

Aerospace Standards

Newsletter

Volume II, Issue 1

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SAE International

Creating globally harmonized standards. Moving industry forward.

Integrated Vehicle Health Management (IVHM) Steering Group Holds First Formal Meeting

An **Integrated Vehicle Health Management (IVHM) Steering Group** has been formed to explore the needs for standardization to support IVHM technology. The group, which will not write standards, but will recommend the development of standards through existing and future SAE technical committees in a coordinated framework, has met several times via teleconference over the past year and held their first formal meeting on June 11.

The Steering Group has expert input from several SAE committees, including:

- E-32 Aerospace Propulsion Systems Health Management;
- G-11 Reliability, Maintainability, Supportability and Probabilistic Methods;
- G-11 SHM, Structural Health Monitoring and Management;
- A-6 Aerospace Actuation, Control and Fluid Power,
- AS-3C2 Fiber Optics Sensors Task Group; and
- AE-5 Aerospace Fuel, Oil and Oxidizer Systems.

There is also representation from the Cranfield IVHM Centre of Excellence, the FAA, and EASA on the group. Additional representatives from the wider health management community are expected to participate in the SAE IVHM initiative.

The group's goals include:

- the development of a single definition and taxonomy of IVHM to be used by the aerospace and IVHM communities,
- the identification of how and where IVHM could be implemented,
- the development of a roadmap for IVHM standards,
- and the identification of future IVHM technological and regulatory needs.

Richard Greaves, SAE Fellow and member of the **E-32 Aerospace Propulsion Systems Health Management Committee**, is serving as Chair of the SAE IVHM Steering Group. **Peter Foote**, Chair of **G-11-SHM Structural Health Monitoring and Management Committee** is serving as Vice Chair of the steering group. Activities to date have been coordinated through SAE's Aerospace Standards Europe office in London, UK.

If you or your company are interested in learning more about this initiative that uniquely approaches vehicle health management holistically and systematically, contact David Alexander at david.alexander@sae.org or +44 (0) 207.034.1250.

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January – May 2010

SAE Document Publication Status	Number Published
New/Issued	34
Revised	140
Reaffirmed	68
Cancelled	7
Amended	39
To review recently published document titles, visit www.sae.org/standardsdev/ , "Recently Published SAE Standards—Aerospace"	

SAE Responds to Standards Requests from FAA

SAE has received requests from the Federal Aviation Administration (FAA) to revise the standard on underwater locating devices, and to develop a new standard on airport lighting.

Work is currently underway to revise AS8045, "Minimum Performance Standard for Underwater Locating Devices (Acoustic) (Self-Powered)." The FAA requested an update to the standard's minimum performance specifications for underwater locating devices (ULDs) in order to "enhance locating flight data recorders, cockpit voice recorders, or aircraft in water." The revised standard is tentatively scheduled to be published in 6-12 months.

The standard, which is quoted in FAA regulations, is developed by SAE's **A-4 Aircraft Instruments Committee**. The team of experts working on the revision includes representatives from the FAA, British and French aviation authorities, the International Civil Aviation Organization (ICAO), and U.S. manufacturers of the transmitters used in ULDs.

Similarly, representatives from many industry sectors, as well as the FAA, are discussing development of a new standard on Enhanced Flight Vision Systems (EFVS). This multidisciplinary group has met twice with the goal of producing a standard which addresses the possible adverse impact to EFVS in the transition of airport surface lighting systems from incandescent lighting to Light Emitting Diodes (LEDs).

This working group will evaluate possible technology solutions and produce a feasibility report to the FAA. It will investigate lighting equipment that produces LEDs but also emits an infrared signal detectable by current EFVS systems. Possible adjustments to the spectrum range of current systems to detect LEDs will also be examined. The new standard is expected to be completed in 12-24 months.

Revision to QMS Audit Requirement Standard Published

A revised version of AS9101, "Quality Management Systems Audit Requirements for Aviation, Space, and Defense Organizations," has been issued by the **G-14 Americas Aerospace Quality Standards Committee** (AAQSC).

