



RESOLVE

2023 ANNUAL REPORT

ASTM International developed a set of **Core Values** that exemplify ASTM's mission and embody our beliefs and organizational priorities:



WE WELCOME

everyone to our open and global community of belonging where every voice is unique and every voice matters.



WE SERVE

with passion, commitment, and integrity, striving to exceed the expectations of each other, our members, and all those who rely on us.



WE COLLABORATE

to discover and deliver the best solutions through diversity of thought, open minds, and teamwork.



WE BELIEVE

in our ability to make a positive difference in people's lives through standards and services, helping our world work better.



WE INNOVATE

by embracing new possibilities, challenging ourselves, thinking boldly, driving change, and evolving as an organization.

RESOLVE

When thinking of words to describe something that has stood the test of time for more than 125 years, there are a few that come to mind: fortitude, endurance, persistence, and resolve. For an organization to last more than even a few decades implies significant resolve in the face of numerous factors and forces, often beyond one's control. Great commitment is required to remain in existence, let alone grow and evolve.

2023 marked ASTM International's 125th Anniversary. And in our 125th year, just as in our first year, that commitment was on full display. The same persistence and dedication to the values of our organization that were on display at our founding in Philadelphia in 1898 could also be found in standards development meetings in Denver, and Washington, D.C. Over time, the range of industries that ASTM supports has grown from steel to sustainability, consumer products, and commercial spaceflight.

In 2023, we celebrated this momentous milestone with celebrations at committee meetings, a series of informational webinars, a case study competition, a ceremony at the gravesite of our founder, Charles Dudley, and much more. We acknowledged that we wouldn't have made it this far without the enduring resolve of our volunteer members, staff, governance, and partners who helped advance our mission of helping our world work better.

To endure for more than 125 years, growth and evolution are necessary, and 2023 highlighted ASTM's commitment to both. Last year, we celebrated the signing of our 125th Memorandum of Understanding (MoU) with the addition of the East African Community. We also signed an MoU with the South Korean 3D Fusion Industry Association (3DFIA), which covers various aspects of collaboration within the additive manufacturing space.

Additionally, we saw the continued growth of ASTM's Emerging Professionals program, which celebrated the 300th Emerging Professional to graduate from the program in October 2023. Relatedly, we championed the launch of the newest student chapter at Florida Institute of Technology, supporting additive manufacturing. Together we developed 170 new standards and revised more than 1,700. We expanded and strengthened our integrated services. We developed new partnerships and reinforced existing ones.

2023 was a momentous year for ASTM International – and yet, it was also business as usual in many ways. We celebrated an historic milestone but also continued to do the things we are known for. We valued every voice and championed the open, consensus process that makes us unique. We showed that same resolve that our forebears have shown since our founding that has allowed us to help our world work better for more than 125 years. We encourage you to scroll through the pages of this report and join us in celebrating the accomplishments of 2023.

At ASTM, we showed the same resolve that our forebears have shown since our founding, which has allowed us to help our world work better for more than 125 years.

As you'll soon discover reading through the pages of this year's report, 2023 was a busy year for ASTM International, as we championed important standards development that:

- supported important infrastructure components,
- underpinned consumer safety,
- bolstered health and safety practices, and more.

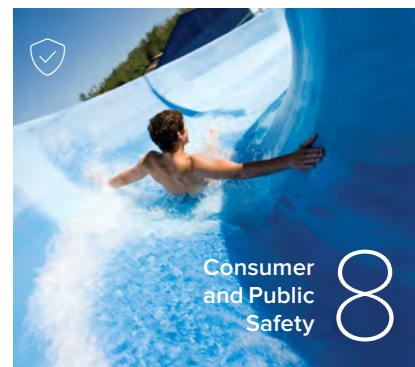
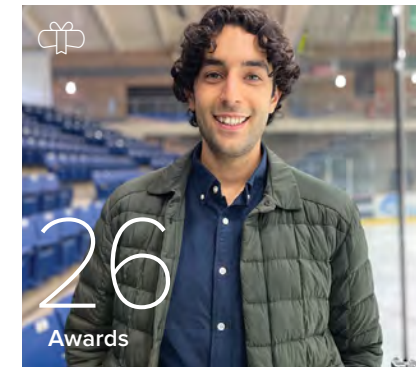
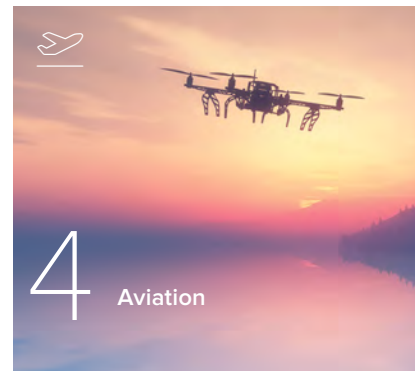


Bill Ells
2023 Board Chair
Vibram USA



Katharine E. Morgan
President
ASTM International

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 AVIATION


AEROELASTICITY REQUIREMENTS FOR LIGHT SPORT AIRCRAFT

ASTM's light sport aircraft committee (F37) has approved a new standard (F3619) that addresses aeroelasticity requirements of light sport aircraft. Aeroelasticity refers to the interaction of aerodynamic, inertial, and elastic forces that emerge during the relative movement of air and aircraft.

ADDITIVELY MANUFACTURED AVIATION PARTS

A new additive manufacturing standard (F3572) provides a part classification scheme that can serve as a consistent risk metric for additive manufactured parts in aviation. The new standard will aid in processes such as inspection, testing, and qualification of these parts.

DEVELOPMENT OF SPACEPORT DESCRIPTIONS

ASTM's commercial spaceflight committee (F47) has approved a new standard that will aid spaceports in developing descriptions of their sites and capabilities, including location and contact information. The standard (F3610) will lead to spaceport descriptions that will provide potential customers and other members of the public with a meaningful understanding of the described sites.



NEW SUBCOMMITTEE ON INFRASTRUCTURE FOR UNMANNED AIRCRAFT SYSTEMS

ASTM International's unmanned aircraft systems (UAS) committee (F38) approved a new subcommittee on infrastructure. The mission of the new subcommittee (F38.04) is to identify, evaluate, and establish best practices for the design, construction, and maintenance of UAS infrastructure. This includes landing and takeoff zones, charging and refueling stations, and communications systems.

The new subcommittee will collaborate with other F38 subcommittees and external stakeholders to ensure that the infrastructure standards developed are comprehensive, practical, and aligned with current and emerging UAS technologies. The subcommittee is committed to promoting safety, efficiency, and sustainability in the UAS industry by advancing the state-of-the-art in UAS infrastructure.



CONSTRUCTION AND INFRASTRUCTURE



KARST TERRAIN REAL ESTATE ASSESSMENT

ASTM International's soil and rock committee (D18) approved a new standard (D8512) that will aid real estate developers with preliminary karst terrain assessment. The new standard provides a protocol for karst assessments that can assist design professionals, plan reviewers, public works officials, and jurisdictional regulators in making an informed judgment on site development and management.

