

**Written Testimony of the American National Standards Institute
before the
U.S. House of Representatives Committee on Science, Space, and Technology**

**Hearing: *Promoting Innovation, Competition, and Economic Growth:
Principles for Effective Domestic and International Standards Development***

February 29, 2012, 10 a.m.

Statement of

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Introduction

Standards and conformity assessment activities are inseparably linked to all facets of our national economy and are vital to the continued global competitiveness of our national economy. They influence an estimated 80% of global merchandise trade – or about \$13 trillion.

The U.S. has the most flexible and democratic standardization system in the world. Our system thrives on the active engagement of all stakeholders – public- and private-sector – giving us a competitive advantage over countries that follow a top-down approach. It is the market itself, through an open, consensus-based process, that determines when a standard should be developed.

The public-private partnership is a key part of what makes our system successful, and the American National Standards Institute (ANSI) is committed to our role as a neutral forum and convener of these diverse parties. We work to leverage the power of standardization through strategic partnerships, both domestic and international, and through targeted activities that help U.S. organizations develop and utilize standards for business growth.

What is ANSI?

ANSI is a private non-profit organization whose mission is to enhance U.S. global competitiveness and the American quality of life by promoting, facilitating, and safeguarding the integrity of the voluntary standardization and conformity assessment system. ANSI's membership is comprised of businesses, professional societies and trade associations, standards developers, government agencies, and consumer and labor organizations. Through this network of members, the Institute represents the diverse interests of more than 125,000 companies and organizations and 3.5 million professionals worldwide.

For more than ninety years, ANSI has served as coordinator of this nation's private-sector led and public sector-supported voluntary consensus standards and conformity assessment system. We speak as the U.S. voice in standards and conformity assessment forums around the globe. ANSI is the official U.S. representative to the International Organization for Standardization (ISO) and, via the U.S. National Committee, the International Electrotechnical Commission (IEC), and is a U.S. representative to the International Accreditation Forum (IAF). A memorandum of agreement between ANSI and the Commerce Department's National Institute of Standards and Technology (NIST) outlines a mutual understanding of the roles of each organization.

For more information about ANSI, please reference Annex A of this document.

The Strength of the Public-Private Partnership

From its very inception, the Institute has coordinated a public-private partnership to address and help resolve the critical issues that face the nation. The ANSI Federation has worked to build effective partnerships in two important areas:

1. between the government and the private sector; and
2. in consensus-building with linked domestic and international needs and activities.

The importance of these collaborative efforts has been officially recognized most recently in the December 2000 ratification of the Memorandum of Understanding (MOU) between ANSI and the National Institute of Standards and Technology (NIST), describing a partnership designed to "enhance and strengthen the national voluntary consensus standards system of the United States and to support continued U.S. competitiveness, economic growth, health, safety and protection of the environment."

Over the past nine decades, we have seen that the most effective solutions come about through a thoughtful, open, and consensus-based process. As the voice of the U.S. standards and conformity assessment system, ANSI leads and facilitates this process, providing the neutral forum where all affected stakeholders work together to:

- identify existing and emerging regulations, requirements and supporting standards and compliance programs;
- define where gaps exist; and
- recommend where additional work is needed.

One of the core principles of ANSI – and the standards community at large – is that of inclusion; that those who have an interest in an issue should be at the table when standards are developed. That includes businesses, consumers, government, academia, industry associations, and companies of all sizes.

As described in the principles of *the United States Standards Strategy*, standards must be based on:

Openness: "Participation is open to all affected parties."

Impartiality: "No one interest dominates the process or is favored over another."

Consensus: "Decisions are reached through consensus among those affected."

For more on the hallmarks of the U.S. standards and conformity assessment system, please see Annexes B and C.

Standards, Conformity Assessment, and Global Trade

We have heard time and again, first-hand from business leaders of companies of all sizes, that participation in standards development gives them the opportunity to:

1. shape the specifications that drive their products' acceptance;
2. capitalize on the efficiency and cost-savings measures that collaborative ingenuity provides; and
3. influence the international requirements that allow certain products to cross borders and take advantage of the global market.