This standard defines requirements for the preparation and execution of the audit process. This revision (Revision D) is based upon ISO 19011 and 17021, aligning the certification audit process to the Stage 1 and 2 approaches. Emphasizing a move away from clause-based to process-based auditing, the revision will enable the auditor to assess and report both quality management system (QMS) conformity and effectiveness with a focus on customer satisfaction.

Both QMS certification auditors and certified organizations will notice a significant change in how future audits are conducted, including the reporting of process effectiveness and audit conclusions.

Changes to the standard include:

- an expanded scope; the replacement of a questionnaire by an Object Evidence Record;
- greater emphasis on Stage 1 surveillance and recertification audit planning;
- strengthened nonconformity management requirements;
- a greater focus on evaluation of process and system effectiveness;
- and the improvement of standard audit report forms.

AS9101D is a companion standard to AS9100C, "Quality Management Systems – Requirements for Aviation, Space and Defense Organizations," AS9110A, "Quality Management Systems – Requirements for Aviation Maintenance Organizations," and AS9120A, "Quality Management Systems – Requirements for Aviation, Space and Defense Distributors." It will be used in the Aerospace Auditor Transition Training course sanctioned by the International Aerospace Quality Group (IAQG).

Volunteer Spotlight: Two Standards Committee Participants Bestowed Highest SAE Member Grade

Election to SAE Fellow is an exceptional professional distinction bestowed on around 20 recipients each year. It recognizes and honors long-term members who have made a significant impact on society's mobility technology through leadership, research, and innovation. The awards were presented during the SAE 2010 World Congress Awards Ceremony this past April. The 2010 recipients included:



Richard W. Greaves, Senior Vice President, Technology and Engineering, Meggitt PLC (**E-32 Aerospace Propulsion Systems Health Management Committee**)



Matthew Reed, Research Associate Professor, Biosciences Group, University of Michigan Transportation Research Institute and Center for Ergonomics in Industrial and Operations Engineering (**G-13 Human Modeling Technology Standards Committee**)

Standards Committee Chairs Workshop is June 22-23

The "Aerospace Standards Chairs Workshop" will be held June 22-23 at SAE International World Headquarters in Warrendale, PA. The workshop, focusing on standards committee leadership and committee best practices, will also enable standards committee leaders (including division and committee chairs and vice chairs) to network and share ideas.

This is the second time such a workshop is being held, based on positive response to the previous workshop in 2008.

The workshop is intended to provide committee leadership with guidance and training, clarify committee leadership roles, increase cross-committee communication, and improve SAE committee leadership relationships.

Over the two-day workshop, a number of breakout sessions are planned, including discussions focusing on the ballot process, volunteerism, employer return on investment, new standards categories, and emerging technologies. There will also be a review of Aerospace Council guidelines, and a "Best Practices" session.

SAEInternational®

The Standard for Aerospace Innovation

SAE International knows that it is people who advance technology. Since 1916 it has worked hand-in-hand with the aerospace community to find solutions to its most common problems through such globally adopted technical documents as Aerospace Standards (AS), Aerospace Material Specifications (AMS), Aerospace Industry Reports (AIR), and Aerospace Recommended Practices (ARP)—becoming the world's largest, most respected aerospace standards development organization.

While its rich standards development history enables SAE International to offer an array of capabilities to serve industry's growing need for future harmonized solutions, a full suite of learning resources – including lifelong engineering education, technical publishing, and events – work to ensure the pipeline of future engineering talent and keep today's practitioners at the forefront of professional growth.

www.sae.org



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Bulgarian Defense Delegation Visits SAE's Washington Office

SAE's Washington, D.C. office hosted a meeting with delegation from the Bulgarian Ministry of Defense on January 26.

The delegation was on a tour, organized by the U.S. Defense Standardization Program Office (DSPO), to gain greater understanding of the workings of the U.S. standards system. **Bruce Mahone, SAE's Director, Washington Operations, Aerospace**, presented an overview of SAE's standards program, with an emphasis on how SAE interacts with the U.S. Department of Defense, NATO, and related government agencies.

The meeting included the three-member Bulgarian delegation, two representatives from the DSPO, and a representative from ASTM International.