NON-METALLIC POLYMER BARS

ASTM's composite materials committee (D30) has developed a new standard specification, D8505, for the latest generation of fiber reinforced polymer (FRP) bars. FRP bars are used as internal concrete reinforcement. The new standard will be useful across the concrete construction value chain.



THERMAL INSULATION PRODUCTS

A new standard approved by ASTM's thermal insulation committee (C16) will aid in the development of new insulation products. The new standard (C1919) covers the measurement of steady-state thermal transmission properties of small flat slab thermal insulation specimens using a heat-flow-meter apparatus.

FATIGUE CRACKING IN ROADS

A new standard approved by ASTM's road and paving materials committee (D04) will allow those in the road construction industry to extend the service life of asphalt mixtures by more accurately predicting and evaluating fatigue performance. The new standard (D8458) will be used to assess the resistance of different types of asphalt mixtures to fatigue cracks in road surfaces.



✓ CONSUMER PRODUCTS AND PUBLIC SAFETY

WATER SLIDE G-FORCE

ASTM International's amusement rides and devices committee (F24) has approved a new standard that will be used to collect gravitational force data for water slides. The new standard (F3493) focuses on using humans fitted with measuring instruments to generate the G-force data.



MOTORIZED PARTITIONS

A new ASTM standard will help to minimize the entrapment or crush hazard posed by motorized partitions when they are in motion. Such partitions, made up of a series of rigid panels that move along a motorized track, are used to provide flexibility in the size of spaces typically used for meetings, sports, and other functions where children are often present. ASTM's consumer products committee (F15) has approved the new standard (F3660), which establishes performance specifications, test methods, and labeling requirements for motorized partitions.

CLOTHING STORAGE UNITS STANDARD REVISED

ASTM International's furniture safety subcommittee (F15.42) has approved several revisions to ASTM's specification for clothing storage units (CSU) (F2057). Revisions to the standard include the following:

- Safety alert symbol and warning placement on the product to ensure conspicuity.
- Height measurements when adjustable feet are included.
- Storage volume requirements to replace nightstands.
- Interlocking drawer elements for drawers, doors, or shelves.
- Test apparatus to reflect a 60 lb. weight from the 50 lb. weight previously used.
- Three new distinct test methods to simulate clothing load in CSU, dynamic force on CSU, and reaction on carpet.

CONSUMER PRODUCTS CONTAINING CANNABINOIDS

ASTM's cannabis committee (D37) has approved a new standard that defines labeling specifications for consumer products containing cannabinoids. The new standard (D8449) is the first set of internationally harmonized label content specifications for consumer products containing cannabinoids to be published anywhere in the world.



KEY TOY SAFETY STANDARD REVISED

ASTM International has published a revision to its Standard Consumer Safety Specification for Toy Safety (F963) to reflect changes approved by its toy safety subcommittee (F15.22).

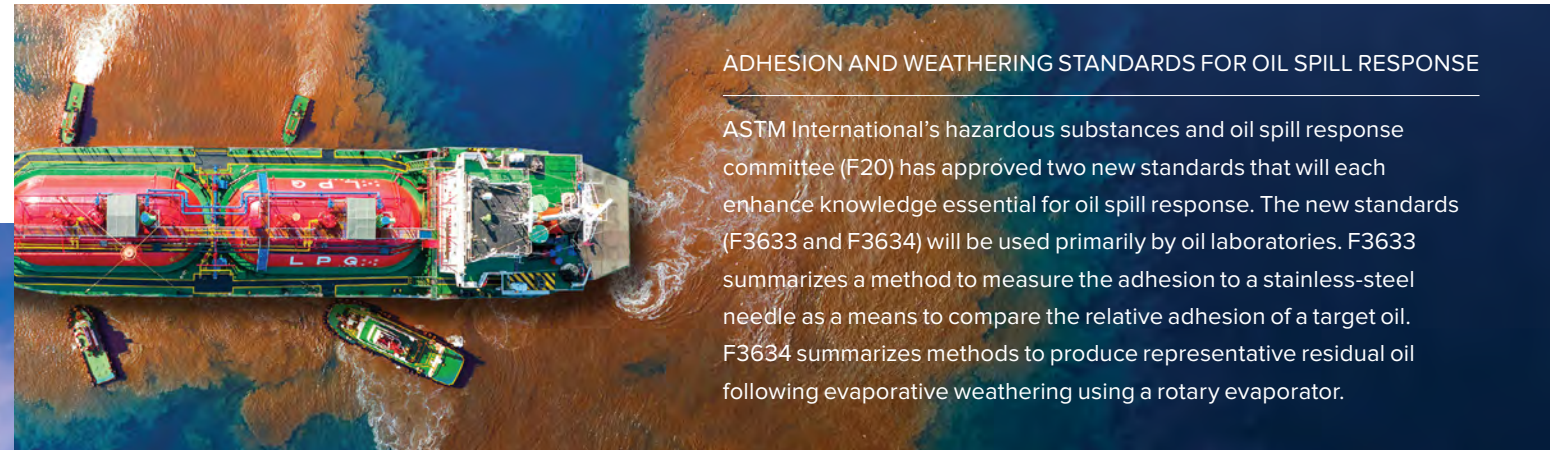
This specification serves to address potential hazards of various toys that may not be readily apparent to the public, but may emerge from their construction, normal use, or a certain degree of abuse.

The most recent revisions impact technical requirements for a variety of toy features, including updates to the requirements for battery accessibility, expanding materials, projectiles, and the sound level of toys. The latest revision also clarifies requirements for toy substrate materials, phthalates and tracking labels.

ENVIRONMENT AND ENERGY

STIRRED-REACTOR COUPON ANALYSIS

ASTM's nuclear fuel cycle committee (C26) has developed a standard describing a new technique for measuring the forward rate of glass corrosion. The new standard (C1926) details the stirred-reactor coupon analysis (SRCA) method, in which monolithic glass coupons are partially masked with an inert material before undergoing corrosion in a large volume of solution with known chemistry and temperature for predetermined duration.



ADHESION AND WEATHERING STANDARDS FOR OIL SPILL RESPONSE

ASTM International's hazardous substances and oil spill response committee (F20) has approved two new standards that will each enhance knowledge essential for oil spill response. The new standards (F3633 and F3634) will be used primarily by oil laboratories. F3633 summarizes a method to measure the adhesion to a stainless-steel needle as a means to compare the relative adhesion of a target oil. F3634 summarizes methods to produce representative residual oil following evaporative weathering using a rotary evaporator.

QUALITY CONTROL FOR RECOVERED CARBON BLACK

A newly-approved standard from ASTM's recovered carbon black committee (D36) provides a test that will help to differentiate products and provide a quality control tool for producers and users. Recovered carbon black (rCB) is a recycled product made from end-of-life tires. The new standard (D8474) describes a thermogravimetric (TGA) technique to determine the amounts of organic residue, overall fixed carbon content, and ash content in recovered carbon black.



