenance of this document. Of special concern was the possibility that the material in one or more versions of the handbook would become out of date relative to other ASME documents. Examples cited were the ASME Training Modules, the ANSI Accredited Procedures, and the Guide to the Accredited Procedures. This was discussed by members of SPT-3, and the team's recommendation is that those sections of the handbook that are defined as *generic* (see above) would be maintained by the Continuous Improvement Committee. Those sections of the handbook that are *customized* by a Supervisory Board would be maintained by that Supervisory Board. SPT-3 recommends an annual review of the handbook(s) be conducted by both the Continuous Improvement Committee and each Supervisory Board.