"SAE was delighted to host our colleagues from Bulgaria and continue our strong working relationship with NATO members," Mahone said.



Representatives from the Bulgarian Ministry of Defense, the U.S. Defense Standardization Program Office, SAE International, and ASTM International met at SAE's Washington, D.C. office on January 26.

Pictured left- to-right are: Nikolay Rashkov Velichkov, Bulgarian Ministry of Defense; Gergana Zhivkova Yordanova, Bulgarian Ministry of Defense; Latasha Beckman, U.S. Defense Standardization Program Office; Trudie Williams, U.S. Defense Standardization Program Office; Emiliya Borisova Ulucheva, Bulgarian Ministry of Defense; Bruce Mahone, SAE International; and Jeff Grove, ASTM International.

Standard on Laser Visual Interference Issued

ARP5598, "Unauthorized Laser Illuminations: Pilot Operational Procedures," was published in November 2009. Issued by the **G10-OL Operational Laser Committee**, this standard addresses operational safety and human factors aspects of unauthorized laser illumination events in navigable airspace. The document describes pilot operational procedures in response to the visual disruptions associated with low to moderate laser exposures that pilots are most likely to encounter during flight operations. With education and training, pilots can take actions that safeguard both their vision and the safety of their passengers.

Engine Icing Test Cell Document To Be Developed

Two SAE committees will begin working together to co-produce a document on engine icing test cells. The FAA has requested that SAE develop a recommended practice addressing a uniform testing technique for icing conditions. **EG-1E Test Cells Committee of the Aerospace Propulsion Systems Support Equipment Committee** and **AC-9C Aircraft Icing Technology Committee** will collaborate on the recommended practice.

JEDEC, SAE Join Forces to Set Fiber-optic System Test and Qualification Standards

JEDEC Solid State Technology Association, a leader in standards development for the microelectronics industry, and SAE International have entered into a memorandum of understanding to collaborate on the development of standards for fiber-optic system test and qualification methods for harsh environment applications. The work will be conducted under the auspices of the new JEDEC JC-13.6 Subcommittee for Fiber Optic Systems in Military and Space Applications.

The JC-13.6 Subcommittee's objective is to publish and maintain a comprehensive test and qualification standard for fiber optics in harsh environment applications, with emphasis on commercial and military avionics in missile and space systems. JEDEC and SAE International invite companies and agencies interested in contributing to the development process to contact the JEDEC office at 703-907-7560 for more information.

"It's clear that the industry must raise the bar and establish comprehensive standards for fiber optics in harsh environments," said Chuck Tabbert, Chairman of JC-13.6. He added, "With high speed point-to-point intra-platform communications networks becoming a choke point for next-generation systems, the rapid qualification of fiber optic transceiver modules and the associated infrastructure is essential. Fiber optic systems offer numerous benefits, including insensitivity to electronic interference, savings in weight and power, increased bandwidth, and immunity to lightning."

"SAE International and JEDEC's agreement to collaborate is a response to the growing consensus regarding the need to improve industry standards available to the fiber optic community," said **Edward M. Manns, Manager of Aerospace Standards for SAE International**. He added, "SAE International is pleased that this effort enjoys the active support of fiber optic industry leaders, and we look forward to working with JEDEC to bring government agencies, users, and vendors together to meet the needs of the industry."

David Zika, Chair of SAE International's Avionic Systems Division, will serve as Vice Chair of the new JEDEC Committee: "This is an important agreement because fiber optics is playing an increasingly larger part in commercial and military avionics. We are pleased to be part of this agreement and look forward to the important work that lies ahead."

JEDEC President John Kelly agreed, saying the quality work that will be done will benefit the entire industry. "JEDEC is delighted to enter into this collaboration with SAE International, and we encourage wide participation in the work being undertaken by JC-13.6." He added, "Such participation helps to ensure broad consensus and significantly enhances the quality of the resulting standards."



A fiber-optic cable is pulled apart prior to being repaired at a U.S. Army installation in Baghdad, Iraq.