SOIL REMEDIATION

ASTM's environmental assessment, risk management and corrective action committee (E50) has developed a standard guide for the remediation of nonaqueous phase liquids (NAPLs) in the subsurface. The new standard (E3361) will help practitioners identify natural processes that break down NAPLs (gasoline, diesel fuel, and some other organic substances) impacting soil and groundwater. Further, the standard will provide methods for estimating the natural attenuation rates of the NAPL, or how fast they break down.

HEALTH AND SAFETY

BACTERIA TESTING FOR MULTIPLE WATER TYPES




ASTM International’s water committee (D19) has approved a new standard (D8516) that will help water producers and users identify and quantify bacteria in potable (drinking, dental, and bottled water) as well as nonpotable water (cooling towers). Heterotrophic bacteria count (HPC) determines the overall number of bacteria in a water sample, allowing water-system managers and water-treatment professionals to make informed decisions based on testing results.



ASTM INTERNATIONAL AND DOCTORS FOR CANNABIS REGULATION SIGN MEMORANDUM OF UNDERSTANDING

ASTM and Doctors for Cannabis Regulation (DFCR) have signed a memorandum of understanding (MoU) aimed at the continued development of ASTM standards for cannabis.

As part of the MoU:

-  ASTM will serve as the standards developing organization (SDO) for the activity;
-  DFCR will participate in the ASTM process and provide technical expertise to assist in the development of ASTM standards;
-  DFCR agrees to reference and use resulting ASTM standards, as appropriate.



EFFECTIVENESS OF ANTIMICROBIAL WIPES

ASTM’s pesticides, antimicrobial agents, and alternative control agents committee (E35) has developed a standard test method for antimicrobial towelettes (wipes). The method (E3363) provides a way to quantitatively determine effectiveness of antimicrobial wipes in treating hard, non-porous surfaces against certain bacteria.

HIGH-ENERGY RADIOGRAPHY

ASTM’s nondestructive testing committee (E07) has approved a new standard that will allow quality assurance for use of high-energy x-rays in a variety of medical and industrial applications. The new standard (E3388) will be used to determine basic spatial resolution and unsharpness of high-energy film radiographs or radiographs.



HEALTH AND SAFETY

PROTECTIVE CLOTHING FOR HEALTHCARE PROFESSIONALS

A new standard approved by ASTM International's personal protective clothing and equipment committee (F23) will help improve the safety of protective clothing for healthcare professionals and others who come into contact with liquid drugs. The new standard (F3267) establishes design, performance, documentation, and labeling requirements and provides test methods for protective clothing used in preventing exposure to liquid chemotherapy and other hazardous liquid drugs.



ASTM INTRODUCES VERIFICATION PROGRAM FOR LAW ENFORCEMENT PROTECTIVE EQUIPMENT

ASTM International's homeland security applications committee (E54) has published three standards that are designed to assess the performance of protective equipment used by law enforcement officers. These standards cover public order helmets (E3342); ballistic-resistant shields (E3347); and ballistic-resistant helmets (E3368).

In addition to publishing the standards, ASTM has established a verification program to evaluate and verify that these protective products meet the relevant standard.



SOIL AND BIOSOLID ANALYSIS

ASTM International's waste management committee (D34) has approved a new (D8535) standard to analyze soils and biosolids for potential contamination from per- and polyfluoroalkyl substances (PFAS). Prior to D8535, there had been a need for PFAS standards for solid matrices.

SMALL BONE FRACTURE PLATES

ASTM International's medical and surgical materials and devices committee (F04) has developed standard test methods (F3437) to serve as a basis for mechanical comparison of small bone plates. Small bone plates, as detailed in this standard, are metallic plates used to fix far extremities in the human body, like fingers, toes, and areas in the cranium and upper face.



INNOVATION

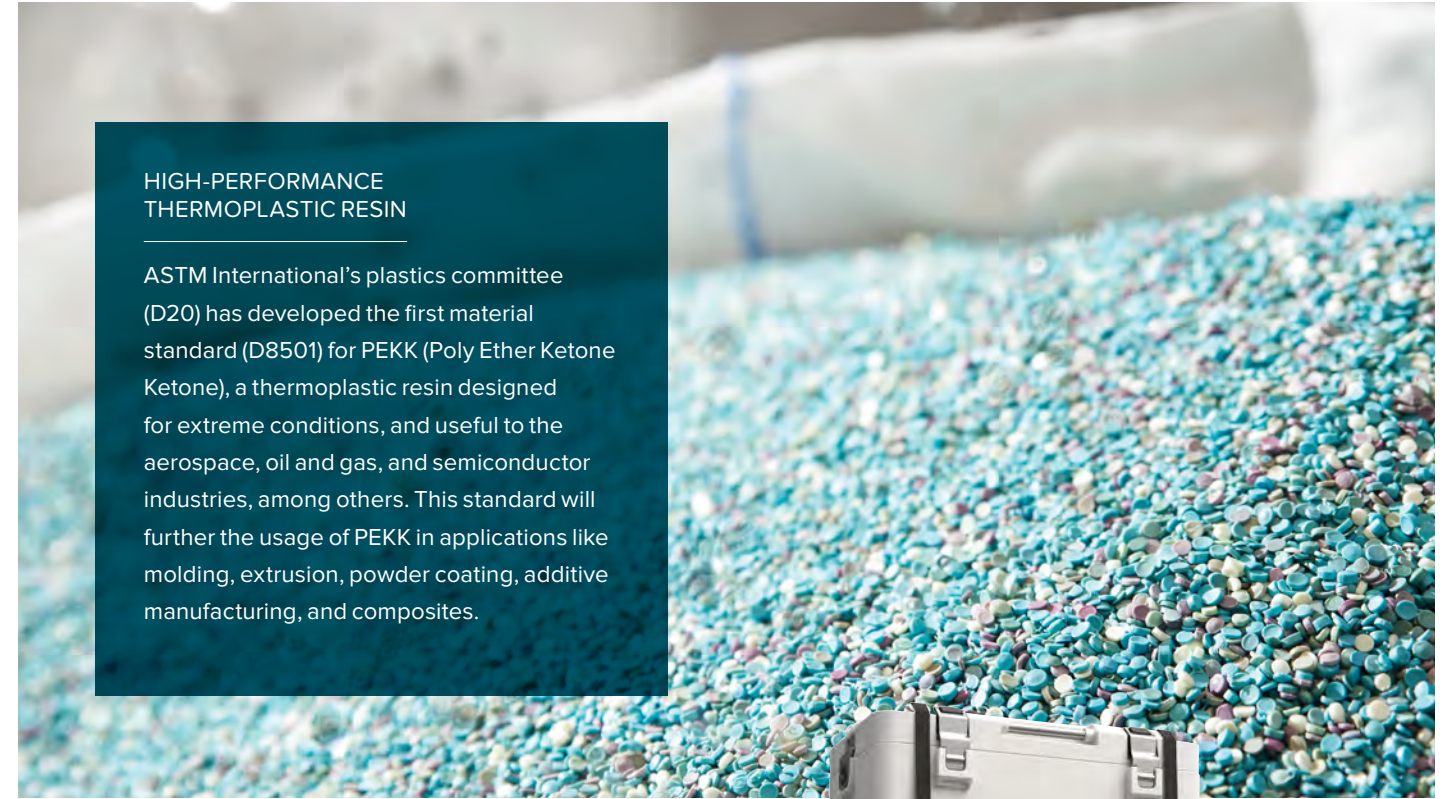
DIGITAL INFORMATION IN THE SUPPLY CHAIN

ASTM's new committee on digital information in the supply chain (F49) is targeting technical gaps and inconsistencies in the goods movement process. Harmonizing the industry lexicon, promoting interoperability, and harnessing enabling technology in a tech-neutral manner will improve efficiency in the goods movement process.



