

Section XII – A New Addition to the ASME Boiler And Pressure Vessel Code

Transport tanks are a vital link in global commerce. There are over one million hazardous materials shipments per day in the U.S.

Three to four billion tons of hazardous materials are shipped annually in the U.S. The U.S. exports \$80 billion and imports \$74 billion of hazardous materials annually, excluding petroleum. When transport tanks handle the shipments, the U.S. Department of Transportation (DOT) is responsible for their safety.

In 1996 the ASME Board on Pressure Technology Codes and Standards (BPTCS) heard a presentation by the DOT on the activities of the Research and Special Programs Administration. DOT described the different types of packaging that are used for hazardous materials and the standards they developed for some of the packaging systems. There are standards that include requirements for "ton tanks" developed by the railroad industry, high-pressure gas cylinders from the Compressed Gas Association and portable tanks constructed in accordance with the ASME Boiler and Pressure Vessel Code (BPV Code).

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Vessels used for transporting goods present some unique design considerations, making the existing BPV Code somewhat inappropriate. The purpose of the DOT presentation was to open a dialogue with ASME on how the BPV Code can address the special considerations required for transport tanks.

There were a number of reasons for the DOT request to ASME. Among them were to:

- Create an internationally accepted code that is also acceptable to the DOT
- Establish an accreditation program for manufacturers of transport tanks
- Establish requirements for a third-party inspection program and for inspectors involved with both the fabrication process and in-service inspection
- Incorporate industry consensus standards into the US federal regulations as required by Public Law 104

The BPTCS agreed to form a group to work on producing a standard meeting the guidelines set forth by the DOT. A new Subcommittee on Transport Tanks was formed within the structure of the Boiler and Pressure Vessel Standards Committee and designated Subcommittee XII. This subcommittee operates under the following charter:

"This committee is responsible for the development of codes and standards covering the construction (all-inclusive term comprising materials, design, fabrication, examination, inspection, testing, certification and pressure relief) and continued service of transport tanks used for the carriage of dangerous goods by all means of transport (road, rail, air, and sea). The committee will also

develop criteria for accreditation of manufacturers of these tanks. The codes and standards developed by this committee are to be suitable for reference by regulatory authorities and safety organizations worldwide."

Subcommittee XII began the task of preparing a new standard that is to be usable by the regulated industry with minimal changes to the current way of doing business. To assist in the task of preparing a new standard three subgroups were formed reporting to Subcommittee XII. These subgroups are General Requirements, Fabrication and Examination, and Design and Materials. It should be noted that all members serving on the subcommittee and subgroups are volunteers from industry and government representing manufacturers, users, insurance companies, regulatory agencies and material suppliers. This broad based support helps assure the final product is a consensus standard that serves the needs of all aspects of the industry and the general public.

The latest draft of Section XII on Transport Tanks was recently distributed to the Boiler and Pressure Vessel Standards Committee for approval. There were a number of negative votes and comments on the draft that require resolution before the standard is finally approved to become part of the BPV Code. Because of this, any observations on the current standard should be considered preliminary and subject to change. With this in mind some of the features of the draft are described below.

There were a number of issues that had to be considered before specific requirements could be drafted. Examples include:

- Expanding the kinds of inspection performed by third parties; for example, a

"Certified Individual" may possibly provide inspection for construction, repair or alteration of low-pressure vessels not now stamped.

■ Developing requirements for the unique problems of pressure relief devices for transport tanks, including requirements for relieving in an overturned position and set pressures well above MAWP to minimize the release of toxic materials.

The basic scope of the proposed standard covers pressure vessels intended for transporting dangerous goods with design pressures appropriate for the transportation mode and volumes greater than 120 gallons. Pressures normally incident to transportation, including loading and unloading operations, are to be considered.

The latest draft of Section XII consists of ten parts, covering: general requirements, materials, design, requirements for welded

construction, fabrication and repair requirements, NDE, testing, pressure relief devices, stamping and certification, and continued service including repair and alterations. Many portions of the draft have their origins in already existing rules of the BPV Code, such as Section VIII, Division 1.

Subcommittee XII is also writing requirements for specific types of service such as portable tanks, ton tanks, cargo tanks, cryogenic vessels and rail tank cars. These types of equipment will be addressed in "Modal Appendices" to be included in Section XII. The first edition of Section XII will include a modal appendix for transport tanks.

