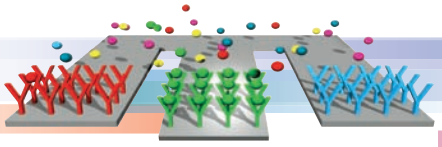
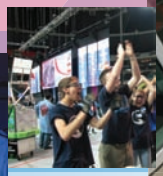
ASME

SETTING THE STANDARD





ASME AT A GLANCE

ASME 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.

ASME VISION

ASME will be the essential resource for mechanical engineers and other technical professionals throughout the world for solutions that benefit humankind.

ASME, the American Society of Mechanical Engineers, is a not-for-profit membership organization that enables collaboration, knowledge sharing, career enrichment, and skills development across all engineering disciplines. Founded in 1880 by a small group of leading industrialists, ASME has grown through the decades to include more than 120,000 members in over 140 countries around the globe.

ASME's diverse members range from college students and early-career engineers to project managers, corporate executives, researchers and academic leaders. ASME serves this wide-ranging technical community through quality programs in continuing education, training and professional development, standards and certification, research, conferences and publications, government relations, and other forms of outreach.

Many engineers join ASME for career enrichment, lifelong learning, and the opportunity to network with professionals of like-minded interests. Others become active in local sections or in ASME's administrative structure of boards and committees, providing leadership and expertise to the Society and the profession at large.

ASME HELPS THE GLOBAL ENGINEERING COMMUNITY DEVELOP SOLUTIONS TO REAL WORLD CHALLENGES FACING ALL PEOPLE AND OUR PLANET.

The governance of the Society is the responsibility of member-elected governors, who volunteer their vast knowledge and expertise to the organization. The board of governors and other volunteer leaders of ASME work in collaboration with a professional staff to shape the Society's programs and strategies and make them available to engineers throughout the world. ASME administers its programs through offices and institutes in the United States, Belgium, China and India and through various committees and groups, to ensure that the myriad technical interests of its members and the global engineering community are met.

For more information about ASME member benefits, visit: http://www.asme.org/Membership/

A STRATEGIC ROADMAP GUIDES ASME

ASME strategically aligns its programs and initiatives to focus on three main organizational priorities – energy, engineering workforce development and global impact – in an effort to provide relevant knowledge-based resources to the broad spectrum of ASME members and constituents.

In energy, ASME is serving as an essential energy technology resource and leading advocate for balanced energy policies. In engineering workforce development, ASME fosters a broader, competent, vibrant and more diverse engineering workforce, with improved retention in both the profession and ASME over all career stages.

And in the area of global impact, ASME is committed to delivering locally relevant engineering resources to advance public safety and quality of life around the world.

Among many examples of the Society's growing outreach in the global arena is *Engineering for Change (E4C)*. *E4C* is a dynamic and growing community of engineers, technologists, social scientists, NGOs, local governments and community advocates whose mission is to improve people's lives in communities around the world. *E4C* features an open, innovative and user-friendly online platform that facilitates collaboration and knowledge exchange for the development of appropriate solutions to issues such as sanitation, access to clean water, energy, transportation, food, education and housing.

For more information about Engineering for Change, visit: http://www.engineeringforchange.org.

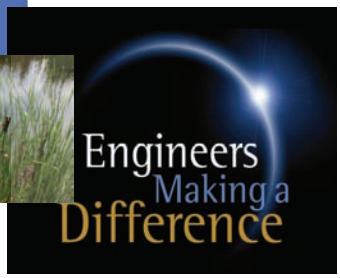
For more information about the ASME strategic roadmap, visit: http://strategy.asme.org/home.cfm

SETTING A WORLDWIDE STANDARD

When ASME's founders – including Henry R. Worthington, Alexander Lyman Holley and John Edson Sweet, along with other prominent industrialists and technical innovators of the nineteenth century – gathered in New York City for the first time in 1880, the main topic of discussion centered on the need for standardized tools and machine parts as well as uniform work practices in the dawning industrial age. Engineering standards, the founders agreed, would ensure safety, reliability and operational efficiency in machine design and mechanical production. ASME issued its first standard, *Code for the Conduct of Trials of Steam Boilers*, in 1914, starting a development process that has grown to more than 500 codes and standards.