The development and application of standards, technical regulations, and conformity assessment (e.g., testing, inspection, certification) has a significant impact on global trade. When developed and applied in an effective manner, standards and conformance open global markets for U.S. products and services. However, intentional or unintentional misapplication of standards and/or conformance activities can create trade barriers for U.S. exporters.

In the global marketplace, transparent, consensus international standards are part of the solution, not part of the problem. It is often the lack of *conformance* to a particular standard that is the problem, whether lead in toys, counterfeit drugs, or unsafe produce.

Congress has recognized in recent legislation for toys and food that monitoring and testing has to be done at the point of creation, not when products enter into our country. This has led to an increased awareness of third-party solutions – based upon international standards – that create a level playing field for all affected parties to participate. These solutions draw from a toolbox of conformity assessment resources – not just testing and inspection, but also systems auditing, accredited certification programs, and education and training.

The programs we have developed are committed to improving product safety and making global supply chains more transparent. They are designed to be sustainable and inclusive – involving every one affected by actions in the global marketplace. They are considerate of all types of suppliers – regardless of size or location. And they will advance the concept of "one standard . . . one test . . . accepted everywhere."

The U.S. government and the ANSI-led private sector standardization community, working together as a public-private partnership, should continue efforts to aggressively address individual trade barriers as they arise in international markets – both through advocacy and enforcement. These efforts not only help companies affected by specific barriers, but also send a message about the importance of fair and open trade and the U.S. commitment to ensuring that our trading partners fully implement any relevant trade agreements.

To advance the diverse interests of U.S. stakeholders, the U.S. government should continue to seek full implementation of the World Trade Organization (WTO) Technical Barriers to Trade (TBT) Agreement and annexes, as well as decisions taken by the WTO TBT Committee. Committing even more government resources to such activities can only be beneficial.

Domestic Standardization Activities and SMEs

The Subcommittee on Technology and Innovation has also expressed a desire for comment on the importance of small and medium-sized industries (SMEs) in global trade and would like to elicit further comment on how SMEs can become more competitive in the global marketplace.

SMEs are major drivers of economic growth, in both domestic and international venues. In the U.S. they provide a majority of private sector jobs and training opportunities for workers, account for half or more of gross domestic product, and play a key role in innovation and R&D. Input from SMEs into the development of voluntary consensus standards is essential to ensuring that these standards include the latest technology and best practices.

ANSI takes pride in our efforts to ensure that all interested parties – including SMEs – are welcomed and involved in standardization efforts. This formal commitment to reach out and include SME participation in the standardization process goes back to at least 1929, when ANSI's predecessor organization, the American Standards Association, signed an agreement with NIST's predecessor agency, the National Bureau of Standards, to provide assistance to small businesses and industries that lacked the means to engage in standardization themselves.

For a current example of this commitment in actions, in May 2011 ANSI's Homeland Security Standards Panel (ANSI-HSSP) hosted a workshop that focused on the unique needs of small businesses in preparing for the challenges of unforeseen catastrophes. The goal of the workshop was to identify actions needed to better reflect small business needs in standards and conformity assessment for preparedness. For small businesses in particular, resuming operations after a disaster depends on how prepared a business is to meet unexpected circumstances. And effective preparedness standards and conformance programs are a key tool.

Standards developers (SDOs) in the ANSI Federation are also very active in outreach to SMEs to foster their involvement in standards developing activities. For example, SAE International, an ANSI-accredited standards developer, publishes nearly 7,000 aerospace standards (in addition to others for ground vehicles). Over 950 of the committee members that develop these standards come from SMEs, and 70 of the committee officers on those committees come from SMEs. All-in-all, roughly 10% of all participants and leaders of SAE standards-creation efforts are SMEs.

