

washington window

Value to Society

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People don't think twice about putting bread in the toaster and then leaving the room. They never give a second thought to putting a roast in the slow cooker and then leaving the house to take a child to soccer practice. Why? Because they know with nearly absolute certainty that toasters and slow cookers are safe. And the reason they are is that they are manufactured to specific safety standards developed by engineers and proved in practice.

As any ASME member knows, every elevator you ride in, every escalator you board, every car you drive, every airplane you fly in is manufactured to a specific safety standard—sometimes several safety standards. Standards are the reason firefighters can hook up their hoses to every fire hydrant anywhere in this country. They are why aircraft engines can run safely and smoothly for thousands upon thousands of hours without breaking down. Standards are why the furnace in your house keeps you warm without blowing you to kingdom come.

It was not always this way. Boilers in businesses, school buildings, and private homes once exploded with shocking regularity, leaving a path of destruction and death. Before ASME developed the first boiler test code in 1884, some 50,000 people died and two million were injured annually in boiler explosions.

Interchangeability is another hallmark of standardization. Today, you can buy a bolt in Los Angeles and a nut in Boston and they will fit together perfectly because of screw thread standards. It was not always this way. A significant part of the city of Baltimore burned to the ground in the early 1900s because the hoses on fire trucks sent to the scene from New York, Washington, and Philadelphia could not be attached to Baltimore's hydrants. Its screw thread standards were different from those in other areas of the country.

Standards are developed in the United States using the voluntary consensus process. Private, not-for-profit organizations, like ASME, use experts from industry, academia, and government to develop safety standards for use by manufacturers; federal, state, and local governments; contractors; developers, and private citizens. The process used is a transparent, consensus one. That is, a standard cannot be finalized without consensus from the developing group. A rigorous issue resolution process is used, and a standards-

writing committee must comprise a balanced representation of interested parties (for example, government, industry, and end users).

An important piece of legislation—the Technology Transfer Advancement Act—passed by Congress in 1995, requires that federal agencies use voluntary consensus standards in place of agency-developed standards where practicable. The act lets federal agencies get out of the standards-setting business and get back to their core missions.

In its Circular A-119, the Office of Management and Budget delineated the positive effects of the law. According to OMB, the use of voluntary consensus standards by federal agencies eliminates the cost to the government of developing its own standards and decreases the cost of goods procured and the burden of complying with agency regulation. It provides incentives and opportunities to establish standards that serve national needs. It encourages long-term growth for U.S. enterprises and promotes efficiency and economic competition through harmonization of standards. And it furthers the policy of reliance upon the private sector to supply government needs for goods and services.

Recognizing that accomplishment of these goals requires protection for standards developers, the OMB circular explicitly states: "If a voluntary standard is used and published in an agency's document, your agency must observe and protect the rights of the copyright holder and any similar obligations."

That last point is particularly important, since standards development organizations like ASME are able to continually develop and update codes and standards because they receive royalties from their copyrighted work. Although there is a significant public health and safety component to ASME's codes and standards, developing them—even with volunteers, as ASME does—is an expensive business. In a typical year, the Society spends upward of \$20 million developing new standards and updating old ones. Without receiving a fair price in compensation, the Society could not afford to continue the work, regardless of the public good.

It is important for ASME members to realize how vital standards development is to the overall health and vitality of the Society. Among other things, revenue from codes and standards enables ASME to develop programs that stimulate the interest of pre-college students in engineering and science. It allows the Society to disseminate information to the public and to policy makers in Washington and in the states about the important contributions of mechanical engineers in promoting national security, securing economic vitality, and ensuring the health and safety of citizens in this country and abroad.