HIGH-PERFORMANCE THERMOPLASTIC RESIN

ASTM International's plastics committee (D20) has developed the first material standard (D8501) for PEKK (Poly Ether Ketone Ketone), a thermoplastic resin designed for extreme conditions, and useful to the aerospace, oil and gas, and semiconductor industries, among others. This standard will further the usage of PEKK in applications like molding, extrusion, powder coating, additive manufacturing, and composites.



NEW SUBCOMMITTEE ON LEGGED ROBOTICS

A new ASTM International subcommittee will focus on test and performance standards for legged robots. The new subcommittee (F45.06) is under the jurisdiction of ASTM's robotics, automation, and autonomous systems committee (F45). The new subcommittee will be developing standards and testing procedures to evaluate the performance of the class of mobile robots primarily relying on articulated limbs and legged mechanisms for locomotion. These include but are not limited to quadruped robots, bipedal robots, and humanoids that operate semi-autonomously or in fully automated modes.



💡 INNOVATION

ASTM LAUNCHES ADDITIVE MANUFACTURING QUALITY (AMQ) CERTIFICATION PROGRAM

In May 2023, ASTM AM CoE officially launched the Additive Manufacturing Quality (AMQ) Certification program for manufacturers using metal AM. AMQ was developed because of industry analysis, user perspective, and identification of gaps that exist within the additive manufacturing industry.

The program is built based on two joint ISO/ASTM standards and demonstrates additive manufacturers' capability to produce parts with consistent quality by complying with published ISO/ASTM standards with a multi-industry focus.



ASTM SIGNS MOU WITH SOUTH KOREAN 3D FUSION INDUSTRY ASSOCIATION

ASTM International signed a memorandum of understanding (MoU) with South Korea-based 3D Fusion Industry Association (3DFIA). The MoU was signed during the 10th ASTM International Additive Manufacturing Center of Excellence (AM CoE) Snapshot Workshop jointly organized with 3DFIA.

Hosted by the Institute for Aerospace Industry (IIACI) in Incheon, South Korea, the workshop was held in conjunction with ASTM F42/ISO TC261 joint meetings and brought together the world's leading industry experts. The MoU was signed by Dr. Mohsen Seifi, ASTM vice president of global advanced manufacturing programs, and Chungwon Park, 3DFIA president.

METAL POWDER FEEDSTOCK FOR ADDITIVE MANUFACTURING

A new standard developed by ASTM International's additive manufacturing committee (F42) will serve as a guide for metal powder feedstock. The new standard (F3571) is intended to help manufacturers with quality control and assessing whether powder batches are within specification limits. The guide covers how to characterize the quality of the feedstock by measuring the quantity of its irregularly-shaped powder particles.

ISOTROPIC PURE MOLYBDENUM

A new standard approved by ASTM International's reactive and refractory metals and alloys committee (B10) will provide specifications for isotropic pure molybdenum. The new standard (B1024/B1024M) covers grades 1 and 2 of unalloyed monolithic forms of molybdenum (UNS R03610). The standard describes a new grade of molybdenum that has fully isotropic mechanical properties, regardless of the shape or size of the product.

STEEL PARTS IN POWDER BED FUSION

ASTM's additive manufacturing technologies committee (F42) has developed a new standard (F3607) for maraging steel in powder bed fusion.

Maraging steel is a class of precipitation-hardened steel strengthened through aging heat treatment, with properties useful for automotive, sporting goods, aerospace, and other industries.



LIQUID AND GAS

TURBINE OIL MICROBIAL CONTAMINATION

A new ASTM International standard will help to control microbial contamination that can degrade turbine oils and turbine oil systems. ASTM's committee on petroleum products, liquid fuels and lubricants (D02) developed the standard. The new standard (D8506) will be useful to turbine oil suppliers, engineers responsible for power generator oil systems, and operator chemists for turbine oil condition monitoring.

FRICTION AND ADHESIVE WEAR PROPERTIES

ASTM International's wear and erosion committee (G02) has released a new standard (G223) that provides a test method for measuring friction and adhesive wear properties of lubricated and nonlubricated materials using the twist compression test (TCT). The new standard will be used by engineers and manufacturers of lubricants.

RECYCLED OIL IN TRANSFORMERS

ASTM's electrical insulating liquids and gases committee (D27) has approved a new standard that will cover the use of recycled oil in electrical equipment. The new standard (D8180) will serve as a basis for the transformer industry to purchase re-refined transformer liquid.

INERT GAS FUSION INSTRUMENTS

ASTM's analytical chemistry for metals, ores, and related materials committee (E01) has approved a new standard (E3346) that covers information and procedures for using combustion and inert gas fusion instruments. Such instruments are used to determine the mass fraction of carbon, sulfur, nitrogen, oxygen, and hydrogen in metals, ores, and related materials.



GLOBAL CONNECTIONS

AGREEMENT WITH EAST AFRICAN COMMUNITY MARKS ASTM INTERNATIONAL'S 125TH MOU

On Nov. 7, ASTM International signed a Memorandum of Understanding (MoU) with the East African Community (EAC), currently consisting of the member states of Burundi, Kenya, Rwanda, South Sudan, Uganda, Tanzania, and the Democratic Republic of Congo.

This is the 125th MoU that ASTM has signed to date, the culmination of agreements signed with many EAC member states since 2003. The document was signed by Dr. Peter Mutuku Mathuki, secretary general for the EAC, and Kathie Morgan, president of ASTM International.

In addition to EAC, ASTM signed MoUs with Fiji and Mali in 2023.

ASTM PARTNERS WITH GLOBAL ALLIANCE TO ELIMINATE LEAD PAINT

ASTM International entered a formal partnership with the Global Alliance to Eliminate Lead Paint (also known as the Lead Paint Alliance), jointly led by the United Nations Environment Programme (UNEP) and the World Health Organization (WHO). The alliance seeks to promote a phase-out of the manufacture and sale of paints containing lead, and eventually eliminate the risk that such paints pose.