In addition, more than half of the members participating in the ASTM International (also an ANSI accredited SDO) standards development committees are employed in enterprises with 250 or fewer employees. The challenges to SME participation include travel expenses to committee meetings, time and resources required to develop standards, and membership fees.

ASTM International and many other SDOs, provide their members with web-based resources that enable participation in the standards development process without the obstacles of travel, time or budgetary restrictions. While technical committees meet in person to develop standards, committees can also use a suite of online standards development tools, including online forums, virtual meetings, electronic balloting, and more. These tools not only enhance the capability of most SMEs to participate in standards development, but allow the more timely development of needed standards.

ANSI is committed to supporting our 260 accredited SDOs' efforts in their inclusiveness, and believes that we and the U.S. government should do even more to foster this engagement.

International Standardization Activities and U.S. Competitiveness

As the U.S. member body to ISO, and the IEC via the U.S. National Committee, ANSI works to ensure that all U.S. interests are considered in the formulation of U.S. positions in these international standards bodies. ANSI provides a strategic link between U.S. industry, those organizations developing standards that support U.S. innovation and competitiveness, and the global arena.

It is crucial that we approach ISO and IEC with a clear and strong national position, and that we effectively leverage relationships with our partners internationally to gain support for U.S. positions. ANSI is committed to working to improve access to information on U.S. activities in ISO and IEC, and will coordinate efforts with agencies to ensure that all interested government stakeholders are aware of opportunities for engagement. Decisions made about our national standardization system and our priorities for action reach far beyond our borders, especially when it comes to the continued success of our products, services, and workforce on the global stage.

In the U.S., input into the ISO and IEC processes are coordinated by U.S. Technical Advisory Groups (TAGs). The U.S. government should also give greater support to the

U.S. TAGs. The government can accomplish this by encouraging qualified government technical personnel to participate in SDO and TAG efforts whenever possible, as a matter of policy. By becoming more involved and doing so in a more coordinated fashion, the government can alert the impacted communities when a cross-sector, standards-based solution is needed, and SDOs in turn can alert the government when key standards are being developed or revised.

The key to our nation's continued success on the global stage is to make sure that:

1. all U.S. stakeholder needs and voices are taken into account;
2. that we approach ISO and IEC with clear and strong national positions both from the technical and policy perspectives; and
3. that we effectively leverage relationships with our partners internationally to gain support for these positions.

To that end, ANSI works with U.S. TAG Administrators to attract greater and diverse government and industry participation in ISO and IEC activities. To facilitate this greater level of engagement, ANSI will continue to work to improve access to publicly available information on TAG activities, and will coordinate efforts with federal agencies to ensure that all interested government stakeholders are aware of opportunities for participation and encourage them to do so.

SMEs in International Standardization

Both ISO and IEC have well-developed programs of ensuring inclusion in their standardization programs. In fact, of the U.S. companies that participate in TAGs for the U.S. National Committee of the IEC, well over half are small or medium-sized businesses.

The ISO document "Engaging Stakeholders and Building Consensus" discusses ISO's efforts to reach out for broad-based stakeholder engagement for participation in ISO activities, including:

- reaching out to previously uninvolved groups whether by direct "inquires, internet searches, networks, personal approaches, advertisements, etc.";
- requiring that there are "no undue financial barriers to participation"; and
- where useful, "provide specialized training programs and orientation sessions to prepare delegates and experts."

Organizations that administer U.S. TAGs utilize a variety of methods to engage SMEs in the standards development work, including web-based resources that not only minimize budget, time, and travel issues, but allow the more timely development of needed standards.

ANSI has over 200 accredited U.S. TAGs that participate in 565 ISO Committees that develop international standards for a broad spectrum of industry sectors. While the level of SME participation varies depending on the industry sector, in many cases over 50% of the companies that participate in ISO activities through ANSI and its member organizations are SMEs.