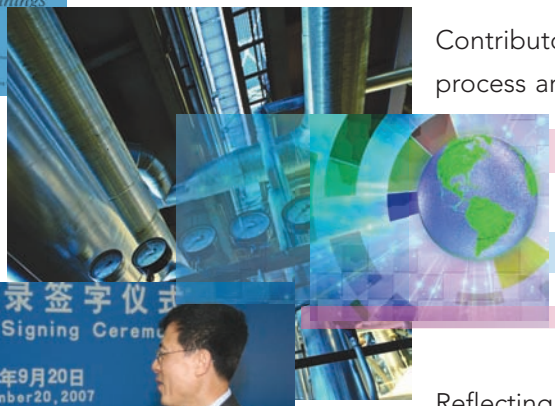
ASME codes and standards cover engineering disciplines ranging from hand tools and elevators to bioprocess equipment and piping systems. In general, ASME standards provide guidelines, procedures, and recommended practices for designing, operating, maintaining, and testing equipment and systems.

THE WORK OF THE ENGINEERING PROFESSION TRANSCENDS BORDERS – ASME'S CONTINUED INTERNATIONAL GROWTH HELPS FOSTER A WORLD OF POSSIBILITIES.



Codes, like the *ASME Boiler and Pressure Vessel Code* and *A17.1 Safety Code for Elevators and Escalators*, are linked with the interest of public safety and carry the force of law. The *Boiler and Pressure Vessel Code* has been incorporated into the laws of all 50 United States and throughout the provinces of Canada. More than 92,000 copies of the code are in use in 100 countries around the world, with translations in a number of languages.

As an extension of codes and standards development, ASME issues certification to manufacturers and fabricators that meet the Society's criteria for quality assurance. ASME also certifies personnel in areas such as plant operations and geometric dimensioning and tolerancing.



Contributors to the Society's codes and standards development process are mostly engineers who volunteer their valuable technical knowledge, resources and expertise. Designers, manufacturers, inspectors and representatives of regulatory agencies also participate on codes and standards committees. These committees, which involve more than 4,000 individuals, continually revise and update codes and standards to reflect changes in procedures and technology.

Reflecting the Society's global strategy, ASME Standards and Certification promotes its activity in many international markets. ASME Standards and Certification collaborates with industry groups and governments from Mexico and South Korea to India and China. Through workshops, seminars and other types of information exchange, ASME works to foster an understanding of the codes and standards process and increase awareness of its programs and publications.

The Society currently has over 6,000 certified companies in more than 70 nations around the world – a strong testament to the global reach of the ASME codes and standards activity.

For more information about ASME codes and standards and certification programs, visit: http://www.asme.org/Codes/

EDUCATIONAL OUTREACH AT MANY LEVELS

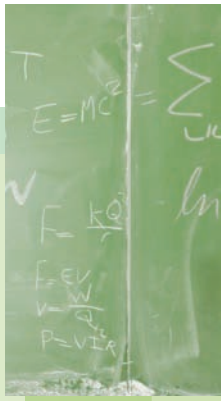
ASME's education programs benefit many groups, from elementary and high school students to colleges and universities and right on up to early-career engineers and seasoned engineers seeking to grow professionally. Building on a long legacy in education advocacy, the Society, through its diverse programs, plays an active role in making engineering a respected, creative, and fulfilling career choice.

The Society's activities in the pre-college sector are aimed at creating a greater awareness of the importance of science, technology, engineering and math (STEM) education programs among K-12 students. Some programs, like the Engineering Magic Web site (http://magic.asme.org/) that describes the relationship of math and science to magic, are aimed directly at students to inspire them to appreciate the excitement and fun of engineering. Other programs are directed at teachers, including ASME-sponsored workshops and instructional guidance materials that enhance the classroom learning experience. The Society's popular *Heroes of Engineering: Design Challenges* curriculum offers K-12 teachers an opportunity to have students experience hands-on engineering by solving design challenges.