(L to R) Gersson Fredy Torres Baquero, ICONTEC; Catherine Kayiganwa, Rwanda Standards Bureau; Risa Hasegawa, Japanese Standards Association; and Yukitaka Yonemura, Japanese Standards Association

STANDARDS EXPERTS WELCOMED TO ASTM HEADQUARTERS

ASTM's global cooperation team welcomed four international visitors, who attended the Standards Expert Program (SEP) and Attached Staff Program (ASP), both of which were held simultaneously from October 23 to November 10.

The two SEP participants for 2023 were Gersson Fredy Torres Baquero from the Instituto Colombiano de Normas Técnicas y Certificación (ICONTEC) and Catherine Kayiganwa from the Rwanda Standards Board (RSB).

The two attached staff joining ASTM from the Japanese Standards Association (JSA) were Risa Hasegawa and Yukitaka Yonemura.

Throughout the programs, the participants learned about the history of ASTM International and the development and application of ASTM standards.

ASTM GLOBAL COOPERATION STAFF MEETS UNITED NATIONS AMBASSADORS

On July 28, ASTM's global cooperation staff met Ambassador Mathu Joyini, permanent representative of South Africa to the United Nations, and Mr. Bulelani Mandla, first secretary of the Mission.

Discussed were the supporting role of standards in achieving the United Nations' Sustainable Development Goals (SDGs) and the MoU partnership ASTM has with the South African Bureau of Standards, now in its twentieth year. Ambassador Joyini recognized the crucial role standards play in our world, particularly in aspects of safety and construction in South Africa, and in achieving the SDGs.

Teresa Cendrowska, ASTM vice president, global cooperation, also met distinguished Ambassador Nguyen Hoang Nguyen, minister counsellor and deputy permanent representative of the Socialist Republic of Vietnam to the United Nations, and Mr. Thanh Phan, Third Secretary of the Mission.

MILLENNIUM CHALLENGE CORPORATION

As part of its ongoing partnership with the Millennium Challenge Corporation, ASTM worked in collaboration with the North Central Superpave Center in Lafayette, Indiana, to provide training in the areas of soil-cement modification and Superpave mix design methodology to a visiting team of engineers from Côte d'Ivoire.

STANDARDS ALLIANCE

ASTM continued its collaborations with the Standards Alliance, managed by the American National Standards Institute, in 2023. A workshop was held in Dakar, Senegal in March 2023 that included meeting with public and private stakeholders in Senegal as well as a tour of the Senegalese Refinery and a private petroleum testing laboratory. Also, a study tour to the U.S. to attend the meetings of ASTM's committee on petroleum products, liquid fuels, and lubricants (D02) in June 2023 was held.



VIRTUAL TRAINING SESSIONS

ASTM presented 38 procedural and technical capacity-building sessions on topics ranging from activating the Memorandum of Understanding and onboarding members to fostering a circular economy of manufacturing materials and sustainable aviation fuels in 2023. The no-cost seminars were attended by 2081 participants from 84 countries. The sessions were designed to improve international expert engagement and broaden the understanding and application of ASTM standards globally.

125TH ANNIVERSARY

A MOMENTOUS MILESTONE

2023 marked ASTM International’s 125th Anniversary, and we honored our past and celebrated in style with exciting events with our members, partners, and staff.



WEBINAR SERIES

Last year we hosted an insightful webinar series on the value of ASTM standards and services. Each of the four webinars had a great panel of ASTM members and partners and topics included:

- The value of ASTM standards
- The ways standards enhance innovation
- How standards help governments and emerging economies, and
- Products and services that support training and use of standards

WORLD STANDARDS DAY

ASTM was honored to serve as the administering organization for the 2023 U.S. Celebration of World Standards Day in Washington, D.C. Here, standards professionals from many standards developing organizations gathered to celebrate and raise awareness of the role that standards play in addressing global priorities.



STAFF EVENTS

ASTM staff had the chance to celebrate the anniversary with cake and festivities at ASTM’s global headquarters, as well as attend a special presentation at the gravesite of Charles Dudley, ASTM’s founder.

COMMITTEE CELEBRATIONS

Throughout the year, members had the chance to celebrate the anniversary at committee meetings in Denver and Washington, D.C. with cake, photo booths, and more.

CASE STUDY COMPETITION

As part of the anniversary celebrations, ASTM committees were invited to submit examples of standards that exemplify an above-average impact in bettering society. 74 submissions from 44 different committees were submitted and eight winning case studies were selected. The winning case studies were published in issues of Standardization News throughout the year.

The winning committees and their case studies were:

- 🏆 **Petroleum products, liquid fuels and lubricants** (D02) – D6751
- 🏆 **Soil and rock** (D18) – D698 and D1557
- 🏆 **Plastics** (D20) – D6866, D6400, and D6868
- 🏆 **Vehicle pavement systems** (E17) – E3266
- 🏆 **Pesticides, antimicrobials, and alternative control agents** (E35) – E1053
- 🏆 **Consumer products** (F15) – F1169
- 🏆 **Personal protective clothing and equipment** (F23) – F3502
- 🏆 **Amusement rides and devices** (F24) – F770





NEXT GENERATION & AWARDS

GRADUATE SCHOLARSHIPS

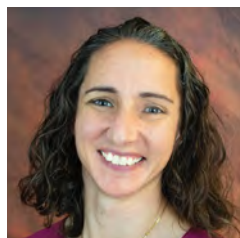
ASTM International boasts more than 5,000 student members and offers several scholarships and grant opportunities each year. In 2022, four \$10,000 scholarships were awarded to the following deserving students.



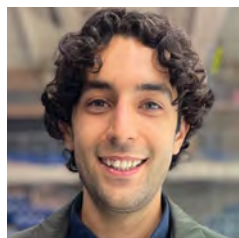
Clara Eichler is a Ph.D. student in environmental sciences and engineering at the University of North Carolina-Chapel Hill. Clara is an active member on D22.05 with interest in working for EPA or NIST to help contribute to advancing research and standards in her field.



Md Abir Hossain is a Ph.D. student in mechanical and aerospace engineering at Ohio State University. Md Abir has used published research using ASTM fatigue and fracture standards, and plans to continue to use them as he pursues a career as a tenured university professor.



Diana Wyman is a Ph.D. student in fiber and polymer science at North Carolina State University. Diana is a previous winner of this scholarship award who once again impressed the review team with her active engagement and contributions to the work of committee D13.



Omid Vakili is a Ph.D. student in biomedical physiology and kinesiology at Simon Fraser University (Canada). Omid is also a past award winner from 2021, and now an active member within the F08 and F24 committees with a primary focus on safety.

EMERGING PROFESSIONALS

The ASTM Emerging Professionals program celebrated its 300th EP during the October 2023 Workshop in Washington, DC. It now has 324 EP graduates that have gone through 31 workshops, 469 work items registered by EP's, 188 leadership positions filled by EP graduates, 117 committees represented (78% of ASTM TC's), 51 awards given to EP graduates, and 33 ILS programs registered to EP graduates. Lindsey Hamill is the first EP graduate to move from COTCO to the BOD, and COTCO has recently welcomed another new EP from the program. And finally, in addition to hosting its first-ever internationally located EP program in Singapore, ASTM also hosted 10 student members and 3 MOU members through the program in 2023.

