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ASME General Position Paper

STANDARDS AND TECHNICAL BARRIERS TO TRADE

Executive Summary

The World Trade Organization's (WTO) Agreement on Technical Barriers to Trade (TBT) recognizes the growing impact of standards and conformity assessment on global commerce and the potential to either facilitate or impede international trade¹. The American Society of Mechanical Engineers (ASME) supports the position that the principal criterion for acceptance as an international standard is the extent of its actual acceptance and use in the global arena.

ASME recognizes the role and authority of the WTO Committee on Technical Barriers to Trade over the implementation of the TBT Agreement and views the principles outlined in the *Decision of the Committee on the Principles of International Standards, Guides and Recommendations*² as a key to executing ASME's mission "to develop the preeminent, universally applicable codes, standards, conformity assessment programs, and related products and services for the benefit of humanity."³ The federal government, through its international trade negotiators and representatives, should support industry standards and conformity assessment programs that ensure the high quality and safety of manufactured products, improve the efficiency of production, and facilitate the conduct of international trade. In addition, they should continue to recognize that many U.S. domiciled standards developing organizations apply the WTO principles to their standards-setting process and continue to promote the acceptance of multiple paths to achieving global technical alignment of standards and conformity assessment programs. Standards produced using a process that adheres to the principles of transparency, openness, impartiality and consensus should be designated as international standards.

I. Introduction

Founded in 1880, the American Society of Mechanical Engineers (ASME) is an international not-for-profit engineering society focused on safety, technical, educational, and research issues. It serves a membership of over 130,000 individuals worldwide; there are no corporate members. ASME conducts one of the world's largest technical publishing operations; holds approximately 50 technical conferences, symposia, and workshops; manages a portfolio of over 300 learning and development courses; is responsible for approximately 500 standards, developed and maintained by technical subject matter experts from 60 countries, and used in over 100 countries; and certifies companies in over 90 countries.

The formation of the World Trade Organization (WTO) in 1995 provided the framework for facilitating the development of international markets, with attendant benefits to all WTO members and their citizens. ASME subscribes to the underlying beneficial principle stated in the Preamble of the Agreement establishing the WTO, which calls on members to conduct their trade relations in a manner that will “raise standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of development.”⁴

The Agreement on Technical Barriers to Trade (TBT), also established in 1995, encourages the development of international standards and conformity assessment programs and seeks to ensure that “technical regulations and standards, including packaging, marking and labeling requirements, and procedures for assessment of conformity with technical regulations and standards do not create unnecessary obstacles to international trade.”^{5, 6} In 2000, a *Committee Decision* was issued on the principles for the development of international standards with respect to the TBT Agreement. The decision established principles concerning transparency, openness, impartiality and consensus, relevance and effectiveness, coherence and developing country interests, as well as a code of good practice for the development, adoption and application of standards.²

As a major international standards developing organization (SDO) and engineering Society, ASME has a leadership role in the international community in supporting WTO TBT objectives and principles and in ensuring that standards maintain high levels of safety, quality, and efficiency while promoting trade and competition.

II. Position

ASME supports the concepts of free and equitable access to international markets and supports the TBT Agreement as well as the principles outlined in the Decision of the TBT Committee concerning transparency, openness, impartiality and consensus, relevance and effectiveness, coherence, and developing country interests that characterize process for the development of international standards.

ASME believes the U.S. federal government, through its international trade negotiators and representatives, should:

- Ensure mechanisms promoting free trade incorporate commitments to timeliness, technical merit and public safety;
- Recognize that some U.S.-domiciled standards developing organizations produce standards that meet the WTO Principles on the Development of International Standards;
- Base the relevance and effectiveness of technical standards on objective tests of acceptance and use in the global market;
- Provide industries and governments flexibility in their approaches to technical alignment of standards and recognize that no single standards development methodology is best for every sector⁷;
- Protect intellectual property rights; and

- Serve as a resource for resolving trade disputes emerging from the use of standards and conformity assessment programs as technical barriers to trade.