As stated earlier, the Boiler and Pressure Vessel Standards Committee reviewed a preliminary draft of Section XII and made significant comments. Subcommittee XII is

in the process of addressing these comments and in some cases making revisions in the draft to address them. The volunteers working on Section XII have invested more than five years in developing these requirements.

While revisions to the draft are necessary to address all concerns, the ultimate goal is to produce a technically sound document with the same consensus process used to publish the BPV Code. It is anticipated that a draft will be approved in mid 2003 with publication to follow in about six months. ASME will make announcements regarding the publication date when final approval is achieved for Section XII.

BPVC Data Report Forms on the Internet

ASME Data Report Forms, as referenced in the Boiler and Pressure Vessel Code for recording of code-related information, are now available as downloadable pdf files. An index of available forms is available on ASME's internet site:
www.asme.org/codes

ITER Fusion Code Development Project

The ASME Codes & Standards Technology Institute (CSTI), ANRIC Enterprises Inc., and the Thermal and Nuclear Power Engineering Society (TENPES) of Japan have initiated the first phase of development activities associated with a new draft Code for Fusion Power Facilities, including the International Thermo-nuclear Experimental Reactor (ITER). ITER is an experimental fusion power facility to be developed with international cooperation at a proposed site in Canada, Spain, France, and Japan. One of the preparatory items is establishment of the codes and standards to be used for construction, operation, and maintenance of ITER. Completion of Phase 1 work is expected in the first quarter of 2003.

The initial project approach is to develop a draft Code Case on Fusion Power Facilities. It will become in the future the new Section III Division 4 of the ASME Boiler and Pressure Vessel Code, which will be dedicated to the codes and standards for fusion power. The approach has been

discussed with the Section III Task Group on Fusion Power Facilities (TG-FPF), Standards Committee of the B&PV Code, and the Board on Nuclear Codes and Standards (BNCS). Completion of the entire project is expected to allow presentation to the BNCS by the first meeting in 2005.

ASME International formed CSTI in November 2002 to ensure that ASME standards committees are provided with a continuing source of research in the technologies that they cover. CSTI provides the research and technology development needed to establish and maintain the technical relevance of codes and standards. Visit the web page (still under construction) at www.csti.asme.org for more information.

ISO 9001: 2000 Registration – Combine ASME Shop Review and ISO Assessment/ISO Renewal

ASME International has developed a program that unites ASME Boiler and Pressure Vessel Accreditation with ISO 9000 Registration. You may wish to consider combining ISO 9000 registration (or ISO 9000 renewal) along with your upcoming ASME shop review for the above mentioned certificate.

The benefits of the program are:

A Simplified Quality System – One quality manual can now be used for both systems.

Reduced Audit/Review Time – One review can now be performed on one occasion for both programs.

Quality Management Consistency and Ease of Implementation – One review means one audit team.

Potential Cost Savings – One integrated quality system means hours of potential cost savings by maintaining a single program rather than two.

For more information, contact:
nothoferw@asme.org

New VP for Conformity Assessment

At the ASME Summer Annual Meeting in June, Madiha M. Kotb, P.E. will assume the position of ASME Vice President, Conformity Assessment for a three-year term, succeeding Arthur J. Spencer.

Raised in Cairo, Egypt, Ms. Kotb is a graduate of Loyola (now Concordia) University. She has worked for the Canadian Province of Quebec since 1981 and has served in the

capacity of chief inspector since 1989. As ASME Vice President, Conformity Assessment, Ms. Kotb also chairs the Board on Conformity Assessment. This Board, composed of volunteers from industry, government, and academia establishes the overall policies for all ASME conformity assessment programs.

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Obituaries

ASME regrets to announce the deaths of two of its consultants who performed Boiler & Pressure Vessel reviews and surveys: Steven M. Matthews on August 30, 2002 and John D. McLoughlin on January 3, 2003.

A 1997 graduate of Texas Tech University, Mr. Matthews was an ASME Team Leader in both the nuclear and non-nuclear programs since 1995. Prior to that he was project manager for the U. S. Nuclear Regulatory Commission and chief inspector for the Texas Department of Labor & Standards Boiler Division. While with the NRC, Mr.

Matthews was also served as ASME Vice President for Accreditation, Registration, and Certification.