STUDENT CHAPTER

ASTM launched a new student chapter at FIT, the Florida Institute of Technology, in Melbourne, Florida. This student chapter will focus on academic and research programs in the additive manufacturing space. Sayed Ehsan Sahaian, assistant professor of mechanical and civil engineering, will serve as faculty advisor.

2023 AWARD OF MERIT RECIPIENTS

The prestigious Award of Merit, which includes the accompanying title of fellow, is ASTM's highest recognition for individual contributions to developing standards.



Roger Bostelman
Exoskeletons and Exosuits (F48)

Sarah R. Gedrich
Packaging (D10)

Mark S. Graham
Roofing and Waterproofing (D08)

Corey L. Haeder
Concrete Pipe (C13)

Byron K. Hayes
Medical and Surgical Materials and Devices (F04)

George J. Kelly
Solar, Geothermal and Other Alternative Energy Sources (E44)

Ronald L. Kelly
Forensic Sciences (E30)

Shawn McCormick
Concrete and Concrete Aggregates (C09)

Chris W. Meyer
Temperature Measurement (E20)

Michael Pluimer
Plastic Piping Systems (F17)

Alan F. Rawle
Nanotechnology (E56)

Richard Rosati
Consumer Products (F15)

Alan V. Ruzicka
Polishes (D21)

Mark Rumizen
Petroleum Products, Liquid Fuels, and Lubricants (D02)

Alexander Salenikovich
Wood (D07)

Scott A. Schroeder
Fatigue and Fracture (E08)

Sarah Smit
Personal Protective Clothing and Equipment (F23)

Marie E. Tkacik
Primary Barrier Packaging (F02)

JAMES A. THOMAS PRESIDENT'S LEADERSHIP AWARD



This award recognizes individuals early in their ASTM International career who have advanced the organization's mission through extraordinary accomplishment, example, and vision.

Eileen Snyder is regional technical coordinator for Alpha Analytical, LLC and member of ASTM's environmental risk management committee (E50).

Brett Horn is the founder of Charlie's House, a non-profit children's safety organization, and member of ASTM's consumer products committee (F15).

W.T. CAVANAUGH AWARD



The Cavanaugh Memorial Award honors W.T. Cavanaugh, CEO of ASTM International from 1970 to 1985, who established ASTM as the world leader in developing and disseminating voluntary standards..

W. James Bover has served as primary consultant for WJB Consulting since he founded it in 2013, after his retirement from ExxonMobil. He previously served on ASTM International's board of directors from 1997 to 2000, and is also a former chair and long-time member of the petroleum products, liquid fuels, and lubricants committee (D02). His leadership extends beyond ASTM to other organizations as well, such as ISO.

PROFESSOR OF THE YEAR AWARD



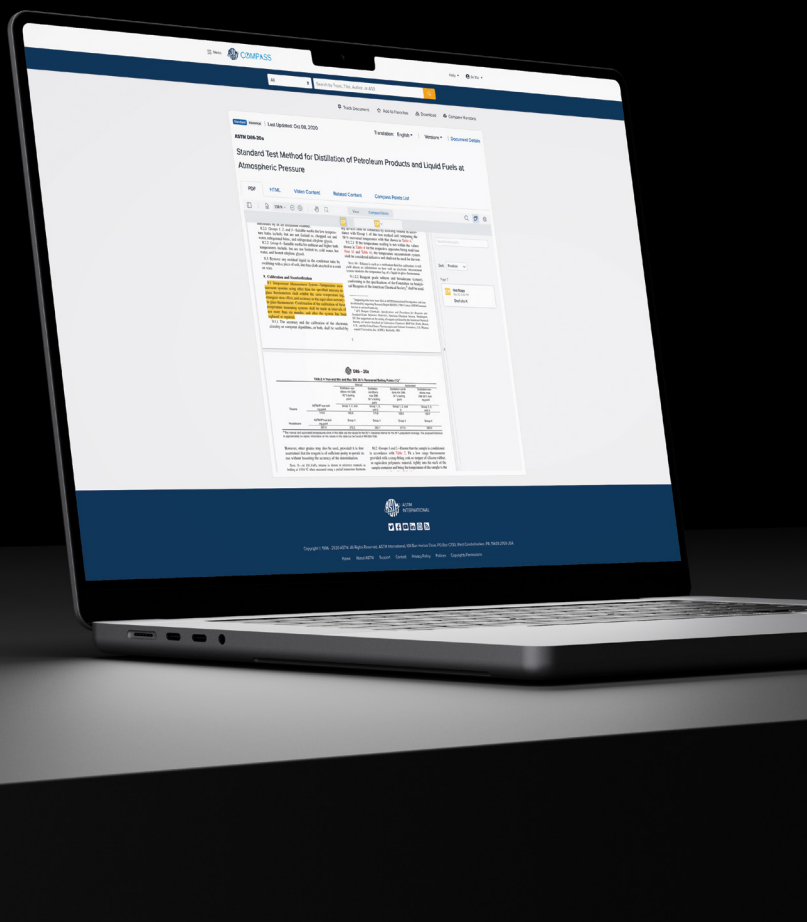
The ASTM International Professor of the Year Award is presented annually to recognize and reward the contributions of educators in developing students' understanding of consensus standards.

Richard W. Neu is the director of the Mechanical Properties Characterization Facility with the George W. Woodruff School of Mechanical Engineering at the Georgia Institute of Technology. Neu is involved in multiple research projects, including one involving strain-controlled fatigue and creep-fatigue testing using ASTM standards E606 and E2714, respectively.



PRODUCTS AND SERVICES




COMPASS Points



ASTM COMPASS

2023 was a reconnection year to learn from the ASTM Compass® user community, and then improve the user experience. Several user-focused Compass surveys gathered updated information on the roles our users fulfill every day.

Peak survey highlights included:

- 
 A majority of respondents were from the United States with a growing presence in Canada, Europe, Middle East, and ASEAN.
- 
 The top five industries that responded included Oil & Gas, Building & Construction, Transportation & Logistics, Chemicals, and Metals.
- 
 The top five job functions that responded included Civil Engineer, Mechanical Engineer, QA/QC Manager, Lab Manager, and Materials Engineer.

Workflow improvement was a key ask among the respondents, and ASTM is prototyping new features and functionalities in response.

As part of promoting workflow improvement, ASTM in 2023 successfully launched the new ASTM Compass workflow tool, Compass Points. Users isolate and annotate specific parts of the standard that is significant to their business' workflow, allowing a selection of important data in a standard, all while enabling a continued connection back to the full authoritative standard to provide the data's context.

Feature work on the Compass platform will be powered and prioritized by customer needs and feedback in the future.