III Discussion

A. Discussion on WTO Principles for the Development of International Standards

The impact of standards on international trade and competition, the existence and necessity of sectoral differences, and the market-driven framework of the U.S. standards system are articulated in the U.S. Department of Commerce publication, *Standards & Competitiveness: Coordinating for Results*⁸ as well as the *United States Standards Strategy*⁹. Both documents recognize standards and conformity assessment programs as being essential to a sound national economy and for the facilitation of global commerce.

For technical standards to facilitate international trade, several conditions must be satisfied. The scope and content of the standard must adequately address a defined need and at the same time incorporate appropriate safety provisions. The TBT Agreement gives preference to performance-based technical regulations; ASME supports this position, noting that at the standards level, more prescriptive provisions are often appropriate, when consented to by affected parties.

Further, the *Committee Decision* establishes principles concerning transparency, openness, impartiality and consensus, relevance and effectiveness, coherence, and developing country interests. ASME develops and maintains hundreds of standards and conformity assessment programs – covering a wide range of products and services – which are used throughout the world and in accordance with these principles.

ASME recognizes the benefits of *coherence* via sustained efforts at international harmonization of standards and conformity assessment activities, while at the same time recognizing that there is no single best approach for achieving this goal. In addition to differing market preferences and the existence of well established historical conventions, other reasons for varying approaches include differences in legal statutes; availability of resources; levels of capacity and economic development; and societal norms of behavior.

Fostering multiple approaches to standards development will afford the flexibility needed in order to ensure that standards and conformity assessment programs are most responsive to the changing needs of industry and governments and most relevant for their intended markets. The determination of which approach to be taken is typically based on how ASME can best respond to the needs of the international and domestic markets in a given sector and to the public health and safety needs of people and governments around the world. For example, in some instances, an existing prescriptive standard will remain dominant for international trade. At other times, a performance-based approach for technical alignment might be taken¹⁰. For instance, it may not be possible to technically align different existing prescriptive design standards with each other but it may be possible to develop a single performance-based standard that would be compatible with each of the different design standards (e.g., a performance-based ISO standard that references ASME and other international standards that achieve the required results); such alignment would be in keeping with the intent of the TBT provisions. While alignment with other international standards is a goal, it is important to note

that at times U.S. health and safety standards, as well as trade competitiveness, may be at risk of being compromised when the push for alignment by non-U.S. parties is unrelenting. The flexibility of multiple approaches provides relief from such pressures.

As a professional technical society established to enhance the welfare of the general public, the principles of *transparency, openness, impartiality, and consensus* have always been cornerstones of ASME's standards development activities. Not only are all ASME standards development meetings free and open to the general public, but membership on ASME standards development committees is free and open to all technically qualified and materially affected stakeholders, regardless of citizenship, nationality or affiliation. Well established procedures are in place to ensure due process and fair and equitable treatment of all – as well as to ensure that relevant stakeholder interests are balanced. In addition, activities related to ASME standards initiatives are published on its public website, including: policy and standards development procedures; membership information; meeting announcements; new project notifications; and availability of draft standards. Solicitation of public comments is conducted via the American National Standards Institute (ANSI) and all comments are subject to peer review and afforded due process. Contributions at every stage of standards development are facilitated via the use of electronic tools in order to minimize limitations based on geographic location. Involvement and impartial treatment of the best and brightest people from around the world is a part of ASME's vision, and the principles of *transparency, openness, impartiality and consensus* are keys to ensuring that ASME's standards and conformity assessment programs are technically sound, commercially relevant and in the public interest.

ASME's standards are reviewed at least every 5 years for continued *relevance*, with many being maintained in a continuous state of review to ensure they are optimally responsive to regulatory and market needs, as well as scientific and technological developments. ASME's commitment to being responsive to stakeholder needs is taken a step further in that it provides technical interpretations (at no cost) in instances where the existing wording in a standard is construed as ambiguous. In addition, ASME has a dedicated organizational unit ("Standards Technology, LLC") that performs research and development in order to provide a scientific justification for the incorporation of new technology or processes into a standard or conformity assessment program. This helps ensure that standards can rapidly incorporate leading edge technology while also providing for technical safety and quality. In general, ASME will continue to support its standards as international standards, however, in the event there is overwhelming evidence that global markets have chosen a competing standard, ASME would act to withdraw its standard from the international arena. ASME will continue to develop and maintain codes and standards that are used and needed solely by U.S. industries, when appropriate.