The Society reaches out to high school students and teachers in many ways. ASME is a proud partner of FIRST® (For the Inspiration and Recognition of Science and Technology), a robotics competition that elevates the fun and appreciation of engineering. The Society, in partnership with The ASME Foundation and ASME Auxiliary, offers scholarships to high school students who excel in the annual FIRST® competition. During Engineers Week, held each February for the purpose of raising awareness of the contributions that engineers make to society, ASME members seek opportunities to meet with teens to discuss the rewards of a career in engineering.

ASME ENABLES INSPIRED COLLABORATION AND KNOWLEDGE SHARING ACROSS ALL ENGINEERING DISCIPLINES WHILE PROMOTING THE VITAL ROLE OF THE ENGINEER IN SOCIETY.

At the college level, ASME provides support and assistance for engineering students, educators, and the Accreditation Board for Engineering and Technology. The Society's activities with college faculty, including heads of mechanical engineering and mechanical engineering technology departments, are designed to enhance curricula and teaching methods.



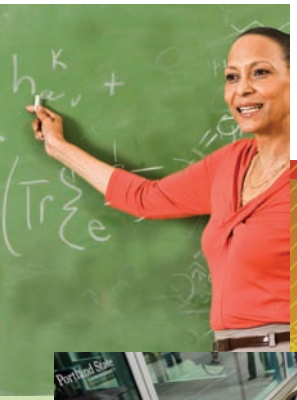
Programs for college and university students include scholarships, loans, fellowships, and sponsorship of design contests and competitions.

The ASME Human-powered Vehicle Challenge, ASME Student Design Competition (sponsored by Boeing), and Innovation Showcase promote technical skills and ingenuity, while instilling the career-enhancing attributes of leadership and teamwork. ASME works to promote diversity in the profession, organizing workshops and other forums aimed at attracting women and other underrepresented groups to engineering.

ASME is strongly focused on the needs of graduating students and the early-career engineer. For this segment of the membership, ASME sponsors career fairs and workshops, in which engineering practitioners describe the ever-changing tools and skill sets required for success in the profession. Other examples of the Society's commitment to members in early-career development include the ASME Jobs Board, *E-mentoring* program, and the Professional Practice Curriculum (PPC).

ISHOW
INNOVATION SHOWCASE

Users of the online Jobs Board can search job openings in a variety of technical fields ranging from aerospace engineering to plant operations, as well as post a resume for prospective recruiters. The *E-mentoring* program allows students and early-career engineers to interact with experienced practitioners to gain insight into technical training and discuss career options and the challenges and issues faced in the workplace. The PPC allows these same groups to access, via the ASME Web site, 49 learning modules on topics ranging from intellectual property and negotiation to team building and risk assessment.



Another outreach program for the early-career engineer is the *ME Today* electronic newsletter, featuring articles and other content aimed at helping engineering students bridge the gap to professional practice in the global economy.

A strong advocate of lifelong learning, ASME Training and Development offers a variety of short courses, in-company training programs, seminars and workshops, and online courses for the engineer seeking skills enhancement or orientation in the application of specific codes and standards. ASME also can tailor its educational resources by providing product packages addressing a mix of technical, management, and workforce development issues to meet specific circumstances and requirements.

For more information about ASME educational services, visit: http://www.asme.org/Education/

CONFERENCES AND PUBLICATIONS

ASME's conferences and publications are primary vehicles for disseminating technical information to the engineering community. The Society's preeminent technical conference is the annual International Mechanical Engineering Congress and Exposition, which brings together many of the Society's technical divisions and volunteer leaders to discuss the state of the art in engineering and technology.

The Society sponsors many other technical conferences throughout the year including Turbo Expo, the International Conference on Nuclear Engineering, International Heat Transfer Conference, and Frontiers in Biomedical Devices Conference.