VOICE OF THE CUSTOMER (VOC)

ASTM has maintained a Voice of the Customer program for six years, and 2023 saw its post-pandemic revival. In addition to the aforementioned ASTM Compass surveys, ASTM Product Management launched an unprecedented series of in-person visits to standards users (including ASTM members), talking to ASTM Compass licensees and non-users alike. This work has built a better understanding of how users are making standards work for them in 2023, shedding light on their unique strategies to improve efficiencies, safety, and interoperability in the coming years.

Product managers conducted over 200 hours of conversations with over 150 different users from multiple industries and in multiple roles. Stakeholders in manufacturing, R&D, quality assurance, laboratory, procurement, partner management, regulation management, and more all contributed their viewpoints. ASTM is currently assessing this feedback to deliver the best possible services that meet standards users where they are and where they need to be.



PETROLEUM REFERENCE MATERIALS

ASTM has launched a new laboratory support product to increase workflow efficiency. ASTM Reference Materials (RMs) are homogeneous and stable materials with an accepted reference value and an estimate of uncertainty for specific properties and test methods. Currently, the majority are petroleum-based matrices in a varying range of levels for properties from different test methods. Each RM is accompanied by a certificate of analysis for the property and test method represented.

ASTM's Reference Materials provide a wide variety of petroleum products with highly accurate reference values and very low uncertainty estimates. They are based on lab results from all over the world and offer a cost-effective means of improving testing precision and accuracy.

INSIGHT SQC

ASTM launched Insight SQC, a cloud-based software application designed to provide statistical quality control charts for laboratories. The design is based on the standard practice for applying statistical quality assurance and control charting techniques to evaluate analytical measurement system performance (D6299) and U.S. EPA 40 CFR 1090 regulations. Insight SQC will create custom charts for the labs to monitor test-method performance on a regular schedule. It includes notifications to users, lab staff, and management regarding warnings or violations of statistical run rules.

Insight SQC wraps analytics, control charting, and audit preparation into one space. Its interface is accessible and comprehensive, complete with various options for automation and customization.

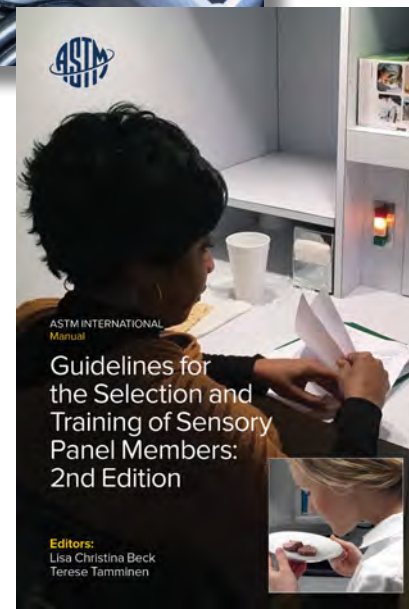
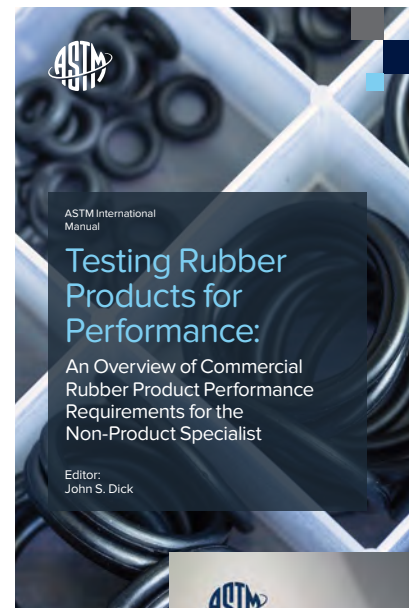




PRODUCTS AND SERVICES

BOOKS AND JOURNALS

ASTM International’s books and journals program continued to expand with contributions from international authors. *Manuals, Monographs, Data Series, Selected Technical Papers, and Technical Reports* continued to grow and advance science and technology. ASTM’s five active journals are published on the ASTM website and in ASTM Compass for quick dissemination and are included in prestigious indexes for ease of discovery. Compass also provides access to ASTM’s Digital Library, which contains 1,500+ eBooks and 60,000+ papers and chapters, including special technical publications, journals, and various manuals.



NEW IN 2023

Testing Rubber Products for Performance: An Overview of Commercial Rubber Product Performance Requirements for the Non-Product Specialist, Edited by John S. Dick

Guidelines for the Selection and Training of Sensory Panel Members: 2nd Edition, Edited by Lisa Beck and Terese Tamminen

FIVE ASTM JOURNALS RECEIVE IMPACT FACTOR RATING

In 2023, all five of ASTM’s journals received impact factor ratings. The impact factor is calculated each year by Clarivate Analytics and given to journals that appear in their database, Science Citation Index.

Geotechnical Testing Journal and *Journal of Testing and Evaluation* continue to receive impact factor ratings, receiving a 1.6 and a 1.2, respectively. Accompanying them for the first time this year were *Smart and Sustainable Manufacturing Systems* with a 1.0 rating, *Advances in Civil Engineering Materials* with a 1.4, and lastly *Materials Performance and Characterization* with a 1.1.

JOURNAL SPECIAL ISSUES

Geotechnical Testing Journal published a special issue (volume 46, issue 6) on Experimental Investigations from Very Small Strains to Beyond Failure. The issue showcased a diverse array of work across the world, featuring twelve articles focused on everything from soil structure and properties to shear behavior.

Materials Performance and Characterization published a special issue (volume 12, issue 2) on Very High Cycle Fatigue (VHCF). The issue featured fifteen articles from various countries primarily focused on VHCF and its relationship with different metals and alloys.

TECHNICAL REPORTS

As of 2023, ASTM has eight Technical Reports in its product line, including five written in collaboration with ISO, with more in production.





PRODUCTS AND SERVICES



LIVE TRAINING & ONDEMAND SOLUTIONS

ASTM's Live Training and OnDemand Solutions Department provides live training (classroom, and virtual) and OnDemand continuing education courses on ASTM standards and related topics.

In 2023, a total of 86 live training events took place, combining both virtual and in-person formats. Two brand-new courses centered around sediments and corrosion were successfully introduced. Furthermore, the live training sponsorship program experienced remarkable growth, welcoming three additional sponsors. These developments show an expansion of training initiatives.

OnDemand Solutions developed and released 59 eLearning products spanning diverse industries such

as energy, construction, building enclosure testing, geotechnical testing, additive manufacturing, automation in aviation, and laboratory testing of cannabis. This expansion in 2023 significantly broadened the OnDemand training catalog, now offering over 600 eLearning courses. Alongside traditional eLearning courses, microlearning courses, and comprehensive eLearning programs, a groundbreaking addition was made with the introduction of a new course featuring a virtual reality experience focused on manual pour point, leading the industry in technical training.

There are now more than 600 OnDemand products available, the majority of which include demonstration videos or animations, interactive review activities, media-rich content presentations, and automatically grading quizzes.

SYMPOSIA AND WORKSHOPS

In 2023, one conference, five symposia, and 12 workshops took place. Most of the events were held in-person and during an ASTM Committee Week. Event topics included asbestos, cannabis, fatigue and fracture, pesticides, roofing, sustainability, and textiles. One volume of *Selected Technical Papers (STP)* and three special issues of our journals are planned to publish as a result of the symposia that we held.