Consensus Based Standards and More from SAE

In addition to its world renowned consensus based and globally adopted technical standards SAE provides a full complement of standards capabilities:

- Consensus Standards
- Committee Management
- Standards Consortium Administration
- Database Creation and Management
- Accreditation and Certification

Technical Committee Meeting Schedule

Current as of publication. For updates, changes, and the most current meeting dates, visit www.sae.org/standardsdev and the "Aerospace Technical Committee meeting schedule" link.

June 22-23	Aerospace Committee Chairman Workshop, Warrendale, PA, USA
June 23-25	AS-2D Time Triggered Systems and Architecture Committee, Vienna, Austria
June 29-July 2	E-31, Aircraft Exhaust Emissions Measurement (Hosted by FOCA), Interlaken, Switzerland
July 12-15	AS-1 Aircraft Systems and Systems Integration Committee Meetings, Ueberlingen, Germany
July 26	AE-4 Electromagnetic Compatibility, Ft. Lauderdale, FL, USA
July 27-28	AMEC, Aerospace Metals Engineering Committee, Warrendale, PA, USA
July 27-29	S-16 Turbine Engine Inlet Flow Distortion, Snowmass Village, CO, USA
August 23-26	A-4 Aircraft Instruments, Albuquerque, NM, USA
August 23-26	G-10 Aerospace Behavioral Engineering Technology (ABET) Committee, Albuquerque, NM, USA
September 8-10	G-3, Aerospace Couplings, Fittings, Hose and Tubing Assemblies, Montreal, QC, Canada
September 13-16	A-6 Aerospace Actuation, Control and Fluid Power Systems, Anchorage, AK, USA
September 13-16	G-14 AAQSC, AAQG, RMC, and Team Meetings, Salt Lake City, UT, USA
September 14-16	AE-5, Aerospace Fuel, Oil and Oxidizer Systems, Anchorage, AK, USA
September 20-23	E-34, Propulsion Lubricants Meeting, Chicago, IL, USA

Aerospace Lubricants and Greases Symposium to be held in conjunction with September E-34 meeting

A symposium covering future influences on aerospace lubricant and grease design will be held September 22-23, 2010 in Chicago, Illinois, USA. This joint symposium is organized by three committees: E-34, Propulsion Lubricants Committee; E-38, Aviation Piston Engine Fuels and Lubricants Committee; and AMS M, Aerospace Greases Committee.

Papers and participant discussions will explore fundamental concepts, future engine designs, and future oil company developments. The symposium is intended to facilitate discussions between engine designers and lubricant developers, in order to look ahead at what the next lubricants will be, and what design conditions lubricants will have to meet.

The symposium, taking place at the Avenue Crowne Plaza Chicago Hotel, is being held in conjunction with the E-34 committee meeting, September 20-22.

For further information, contact **E-34 Chairman Jim McDonnell** at james.mcdonnell@navy.mil

September 21-22	Aerospace Council, Montreal, QC, Canada
September 21-23	E-36, Electronic Engine Controls, Toronto, ON, Canada
September 21-23	S-9 Cabin Safety Provisions Committee, Warrendale, PA, USA
September 22-24	AE-2 Lighting Committee, Cedar Rapids, IA, USA
September 27-30	AMS Metals Group Committee Meetings, San Francisco, CA, USA
September 27- October 1	Safety Assessment for Airborne Systems and Equipment, Boston, MA, USA
October 4-6	Air Cargo & Aircraft Ground Equipment & Systems Committee, Scottsdale, AZ, USA
October 4-6	E-25, General Standards for Aerospace and Propulsion Systems, Albuquerque, NM, USA
October 5-7	AMS G-8, Organic Coatings and AMS G-9, Sealing Committee Meetings, Portland, OR, USA
October 5-7	E-32, Aerospace Propulsion Systems Health Management (Hosted by Impact Technologies) Rochester, NY, USA
October 5-6	EG-1B, Hand Tools Albuquerque, NM, USA
October 5-7	Aircraft Seat Committee, Albuquerque, NM, USA
October 12-13	AMEC, Aerospace Metals Engineering Committee Meeting Los Angeles, CA, USA
October 12-14	AE-8A Systems Installation and AE-8D Wire & Cable Committees, Indianapolis, IN, USA
October 18-22	AC-9/AC-9C Committee Meeting, Ottawa, ON, Canada
October 18-21	ASD - Avionic Systems Division Meetings, Denver, CO, USA
October 19-21	A-5 Aerospace Landing Gear Systems Committee, Tampa, FL, USA
October 19-21	S-15, Engine Performance Presentation for Electronic Digital Computers (Hosted by Rolls-Royce), Indianapolis, IN, USA
October 20-22	A-10 Aircraft Oxygen Committee, Atlanta, GA, USA
October 20-21	A-20 Aircraft Lighting Committee, Atlanta, GA, USA
October 26-29	AE-8C1 Connectors and AE-8C2 Terminating Devices Committees Savannah, GA, USA
November 2-4	AE-7 Aerospace Electrical Power and Equipment Committees (in conjunction with SAE Power Systems Conference) , Fort Worth, TX, USA