The *Committee Decision* also provides for a *development dimension* to enable effective participation in standards development and to offer technical assistance to other members (and developing country members in particular). Consistent with these provisions, ASME provides equal access to information, opportunities for direct participation, and immediate support for technical inquiries at no cost. In addition, ASME has been proactive in providing assistance to developing countries (and others, as appropriate). Consultations with both private and government bodies, free or low cost technical training, organizational assistance, and general outreach are all integral parts of ASME's ongoing operations. ASME will continue to avail itself to play a leading role in public-private partnerships, such as the U.S. Agency for International Development (USAID)-funded Standards Alliance, and its strong engagement in global

engineering development programs such as Engineers Without Borders (EWB) and Engineering for Change (E4C).

In addition to addressing standards development, five articles of the TBT Agreement deal with conformity assessment procedures. ASME certifies over 7,000 manufacturers of boilers, pressure vessels and related equipment in over 70 countries. ASME's conformity assessment programs adhere to Article 5 of the TBT Agreement, and ASME works closely with central, local, and regional governmental entities, and non-governmental bodies, to ensure equitable treatment for all materially affected parties.

B. Discussion on the Differences in Standards Development Processes

Policy makers and stakeholders engaged in international trade should be aware of key differences in the processes leading up to the presumption of consensus within the framework of various standards development organizations. There still exists some misperception that only standards developed by ISO or the IEC are "international standards"¹¹. The ISO and IEC standards development processes provide each participating country a single vote, which as a political device may be appropriate. However, when standards are expected to fill both trade normalization and safety roles, this system provides no assurance that appropriate levels of technical review will be achieved. In the case of both ISO and many non-U.S. national standards, technical adjudication provisions are not directly provided and consequently, technical interpretation of standards provisions is cumbersome and subject to lengthy processes. Additionally, most non-U.S. national and regional standards development organizations are closed to nonmembers and as a result, U.S. participation in their processes is inhibited if not altogether proscribed. Lastly, the "one country, one vote" process employed by ISO and IEC could potentially result in regional trading blocks dominating the interests of other member bodies¹².

ASME's process ensures that all stakeholders – both direct participants and members of the general public – have the opportunity to submit comments and ensures a formal response is received following due consideration of the comment. Further, votes submitted on new or revised standards are classified by stakeholder interest¹³ in order to ensure that the resulting standard or conformity assessment program – in addition to being technically sound and commercial relevant – reflects a balanced solution. Procedural due process provides the ability for any person or corporate entity to have direct access to the standard development process and to have an impartial hearing of appeals on actions. Such direct access is lacking in many other standards development processes, including those of ISO.

ASME is a strong supporter and believer in ISO; however, clearly, there are international standards other than ISO standards. A standard's origin, however, may be less important to the manufacturer, user, and regulator than the quality, technical merit, and the standard's applicability to the problem at hand. This is especially important when applying the language of the TBT Agreement, including the terms *international standards* and *international body*. ISO standards acquire the title of "international standards" solely by virtue of the membership composition of ISO. However, this is no guarantor of the technical quality or commercial merit of the resulting standards. Other standards acquire the title of "international standard" by actual use in the global market; the ones that survive are generally solid technical standards.