For example, there are a number of SMEs participating in the ANSI-Accredited U.S. TAG to ISO TC 229, *Nanotechnologies*. Out of the 20 organizations that identify themselves under the “Corporate” interest category, approximately 25% are SMEs; SMEs also account for 10% of the overall TAG Membership. These SMEs range from smaller, nanotechnology-focused start-ups, to established companies in business for over 60 years. As they sit side by side with corporate giants from the chemical and electronics industry sectors, they are able to network with their larger counterparts and identify similar strategic goals, developing into potential business partnerships and further innovation.

Overcoming Technical Barriers to Trade and Expanding Markets

A big problem we face in the global market is that all too often, standards are used as barriers by other nations. Emerging markets such as China and India are creating hundreds – even thousands – of new standards and product requirements each year, and most are created by government with limited industry input. You can imagine what kind of difficulty this creates for U.S. businesses looking to get into those markets. One of ANSI’s key priorities is to help U.S. companies – large and small – negotiate this complex landscape and gain the market-growth advantages of standards and conformance, and overcome any barriers placed in the way of unobstructed trade relations.

To give one recent example, in the midst of fulfilling an \$8.5 million contract, a U.S. SME ran into problems with Chinese customs, who improperly impounded a key component, claiming it failed to meet Chinese certification requirements. After a series of unproductive meetings with Chinese freight forwarders and customs officers, ANSI worked with the China Certification and Accreditation Administration (CNCA), which agreed to intervene on behalf of the U.S. company. At the same time, the U.S. government raised the issue with Chinese officials, emphasizing China’s WTO obligations. In a short time after the initial contact, the SME obtained the necessary certification and was able to enter the market. China’s acknowledgement in this case of its obligation under the WTO should also benefit other U.S. exporters to China who may face similar certification-related obstacles to trade.

In India, even Indian companies have a hard time accessing the standards and regulatory systems – in fact ANSI was instrumental in bringing together Indian government and the Indian private sector standards organizations in a first ever trilateral MOU with ANSI.

Such efforts at transparency and inclusiveness are critical to the competitiveness of U.S. industry – and SME’s in particular – in the global market. Standards and technical barriers

to trade (along with IPR issues), are consistently listed by U.S. companies of all sizes as the chief impediments to furthering U.S. trade exports. But when used effectively, consensus-based international standards are not an obstacle – they are part of the solution. Together with effective conformity assessment solutions, they have the capacity to remove barriers to trade and fuel business growth for large and small companies.

While large corporations may have the resources to develop global strategies and to overcome barriers to trade, SMEs often lack such in-house abilities. ANSI has worked closely with NIST in developing an online StandardsPortal (www.standardsportal.org) that provides the key information needed to help U.S. SMEs – and all companies – compete effectively in emerging markets such as China, India, and Korea.

The StandardsPortal is an incredible free resource for U.S. exporters, as well as for those nations looking for guidance in best practices in standards development. It helps companies answer such questions as:

- What technical requirements must my product meet to enter and compete in this particular market?
- How can I get early warning about changes to these requirements?
- How can I ensure that my company's perspectives are heard and considered in the development of national requirements and policies that could affect my business?

ANSI also offers our members the guidance of an ongoing Manufacturers' Roundtable for companies doing business in and with China. And we work extensively with Indian officials as part of our U.S.-India Standards and Conformance Cooperation Program, among other initiatives, to facilitate trade and increase transparency between the U.S. and India.

Conclusion

We hear a lot about problems that our exporters have in breaking into emerging markets – and we can't afford to let them miss out on these opportunities. One of ANSI's key jobs is to provide the information, access, and guidance U.S. industry needs to succeed in the global market. We need to make more efficient use of the standards and conformance resources that are already in place . . . and we need to identify every gap that exists.

We also need to bring to bear new human and financial resources to strengthen our ability to capitalize on the opportunities the global market offers. Government and industry need to work together to maximize our impact and bolster U.S. competitiveness.