Call for Nominations: **SAE International Aerospace Awards**

Peer recognition...perhaps the most satisfying recognition one can achieve! It is not too early to begin thinking about submitting nominations or forwarding this information to colleagues who may be interested in learning about these programs. **Deadline for the following awards is December 31, 2010.**

Find additional SAE Aerospace Awards, complete award information, and nomination forms at www.sae.org/awards/aerospace

Bruce R. Aubin Aerospace Customer Support Award for Excellence

Given in recognition of an individual within a Tier 2 or Tier 3 aerospace supplier, who in the assessment of his/her peers has contributed to the advancement in safety, reliability and product worthiness in the air transport industry through his/her initiative, dedication; and excellence in personal interfaces in working with customers to achieve operational efficiency for customers and users.

Clarence L. (Kelly) Johnson Aerospace Vehicle Design and Development Award

Recognizes an individual with a distinguished career involving significant contributions in the innovative design and development of advanced aircraft and/or spacecraft, and for the technical value and originality of those contributions which have expanded the knowledge of aerospace engineering.

Franklin W. Kolk Air Transportation Progress Award

Recognizes an individual for unique and outstanding contributions to air transportation and/or to the work of the aerospace technical committees in developing aerospace standards, specifications, technical reports, and data through cooperative research.

Marvin Whitlock Award

Recognizes an individual for significant technical contributions and/or innovation related to operational availability of aircraft. Operational availability includes areas such as repair design, tooling, maintenance practices, logistics, inspection, modification and safety.

SAE Aerospace Engineering Leadership Award

Honors individuals at the corporate official level for outstanding contributions to the field of aerospace engineering through his/her leadership skills and significant contributions leading to great positive impact on the aerospace community.

SAE Aerospace Chair Award

Given to recognize outstanding leadership demonstrated by chairs of committees under the Aerospace Council and Air & Space Group. The award may be presented in recognition of performance over an extended period of time or for a singular accomplishment.

Technical Standards Board Outstanding Achievement Award

Recognizes individuals for outstanding service in the technical committee activities of the Society. This includes valuable contributions to the work of SAE technical committees, unusual leadership in the activities of an SAE technical committee, significant contributions as a representative of the Society to the accomplishments of technical committees of other organizations or of government agencies, and outstanding contributions to SAE technical committee work in the form of research, test methods and procedures, and/or development of standards.

Standards Development Leader and Partner

SAE has become the world's largest standards development organization by partnering with industry for nearly 100 years to discover solutions to its common problems. Today, it works with companies – and other SDO's around the world—to create and harmonize standards for the advancement of the global aerospace industry.

- AeroSpace and Defence Industries Association of Europe (ASD)
- Society of Japanese Aerospace Companies (SJAC)
- NATO Standardization Agency (NSA)
- European Organization for Civil Aviation Equipment (EUROCAE)
- International Air Transport Association (IATA)
- National Center for Advanced Materials Performance (NCAMP)
- Federal Aviation Administration (FAA)
- European Aviation Safety Agency (EASA)
- International Civil Aviation Organization (ICAO).



Transforming SAE International Membership

For more than a century, engineers in the aerospace, automobile, and commercial vehicle industries have enjoyed and benefited from the prestige and value of membership in SAE International.