C. Discussion on the Protection of Intellectual Property Rights

In order to continue to serve the needs of global stakeholders while incorporating the latest in technological advancements, it is vital that standardization processes respect the rights of intellectual property owners while ensuring users have access to the intellectual property rights (IPR) incorporated in standards. ASME policy discourages referencing patented items and trademarks in standards and instead recommends the development of performance language that would enable the use of patented technology.¹⁴ However, in some instances, the best technology for a technical standard is a proprietary technology, protected by one or more patents, and a given standards development committee may opt to incorporate patented technology in proposed standards in order to make the most advanced, best technology available to all, provided that the owner of the technology agrees to make the technology available to users of the standard under reasonable terms and conditions.¹⁵

The protection of IPR also extends to the copyright of the standards themselves, as revenue from sales of the standard is generally used to offset the costs associated with managing the standards development process. It is important to understand that the term “reasonably available” does not mean imply “free” standards. The White House Office of Management and Budget (OMB) 2016 update to OMB Circular A-119 reaffirmed that public interests are well served by the Office of the Federal Register’s (OFR’s) policies supporting government use of private sector standards in a context supported by U.S. copyright law and U.S. international trade obligations.

IV. Conclusions and Recommendations

The United States Trade Representative and other public and private U.S. bodies involved in TBT issues should continue to promote technical regulations and market accepted standards meeting the intent of the TBT provisions as international standards.

Strong emphasis should be given to alternatives to ISO/IEC standards, if these alternatives satisfy the WTO’s Principles for the Development of International Standards. This is especially true in cases when the global market has made effective use of other standards that meet trade and safety needs. Governments should continue to exercise the option of selecting those international standards which best meet their regulatory and public safety objectives.

The federal government should work with state and local government bodies that adopt various standards and/or conformity assessment schemes as means of fulfilling local health and safety statutory obligations to assure a uniform understanding and implementation of the provisions of Articles 3 and 11 of the TBT Agreement.

¹ The Agreement on Technical Barriers to Trade (TBT) was adopted at the conclusion of the Uruguay Round of General Agreement on Tariffs and Trade (GATT) negotiations in conjunction with the Agreement establishing the WTO.

² Decision Of The Committee On Principles For The Development Of International Standards, Guides And Recommendations With Relation To Articles 2, 5 And Annex 3 Of The Agreement G/TBT/1/Rev.9

³ The full Mission of ASME Standards & Certification is to “Develop the preeminent, universally applicable codes, standards, conformity assessment programs, and related products and services for the benefit of humanity. Involve the

best and brightest people from around the world to develop, maintain, promote, and employ ASME products and services globally.”

⁴ Preamble to the “Agreement Establishing the World Trade Organization”, Marrakech Agreement, 1994

⁵ Preamble to the World Trade Organization “Agreement on Technical Barriers to Trade”, Uruguay Agreement, 1995

⁶ Article 4 of the TBT Agreement establishes a “Code of Good Practice for the Preparation, Adoption and Application of Standards”. The text of the Code is contained in Annex 3 of the TBT Agreement.

⁷ As used in this document, *sectors* are different industries or markets (e.g. pressure equipment, telecommunications, pharmaceuticals, etc.)

⁸ “Standards & Competitiveness: Coordinating for Results”, U.S. Department of Commerce, 2004

⁹ “United States Standards Strategy”, American National Standards Institute, 2015

¹⁰ OMB Circular No. A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities” (2016), states a “*performance standard*” refers to a standard that states requirements in terms of required results, but without stating the methods for achieving the required results. A performance standard may define the functional requirements for an item, operational requirements, and/or interface and interchangeability characteristics. A prescriptive standard, by contrast, may specify design requirements, such as materials to be used, how a requirement is to be achieved, or how an item is to be fabricated or constructed..”

¹¹ International Organization for Standardization and International Electrotechnical Commission, respectively

¹² ISO Technical Committee 85 on Nuclear Energy, for example, has 18 Participating Countries, 8 of which are members of the European Union

¹³ Examples of interest classifications include: producers and manufacturers; purchasers, owners and consumers; employees and labor interests; governmental bodies having regulatory power or influence over the field in question; specialists having expert knowledge; designers; insurance interests; installers and erectors; utilities; and distributors and retailers.

¹⁴ ASME CSP-59, “Referencing Patented Items and Trademarks In Codes and Standards”

¹⁵ For a full discussion on Intellectual Property Rights with respect to standards, visit

www.wipo.int/sme/en/documents/ip_standards.htm