With the transparency and inclusiveness of the U.S. standardization system, in a partnership that spans the public and private sectors, standards and conformance can be a strategic tool to help fuel U.S. innovation, competitiveness, and economic growth. And ANSI is always ready to coordinate the public-private partnership and take the next steps needed to further strengthen our national economy.

Annex A**Background on the U.S. Standardization and Conformity Assessment System and the Role of the American National Standards Institute (ANSI)**

The U.S. private sector-led, voluntary standardization and conformity assessment system has been in existence for more than 100 years. Highly decentralized, the system is naturally partitioned into industrial sectors that are supported by numerous independent, private sector standards developing organizations (SDOs). Marketplace demand drives the system's activities, with standards and conformity assessment programs typically developed in response to specific concerns and needs expressed by industry, government, and consumers.

Since 1918, this system has been administered and coordinated by ANSI with the cooperation of the private sector and the federal, state and local governments. ANSI does not develop standards or conformity assessment programs. Rather, it functions as a central clearinghouse and coordinating body for its member organizations. The Institute is a unique partnership of industry, professional, technical, trade, labor, academic, and consumer organizations, as well as government agencies. These members of the ANSI federation actually develop standards and conformity assessment programs, contributing their time and expertise in order to make the system work.

ANSI ensures the integrity of the U.S. standards and conformity assessment system by:

1. establishing a set of due process-based "essential requirements" that SDOs may follow in order to manage the development of consensus standards and conformity assessment programs in a fair and open manner;
2. accrediting SDOs and Certification Bodies (CBs) who adhere to these requirements;
3. approving candidate standards from ANSI-accredited SDOs as American National Standards (ANS); and
4. conducting regular audits of the ANS activities of ANSI-accredited SDOs to ensure ongoing compliance with ANSI's essential requirements.

ANSI has accredited hundreds of SDOs across a range of industry sectors. These industries include (but certainly are not limited to) telecommunications, medical devices, heavy equipment, fire protection, information technology, petroleum, banking, and household appliances. There are now more than 10,000 ANSI-approved ANS that address topics as diverse as dimensions, ratings, terminology and symbols, test methods, interoperability criteria, product specifications, and performance and safety requirements. These standards development efforts serve the public interest and are being applied to new critical areas such as the environment, healthcare, homeland security, and nanotechnology.

The Institute's approval of a candidate standard or conformity assessment program as an ANS verifies that the principles of openness and due process have been followed and that

a consensus of all interested parties has been reached. Due process requires that all proposed ANS be circulated to the public at large for comment, that an attempt be made to resolve all comments, and that there is a right of appeal. In addition, ANSI considers any evidence that a proposed ANS is contrary to the public interest, contains unfair provisions or is unsuitable for national use. This basic formula has been the hallmark of the ANS process for decades, and it has garnered worldwide respect and acceptance.

One of the best indicators of confidence in the U.S. voluntary consensus standardization and conformity assessment system (as exemplified by the ANS process) is Congress's 1996 passage of the *National Technology Transfer and Advancement Act* (NTTAA). This law (P.L. 104-113) requires federal agencies to use voluntary consensus standards and conformity assessment programs for regulatory purposes wherever feasible and to procure equipment and services in accordance with such standards. It also requires agencies to increase their participation in the development process and directs the Commerce Department's National Institute of Standards and Technology (NIST) to coordinate federal, state and local voluntary standards and related conformity assessment activities.

ANSI also promotes the international use of U.S. standards and conformity assessment programs. The Institute serves as the U.S. national body representative in two major, non-treaty international standards organizations: the International Organization for Standardization (ISO) and, through the United States National Committee (USNC), the International Electrotechnical Commission (IEC). ANSI and the USNC play a leadership role in ISO and IEC, respectively, on both policy and technical matters.

Part of ANSI's role as the U.S. member of ISO includes accrediting U.S. Technical Advisory Groups (U.S. TAGs) which develop and transmit, via ANSI, U.S. consensus positions on the activities and ballots of technical committees and subcommittees. Similarly, the USNC approves TAGs for IEC activities. In many instances, voluntary standards and conformity assessment programs developed by U.S. SDOs are taken forward, through ANSI or the USNC, where they are approved in whole or in part by the ISO and/or IEC as International Standards. ANSI also encourages the adoption of international standards as national standards where they meet the needs of the user community.