SEI

The Safety Equipment Institute (SEI) operates an independent program for testing and certifying thousands of innovative safety and protective products, from firefighter and baseball helmets to work boots and protective eyewear. SEI works with manufacturers as well as independent laboratories and quality-assurance auditors to certify products to performance standards for products used by consumers, fire and emergency services personnel, general industry workers, and law enforcement officers. The list of SEI-certified products continued to grow with the addition of new standards for recreational products and law enforcement.



CCRL

The Cement and Concrete Reference Laboratory (CCRL) program continued to improve construction materials testing through lab assessments, proficiency testing samples, instruction, guidance, and clarification of standards. CCRL's Laboratory Inspection Program provides evidence of a laboratory's ability to perform test methods. The overall program has grown to include approximately 1,800 labs in concrete, concrete aggregates, steel reinforcing bars, cement, pozzolan, slag cement, and masonry products. CCRL's Proficiency Sample Program helped laboratories compare their results with other labs by testing samples of the same material. This program ships approximately 18,400 boxes (377 tons) to more than 1,900 laboratories worldwide.



TMC

The Test Monitoring Center (TMC) became an affiliate of ASTM International in 2021 and moved its operations to a newly renovated building in Armstrong, PA. The center provides worldwide calibration services for more than 45 ASTM test methods used to evaluate automotive lubricants. Reference oil distribution, test-stand calibration, and laboratory visits form the core of the center's mission under the automotive lubricants subcommittee of the petroleum products, liquid fuels, and lubricants committee (D02).



FINANCIALS

Consolidated Statements of Financial Position (in thousands)

	December 31, 2023	December 31, 2022
ASSETS		
Cash and cash equivalents	\$ 11,950	\$ 14,387
Short term investments	19,479	11,073
Accounts receivable, less allowance for doubtful accounts of \$250 in 2023 and 2022	6,638	5,751
Interest receivable	177	178
Royalties receivable	7,734	7,706
Investments:		
General investment fund	244,649	211,629
Other	8,916	7,891
Cash surrender of life insurance	37,004	37,099
Inventories	1,413	1,490
Property and equipment, net	52,382	73,131
Right-of-use assets	1,497	1,339
Prepaid pension asset	78,486	66,361
Other assets	6,360	6,957
	<u>\$ 476,685</u>	<u>\$ 444,992</u>
LIABILITIES		
Accounts payable and accrued liabilities	\$ 10,642	\$ 10,150
Deferred income	17,758	14,155
Postretirement benefit liability	3,647	3,581
Lease liabilities	1,559	1,349
Total liabilities	33,606	29,235
NET ASSETS		
Without donor restrictions:		
Undesignated	268,543	241,321
Designated - general	170,438	170,336
	438,981	411,657
With donor restrictions	4,098	4,100
Total net assets	443,079	415,757
	<u>\$ 476,685</u>	<u>\$ 444,992</u>

Consolidated Statements of Activities (in thousands)

Years ended
December 31, 2023
and 2022

Changes in net assets without donor restrictions:

	December 31, 2023	December 31, 2022
Operating revenues:		
Publication sales	\$ 76,980	\$ 71,656
Laboratory services	24,356	24,438
Advanced manufacturing	3,426	2,572
Members' administrative fees	2,081	2,002
Investment return allocation	4,242	4,154
Symposium and other income	957	995
Contributions	187	274
Other	980	332
	113,209	106,423
Net assets released from restrictions	600	396
Total operating revenues	113,809	106,819
Operating expenses:		
Salaries and benefits	52,121	50,024
Consulting and contract services	13,097	12,870
Other Society office expenses	7,399	6,997
Depreciation	9,800	7,389
Building occupancy	1,346	1,151
Publications	7,517	7,156
Laboratory services	8,675	9,711
Awards, contracts and other expenses	600	396
Committee and symposium expenses	2,691	2,787
Advanced manufacturing	3,244	2,546
Total operating expenses	106,490	101,027
Excess of operating revenues over operating expenses	7,319	5,792
Other revenues and (expenses):		
Board meeting - outside headquarters expense	(931)	(331)
Legal, copyright and strategy	(372)	(511)
Asia strategy	(62)	(69)
Advanced manufacturing	(158)	(1,972)
Modernizing business systems	(24,228)	(23,596)
Other	(322)	197
Investment gain (loss)	29,921	(44,947)
Pension and postretirement benefit changes	16,157	981
Total other revenues and expenses	20,005	(70,248)
Change in net assets without donor restriction	27,324	(64,456)
Changes in net assets with donor restrictions:		
Interest and dividends	116	32
Contributions	464	439
Other	11	157
Investment gain (loss)	7	(58)
	598	570
Net assets released from restrictions	(600)	(396)
(Decrease) Increase in net assets with donor restrictions	(2)	174
Changes in net assets	27,322	(64,282)
Net assets at beginning of year	415,757	480,039
Net assets at end of year	<u>\$ 443,079</u>	<u>\$ 415,757</u>

2023 SNAPSHOT



152

New Standards

1,661

Revised Standards

12,903

Active Standards



35,908

Members Worldwide

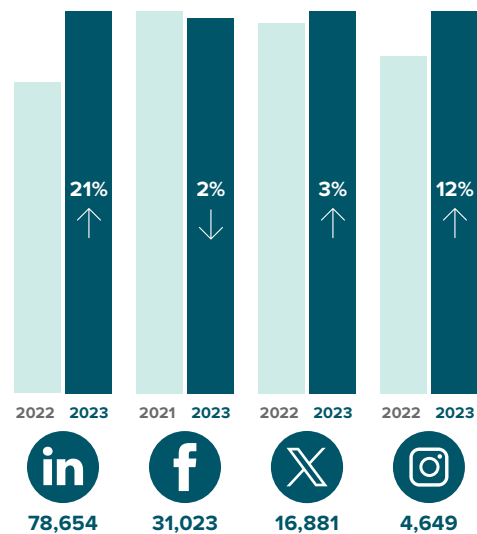


2,179

Technical Subcommittees

148

Technical Committees



COMMUNICATIONS

In 2023, ASTM International's social media channels – Facebook, Instagram, LinkedIn, and X – accounted for 3.9 million impressions from a total of 131,207 followers. LinkedIn followers grew 20.5%, and now account for roughly 60% of all followers. On YouTube, there were nearly 200,000 video views.



"Standards to Protect an Aging Population" was the most popular new ASTM article published in 2023, highlighting safety specifications on products widely used by the elderly. The magazine's online views grew 7% from 2022 to 2023.



ASTM INTERNATIONAL

Helping our world work better

Committed to serving global societal needs, ASTM International positively impacts public health and safety, consumer confidence, and overall quality of life. We integrate consensus standards – developed with our international membership of volunteer technical experts – and innovative services to improve lives...Helping our world work better.

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