Conference proceedings comprise one arm of the Society's extensive and internationally recognized publishing operation that also encompasses codes and standards, engineering manuals and academic texts under the ASME Press imprint, and technical journals in a variety of disciplines. Popular journals of the Society include *Journal of Heat Transfer, Journal of Engineering for Gas Turbines and* Power, *Journal of Computing and Information Science in Engineering, Journal of Manufacturing Science and Engineering*, and *Journal of Fuel Cell Science and Technology.* ASME's technical publications are available in print or electronically via the ASME Digital Library, a powerful online tool that allows cross-journal searching, extensive links to primary publishers and databases, and a complete suite of personalization tools.

ASME also publishes *Mechanical Engineering* magazine, *Mechanical Advantage, ME Today,* and *ASME News*, the Society's online newspaper.

For more information about ASME publications, visit: http://www.asme.org/Publications/

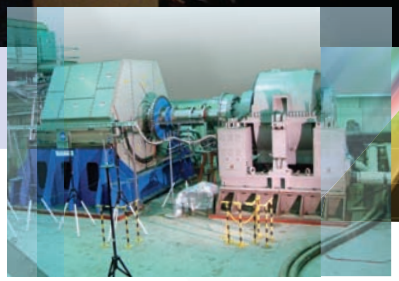
For more information about ASME meetings and conferences, visit: http://calendar.asme.org/

ADVOCATING FOR THE PROFESSION

ASME's government relations programs, administered by its Washington Center, offer members opportunities to provide federal and state government officials with information and assistance on relevant public policy issues, such as energy and funding for STEM education. Methods of outreach include briefings, seminars and conferences, and position statements.

ASME position statements communicate the viewpoints of groups within ASME that are engaged in a variety of issues presented before legislators and policymakers. ASME groups and committees lend a voice to the decision-making process on topics ranging from research and development funding and energy to education and national defense.

ENGINEERING ISN'T ONLY ABOUT MAKING THINGS, IT'S ABOUT MAKING THINGS BETTER, SAFER AND OF HIGHER QUALITY AND PERFORMANCE.



Another popular government outreach activity of the Society is the ASME Federal Fellows program. Established in 1974, the Federal Fellows program allows select members to serve one-year terms on the professional staffs of U.S. senators and representatives and in federal agencies like the White House Office of Science and Technology Policy. There, ASME members work with legislators on a range of engineering, science and technology issues, imparting expert analysis and recommendations that assist in policy decisions. The fellows, in turn, gain valuable knowledge and insight into the political process, which can boost their careers.

FEDERAL GOVERNMENT FELLOWSHIPS PROVIDE A VALUABLE PUBLIC SERVICE...PROVIDING ENGINEERS WITH A UNIQUE OPPORTUNITY TO PARTICIPATE IN THE POLICYMAKING PROCESS.

For more information about ASME's role in public policy, visit: http://www.asme.org/NewsPublicPolicy/GovRelations/

THE ASME FOUNDATION

Through philanthropy, The ASME Foundation funds programs that help overcome the engineering challenges of creating a better world.

The Foundation supports ASME units engaged in projects for technical literacy, career planning, skills development, public policy and the recognition of the engineer's work.

The Foundation awards scholarships to eligible college and university undergraduate and graduate students, as well as high school seniors who are involved on FIRST® teams. The ASME Foundation comprises members and friends of ASME who are committed to improving the world and supporting technical achievement.

For more information about The ASME Foundation, visit: http://foundation.asme.org/

ASME TECHNICAL DIVISIONS

BASIC ENGINEERING TECHNICAL GROUP
- Applied Mechanics Division
- Bioengineering Division
- Fluids Engineering Division
- Heat Transfer Division
- Materials Division
- Tribology Division

ENERGY CONVERSION GROUP
- Internal Combustion Engines Division
- Nuclear Engineering Division
- Power Division
- Advanced Energy Systems Division
- Solar Energy Division

ENGINEERING AND TECHNOLOGY MANAGEMENT GROUP
- Management Division
- Safety Engineering and Risk Analysis Division
- Technology and Society Division