In addition, ANSI advocates U.S. positions in various regional standards organizations and regularly meets with representatives from standards bodies in other nations. Thus, ANSI plays an important role in facilitating the development of global standards and related conformity assessment programs that support global commerce and which prevent regions from using local standards that favor local industries as trade barriers.

Conformity assessment is the term used to describe steps taken by both manufacturers and independent third-parties to determine fulfillment of standards requirements. ANSI's role in the conformity assessment arena includes accreditation programs for product certification bodies, personnel certification bodies, greenhouse gas validation and verification bodies, and standards developers. The ANSI-ASQ National Accreditation

Board accredits management systems certification bodies under the ANAB brand and accredits testing and calibration laboratories, reference material producers, and inspection bodies under the ACLASS brand.

ANSI also is involved in several international and regional organizations to promote multilateral recognition of conformity assessments across borders to preclude redundant and costly barriers to trade.

In summary, through its various roles and responsibilities, ANSI advances its mission to “enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and safeguarding their integrity.”

Annex B**Excerpt from the *United States Standards Strategy*****PRINCIPLES**

It is well established in the community of nations that standards should meet societal and market needs and should not be developed to act as barriers to trade. In approving the World Trade Organization Technical Barriers to Trade Agreement, WTO members recognized that goal and established globally accepted principles as a framework to promote cooperation and discourage the use of standards as trade barriers. The U.S. standards and conformity assessment system is based on the following set of globally accepted principles for standards development.

- **Transparency**
Essential information regarding standardization and conformity assessment activities is accessible to all interested parties.
- **Openness**
Participation is open to all affected interests.
- **Impartiality**
No one interest dominates the process or is favored over another.
- **Effectiveness and relevance**
Standards and related conformity assessment programs are relevant and effectively respond to regulatory and market needs, as well as scientific and technological developments.
- **Consensus**
Decisions are reached through consensus among those affected.
- **Performance-based**
Standards are performance-based, specifying essential characteristics rather than detailed designs where possible.
- **Coherence**
The process encourages coherence to avoid overlapping and conflicting standards and conformity assessment programs.
- **Due Process**
Standards development accords with due process so that all views are considered and appeals are possible.
- **Technical Assistance**
Assistance is offered to developing countries in the formulation and application of standards and related conformity assessment programs.

In addition, U.S. interests strongly agree that the process should be:

- **Flexible**, allowing the use of different methodologies to meet the needs of different technology and product sectors;
- **Timely**, so that purely administrative matters do not slow down the work, but meet market expectations; and
- **Balanced** among competing interests.

Annex C**Excerpt from the *National Conformity Assessment Principles of the United States***

The *National Conformity Assessment Principles for the United States* document articulates the principles for U.S. conformity assessment activities that will allow consumers, buyers, sellers, regulators and other interested parties to have confidence in the processes of providing conformity assessment, while avoiding the creation of unnecessary barriers to trade.

Conformity assessment includes sampling and testing, inspection, supplier's declaration of conformity, certification, and management system assessment and registration. It also includes accreditation of the competence of those activities by a third party and recognition (usually by a government agency) of an accreditation program's capability.

While each of these activities is a distinct operation, they are closely interrelated. The choice of the most appropriate assessment processes, as well as the quality with which any one of them is performed, can have a significant effect on the confidence in and reliance that can be placed on the results of the entire conformity assessment.

The definitions included in the *National Conformity Assessment Principles* document are based on ISO/IEC 17000:2004, *Conformity assessment — Vocabulary and general principles*. Some variances, noted in italics, occur where the term is not in ISO/IEC 17000 or has another specific meaning in the United States. Definitions are included in this document to preclude confusion and to make it more understandable. In different contexts, the same term can signify different types of activities.