Industry pioneers like Orville Wright and Glenn Curtiss were SAE members, as are current-day leaders including William Clay Ford Jr. and thousands of engineers across the global mobility universe.

Each of these professionals found value from the traditional SAE membership—a membership that offered access to relevant technical information and excellent local networking opportunities, like Section meetings.

For decades, this traditional model fully met the needs of millions of mobility engineers. However, in today's global engineering environment, with its increased demands on time and unfettered access to vast amounts of technical information, the longstanding value derived through SAE membership is changing.

These major trends are not lost on **Scott Klavon, Director of Membership and Professional Services for SAE International.**

"As an engineer, a former U.S. Navy officer, and a former maintenance engineer on U.S. Marine Corps helicopters, I realized that my needs and expectations of a professional society membership are changing over time, both in response to the new demands that are being placed on me as well as the different phases of my own career path," Klavon said. He further noted there is an ever-accelerating gap between the traditional membership model and the needs of today's mobility engineers.

It became clear to SAE that the modest changes we've periodically introduced in the past would not suffice to meet the sophisticated, value-oriented, and globally savvy engineering community of today and tomorrow. The economic upheaval of the global crisis of 2008-09 and its concomitant impact on the mobility industry became a clarion call for SAE International to take a fresh look at membership and contemporize its value proposition for today's engineering environment.

As with any re-engineering project, Klavon and his team of SAE staff insisted that customer requirements drive the process. Based on input from members from around the world as well as analysis of the programs, products, and services most valued by engineers, the Membership Services and Sections Board and SAE's membership team set out to design a membership model that is completely in sync with today's professionals.

As the new model began to take shape, best practices from professional societies, as well as loyalty programs (e.g., frequent traveler and preferred customer programs) commonly used throughout the commercial world, infused SAE's thinking.

The new model that emerged is unlike anything seen in traditional professional societies. As an SAE member, you can now choose the membership package that best meets your needs. Often referred to as a "tiered model," you can select from Student, Classic, Premium, and Elite membership packages.

The benefits offer customized value regardless of what stage of your career you are in. Students can attend SAE events for free and can access SAE's new student-oriented magazine, *Momentum*. Young professionals can enjoy discounts on the latest and most relevant technical information available. And, seasoned professionals can find the professional development courses to keep their skills current and cutting-edge.

All members enjoy discounts on technical literature and subscription to at least one of SAE's technical magazines.

Klavon is relentless on ensuring SAE members receive maximum value for their dues dollars.

"Continually adding value for members is a prime objective for SAE. The success of our organization depends on it," he said. "Adding value is something that always will be done, whether it's through

...continued



The World is Changing
And SAE International membership has changed to help you keep pace with it.
saeignite.sae.org

P100503 **SAE International**

“Transforming SAE International Membership” continued from previous page

small changes or, as is the case now, large transformations to the core of the organization’s existence—membership.”

Launched in April 2010, SAE’s membership model will have more enhancements and features added throughout the year to provide even greater value to members.

These include a new, members-only website called EngineerXchange. The site will allow SAE members to easily communicate with members around the world; post messages on their profile pages; join online groups; submit content and suggestions for future content to SAE; view and comment on industry and engineering information; and participate in blogs, surveys, and polls.

Also, a new members-rewards program is being developed to further maximize the benefits enjoyed by the most engaged SAE members.

Separate from the membership model but nonetheless important for engineering professionals is a new Virtual Career Fair from SAE that offers unemployed members, as well as members looking for a career change, the opportunity to review openings, all through the ease and anonymity of online service.

Again, the common thread among all of the changes in SAE’s membership structure is value for mobility-engineering professionals.

“We recognize that our members make difficult choices every day in their professional lives,” Klavon said. “We built this new model with that in mind. We offer choices and benefits that make sense to today’s engineering professional.”

As a volunteer on an SAE Standards Committee you know first-hand the value that SAE brings to the mobility industry through its renowned consensus based standards program.

And now, SAE’s re-engineered Membership Program brings more value to its members as it allows members to decide which level of membership is right for them. Use the exclusive **“Membership e-Valuator”** found www.saeignite.sae.org to do so.