Mr. McLoughlin had served as an ASME Team Leader since 1979, first as a consultant and staff member of the National Board of Boiler and Pressure Vessel Inspectors, and since 1995 as an ASME consultant. Prior to that he served in the United States Coast Guard and as an inspector for the Commercial Union and Royal Globe insurance companies.

ASME Conformity Assessment – Certification and Accreditation Resources

www.asme.org/cns/accreditation

- ISO 9001: 2000 Registration – Combine ASME Shop Review and ISO Assessment/ISO Renewal
- Boiler & Pressure Vessel – International/Domestic Application Forms
- BPV News & Events/the Mark Archive/Resources
 - Data Report Forms
 - Certificate Scopes
 - Code Section and Ordering Information
- Nuclear Components - International/Domestic Application Forms
- Nuclear Materials - International/Domestic Application Forms
- List of Current Authorized Inspection Agencies (AIA's)
- List of Pressure Relief Device Holders
- Worldwide Certificate Holder Search

Managing Director, Conformity Assessment – David Wizda, 1-212-591-8590, wizdad@asme.org
Director, Accreditation and Certification – Alan Bagner, 1-212-591-8580, bagnera@asme.org

ACCREDITATION PROGRAMS

- AIA Qualification of Authorized Inspection Agencies, nuclear and non-nuclear, based on the ASME QAI-1 Standard (formerly N626.1)
Bibi Rahim, 1-212-591-8585, rahimb@asme.org & Ken Baron, 1-212-591-7019, baronk@asme.org
- BPV Boiler and Pressure Vessels
Joseph Pang, 1-212-591-8525, pangj@asme.org; Sandra Bridgers, 1-212-591-8583, bridgers@asme.org; Ken Baron, 1-212-591-7019, baronk@asme.org
- N-type Nuclear component manufacturers and assemblers (vessels, tanks, pressure piping, and pressure relief devices)
Bibi Rahim, 1-212-591-8585, rahimb@asme.org & Maria Tromba, 1-212-591-8586, trombam@asme.org
- PRD Pressure relief device testing laboratories and authorized observers
Joseph Pang, 1-212-591-8525, pangj@asme.org; Sandra Bridgers, 1-212-591-8583, bridgers@asme.org; Ken Baron, 1-212-591-7019, baronk@asme.org

- QEI Elevator Inspector certifying organizations
Bibi Rahim, 1-212-591-8585, rahimb@asme.org & Joseph Pang, 1-212-591-8525, pangj@asme.org
- QSC Nuclear material organization (material manufacturers and suppliers)
Bibi Rahim, 1-212-591-8585, rahimb@asme.org & Maria Tromba, 1-212-591-8586, trombam@asme.org
- RTP Manufacturers of reinforced thermoset plastic corrosion resistant vessels
Bibi Rahim, 1-212-591-8585, rahimb@asme.org & Maria Tromba, 1-212-591-8586, trombam@asme.org

REGISTRATION PROGRAM

- ISO Registration of suppliers of mechanical equipment and related materials, items, and services in the industries and sectors associated with the art, science, and practice of mechanical engineering
Christine Bujal, 1-212-591-8592, bujalc@asme.org & Ken Baron, 1-212-591-7019, baronk@asme.org

CERTIFICATION OF PERSONNEL

- QHO Operators of hazardous waste incinerators
Sandra Bridgers, 1-212-591-8583, bridgerss@asme.org & Maria Tromba, 1-212-591-8586, trombam@asme.org
- QMO Operators of medical waste incinerators (MWIs)
Sandra Bridgers, 1-212-591-8583, bridgerss@asme.org & John Millman, 1-212-591-8584, millmanj@asme.org
- QRO Operators of resource recovery facilities processing municipal solid waste (MWCs)
Sandra Bridgers, 1-212-591-8583, bridgerss@asme.org & John Millman, 1-212-591-8584, millmanj@asme.org
- QFO Operators of high capacity fossil fuel fired plants
Sandra Bridgers, 1-212-591-8583, bridgerss@asme.org & John Millman, 1-212-591-8584, millmanj@asme.org
- Y14 Geometric dimensioning and tolerancing professionals (GDTP)
Sandra Bridgers, 1-212-591-8583, bridgerss@asme.org & John Millman, 1-212-591-8584, millmanj@asme.org

Promotion Manager, Codes and Standards, Bill Nothofer, 1-212-591-8033, nothoferw@asme.org



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