- **Accreditation**

Third party attestation related to a conformity assessment body conveying a formal demonstration of its competence to carry out specific conformity assessment tasks. *(These tasks include sampling and testing, inspection, certification and registration.)*

- **Certification**

Third party attestation related to products, processes, or persons *that conveys assurance that specified requirements have been demonstrated.*

- **Conformity Assessment**

Demonstration that specified requirements relating to a product, process, system, person or body are fulfilled. *(This may include any activity concerned with determining directly or indirectly that relevant requirements are fulfilled.)*

- **First, Second, and Third Party**

The first party is generally the person or organization that provides the object, such as the supplier. The second party is usually a person or

organization that has a user interest in the product, such as the customer. The third party is a person or body that is recognized as being independent of the person or organization that provides the object, as well as the user or customer of the object.

- **Inspection**

Examination of a product design, product, process, or installation and determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements.

- **Recognition**

Procedure used to provide formal notice that an accreditation body is competent to carry out specific tasks. These tasks include accreditation of testing laboratories and inspection, certification, and registration bodies. A governmental recognition system is a set of one or more procedures used by a Federal agency to provide recognition.

- **Registration**

Third party attestation related to systems that convey assurance that specified requirements have been demonstrated. Such systems include those established for the management of product, process, or service quality and environmental performance.

- **Sampling**

Provision of a sample of the object of conformity assessment according to a procedure.

- **Supplier's Declaration**

Procedure by which a first party or supplier conveys assurance that the object of conformity fulfills specified requirements.

- **Test**

Technical operation that consists of the determination of one or more characteristics of a given product, material, equipment, organism, person's qualification, physical phenomenon, process, or service according to a specified technical procedure (test method).

- **Testing**

Determination of one or more characteristics of an object of conformity according to a specified technical procedure (test method). Action of carrying out one or more tests.

- **Test Method**

Specified technical procedure for performing a test.



S. JOE BHATIA

**President and Chief Executive Officer
American National Standards Institute (ANSI)**

S. Joe Bhatia began his tenure as president and chief executive officer of the American National Standards Institute (ANSI) on January 1, 2006.

Prior to joining ANSI, Mr. Bhatia held the position of executive vice president and chief operating officer of the international group at Underwriters Laboratories Inc. (UL). During his 30-plus-year tenure with the organization Mr. Bhatia assumed positions of progressive leadership in global business operations. His areas of responsibility included engineering, governmental and congressional liaisons, external affairs, follow-up (certification) services and direction of UL's \$300+ million international operations.

In 2009, Mr. Bhatia was elected to serve as vice president for the Pan American Standards Commission (COPANT) for a two-year term. He also serves as vice chairman of the Industry Trade Advisory Committee on Standards and Technical Trade Barriers (ITAC 16), a joint program of the U.S. Department of Commerce and U.S. Trade Representative. A member of the International Organization for Standardization (ISO) Council and its Standing Committee on Strategies, Mr. Bhatia also holds a seat on the Oakton Community College Education Foundation Board and recently retired as a member of the National Fire Protection Association Board of Directors. In addition to his numerous professional affiliations, Mr. Bhatia is a frequent lecturer in the U.S. and around the world on topics such as international trade, technical developments, commercial market access, and health, safety and environmental concerns.

Mr. Bhatia holds a Bachelor of Science in electrical engineering and a Master of Science in business management. He and his wife, Punita, have two sons.

ANSI is a not-for-profit membership organization that brings together organizations from both the private and public sectors dedicated to furthering U.S. and international voluntary consensus standards and conformity assessments. ANSI accredits national standards developing organizations and approves American National Standards. It is the sole U.S. representative to the International Organization for Standardization (ISO) and, via the U.S. National Committee, the International Electrotechnical Commission (IEC). ANSI is also a member of the International Accreditation Forum, the Pacific Area Standards Congress, and the Pan American Standards Commission.