New member benefits that would be of particular interest to Standards Committee Volunteers include these already available or soon-to-be-introduced benefits:

- Easy access to SAE technical standards in progress
- Members only advance notice of new technical papers prior to SAE conferences
- Unlimited, online access to the new “EngineerXchange,” a members-only resource for technical information, networking opportunities, career management, and more

It’s never too early or too late to begin your SAE member journey.

www.sae.org

re-engineered for mobility engineers worldwide

SAE International’s website is the gateway to the world’s largest collection of technical resources for those involved in designing and developing automotive, aerospace, and commercial vehicles and their systems.

Redesigned to better address the various industry channels and the expanding number of engineers from around the world it serves, it is now easier and faster to navigate the 105-year-old society’s vast library of technical information.

The revamped site features:

- A new, user-friendly home page and improved navigation through industry-specific channels
- Enhanced search with content from SAE’s various engineering magazines
- Improved delivery of its publication products
- Customization capabilities that deliver the content you want most
- Industry news and application stories unique to the website
- Integration with major social media platforms

View at www.sae.org June 2010
Engineered for an improved user experience.



SAE International

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Acknowledgement: Corporate Support (January – May 2010)

SAE International wishes to acknowledge those companies who contributed to the funding of the 2009 SAE Standards Development Program. Thank you for helping write the future of the aerospace industry.

Thank you.

AC Technology
Adel Wiggins Group
Aero Mag 2000 Yul, Inc.
Aerofit, Inc.
Air BP Lubricants
Alcoa Fastening Systems
Amphenol Fiber Systems International
AMSAFE Aviation
Carpenter Technology Corp
Cessna Aircraft Company
Crissair, Inc.
Cryotech Deicing Technology
DeWAL Industries
DME Corporation
EASA
Electronics, Inc.
Emhart Fastening Teknologies
Federal Aviation Administration
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The Boeing Company
The Lee Company
Thomas & Betts Corporation
Tiodize Company, Inc.
Trelleborg Sealing Solutions US, Inc.
Tri-Star Electronics International, Inc.
Wesco Aircraft Hardware Corp
Woodward Governor Company

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New! Corporate Sponsorship of SAE Standards Technical Committee Meetings

Build your company's brand – target very specific technology niches – support standards development

SAE is the world's largest aerospace standards development organization. Its consensus based program is the forum through which the global industry collaborates on and sets expectations for vehicle reliability, quality, safety, efficiency, and compliance.

Thousands of engineers from companies throughout the supply chain and around the world serve on some 250 SAE technical committees developing, revising, and keeping current more than 8,400 technical standards—standards that address the full spectrum of aerospace business from design, integrate, build and operate to such critical issues ranging from fuel to weather.

Whether your organization is involved in SAE standards activities or not, you can put your company's name directly in front of those that create industry's standards—while they are creating them—by purchasing one of many sponsorship opportunities now offered around SAE Aerospace Standards Technical Committee Meetings.

- Choose from hundreds of technical committees that are developing standards on thousands of very specific technical issues--thereby targeting your audience more than ever thought possible
- Communicate to engineering customers while they're in an environment actively working on standard solutions to challenges your company may play a role
- Time your branding/communication efforts perfectly with an intensive, year-long SAE standards technical committee meeting schedule

► To learn of the various sponsorship levels and opportunities that are available visit www.sae.org/marketingolutions.sae.org/, "Exhibits and Sponsorships"

► To match your objectives with SAE standards initiatives visit www.sae.org/standardsdev/, "Technical Committee meeting schedule—Aerospace"

Materials Science Technology Inc. and Aero Mag 2000 (YUL) Inc. have sponsored food and beverage breaks at SAE's recent spring committee meetings.