ENVIRONMENT AND TRANSPORTATION GROUP
- Aerospace Division
- Environmental Engineering Division
- Noise Control and Acoustics Division
- Rail Transportation Division
- Materials and Energy Recovery Division

MANUFACTURING TECHNICAL GROUP
- Manufacturing Engineering Division
- Materials Handling Engineering Division
- Plant Engineering and Maintenance Division
- Process Industries Division

PRESSURE TECHNOLOGY GROUP
- Nondestructive Evaluation (NDE) Engineering Division
- Pressure Vessels and Piping Division

SYSTEMS AND DESIGN GROUP
- Computers and Information in Engineering Division
- Design Engineering Division
- Dynamic Systems and Control Division
- Electronic and Photonic Packaging Division
- Fluid Power Systems and Technology Division
- Information Storage and Processing Systems Division
- Microelectromechanical Systems (MEMS) Division

INTERNATIONAL PETROLEUM TECHNOLOGY INSTITUTE
- Pipeline Systems Division
- Petroleum Division
- Ocean, Offshore and Arctic Engineering Division

For more information about the technical divisions of ASME, visit: http://divisions.asme.org/

PHOTO CREDITS

Cover: Photo of cantilever device courtesy of Matthew Landry, University of Texas Health Center; *Inside front cover:* Photo of NASA's Terestrial planet finder courtesy of Derek Wilson, Center for Advanced Engineering Environments, Old Dominion University; *Page 1:* Photo of GEnx engine courtesy of GE Aviation; Page 7: Photo of engineers teaching children courtesy of Iridescent Family Science Program, 2008, Tara Chklovski, www.iridescentlearning.org; *Page 11:* Photo of an IBM conference room at its facility in Research Triangle Park, North Carolina, courtesy of IBM Corporation; Photo of the world's first 36.5 MW superconductor ship propulsion motor completed by AMSC and Northrop Grumman at the U.S. Navy's Integrated Power System Land Based Test Site in Philadelphia, courtesy of American Superconductor;

ASME OFFICES

HEADQUARTERS
Three Park Avenue
New York, NY 10016-5990 U.S.A.
212-591-7000
Fax: 212-591-7674
Web site: http://www.asme.org

THE ASME FOUNDATION, INC.
1828 L Street, NW
Suite 906
Washington, DC 20036-5104 USA
202-785-7393
Fax: 202-429-9417
E-mail: schatzlem@asme.org

SERVICE CENTER AND INFORMATION CENTRAL
22 Law Drive
P.O. Box 2900
Fairfield, NJ 07007-2900 U.S.A.
973-882-1170 or
800-THE-ASME (800-843-2763)
Fax: 973-882-8113
E-mail: infocentral@asme.org

WASHINGTON CENTER
1828 L Street, NW
Suite 906
Washington, DC 20036-5104 U.S.A.
202-785-3756
Fax: 202-429-9417
E-mail: holguinj@asme.org

INTERNATIONAL GAS TURBINE INSTITUTE
6525 The Corners Parkway
Suite 115
Norcross, GA 30092-3349 U.S.A.
404-847-0072
Fax: 404-847-0151
E-mail: igti@asme.org

INTERNATIONAL PETROLEUM TECHNOLOGY INSTITUTE
11757 Katy Freeway
Suite 865
Houston, TX 77079-1733 U.S.A.
281-493-3491 or
866-276-3738
Fax: 281-493-3493
E-mail: ipti@asme.org

EUROPE
Avenue DeTervueren, 300
1150 Brussels
Belgium
32-2-743-1543
Fax: 32-2-743-1550
E-mail: vanliempdj@asme.org

ASME ASIA PACIFIC, LLC
Unit 09A, EF FI, E. Tower/Twin Towers
No. B12, JianGuo MenWai Dajie
ChaoYang District
Beijing, 1000022 P.R.C.
86-10-5109-6032
Fax: 86-10-5109-6039

INDIA
c/o: TECNOVA India PVT LTD
335, Udyog Vihar, Phase-IV
Gurgaon-122 015 (Haryana)
91.124.430.8411 or
91.124.430.8413
Fax 91.124.430.8027