SAE contact information: Sales--Amanda Grech; v. 1.724.772.4078; email: agrech@sae.org; Aerospace Standards--Kerri Rohall; v. 1.724.772.7161; email: krohalla@sae.org

Standards Development Committees Seeking Participants

Volunteers are needed for the following SAE Technical Standards Development committees. If you possess the expertise in any of the listed areas—or you know of a colleague who may be interested in being involved—contact Senior Standards Specialist Becky DeGutis at bdegutis@sae.org

- E-25 General Standards for Aerospace & Propulsion Systems Committee
- E-33 In-Flight Propulsion Measurement Committee
- EG-1A Balancing Committee
- AE-5 Aerospace Fuel, Oil & Oxidizer Systems Steering Group
- G-3 Aerospace Couplings, fittings, Hose and Tubing Assemblies Committee

Volunteer Recognition: Document Sponsors (January – June 2010)

The SAE Standards Development Program thanks its Document Sponsors. These individuals have served not only as active committee members but have dedicated their time and talent in guiding the development of standards documents from the preparation of all drafts through balloting and publication.

Thank you.

Chris Armellini, Defense Supply Center Philadelphia	Ernie Hill Carpenter, Technology Corp	Van Nakagawara, Federal Aviation Administration
Jacque Bader, Rolls-Royce Corp	Randolph Hite, PCC Structural Inc LPC	Kevin O'Loughlin, Alemite LLC
Scott Balliett, Latrobe Specialty Steel Company	Robert Hodder	Patrick Oakes, Glenair International
James Barnett, Rolls-Royce Corp	Daniel Howard, Boeing	Roque Panza-Giosa, Goodrich Landing Gear
Jean-Francois Belanger, Pratt & Whitney Canada	Robert Howard, Aerospace Testing Alliance	Thomas Parayil, ATI Allegheny Ludlum
Leonard Bensch	James Ide, Nexans	Nilesh Patel, Shur-Lok Corp
Tim Boysen, Hamilton Sundstrand	Ed Jamieson, Bodycote	A. Patterson, Lockheed Martin Aeronautics Co
Michael Brandt, Alcoa	Randel Kanaby Rolls-Royce Corp	Michael Peppas, PDS Technical Services
Earnest Brown, Defense Supply Center Columbus	Peter Keenan, Airbus Operations Ltd	Ronnie Peterson
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Eric Chesmar, United Airlines Inc	Christopher Kern, Questek Innovations LLC	Mike Roark, Burns & McDonnell Engineering
Joseph Chivinsky, Performance Review Institute	Manuel Koucouthakis, Honeywell Aerospace	Alfred Rode
Norman Coats, Kaiser Aluminum	Robert Koukol, Honeywell Aerospace	Ken Sabo, Lockheed Martin Aeronautics Co
Henry Collins, NSL Analytical Services Inc	Douglas Kutzer, SAE International	Robert Schmedake, Boeing Integrated Defense Systems
John Cowie, Copper Development Association Inc	Ronald Lai, Burndy LLC	Alan Schofield Greene Tweed & Co Wilson Shopp
Colister Dickson, Lockheed Martin Aeronautics	John Lang, Advanced Chemistry & Technology	Roger Sines, Honeywell Aerospace
Thomas Dwenger	Robert Lang, Boeing Co	Renatas Stanislovaitis, GE Aviation
Charles Ellis, Bombardier Flight Test Center	Jerry Leanna, Panduit Corp	Robert Steffen, Raytheon Precision Manufacturing
Dennis Evans, SAE International	Michael Leary, Space Photonics Inc	Kurt Thompson, Space-Lok Inc
Hisham Farajallah, Boeing	Robert Lenaburg, Boeing Commercial Airplanes	Thomas Tsareff, SAE International
David Flask, Honeywell Aerospace	Jacques Leroux, Dow Chemical Canada Inc	Hans Van der Velden
Alan Fletcher, WPAFB	Michael Long, Boeing Commercial Airplanes	Phillip Wade, Smiths Industry Aerospace
Clint Forrest, ES3 Inc	James MacLeod, National Research Council Canada	David Walen, Federal Aviation Administration
Richard Gaines, Cessna Aircraft Co	Anthony Marino, Boeing Co	Wayne Wilcox, Wayne Wilcox Engineering Consultant
Lee Gearhart, Moog Inc	James McMurray, Metal Improvement Co	Craig Willan, Omega Research & Engrg
Christine Graham, NHBB Inc	Paul McMurtry, Hamilton Sundstrand	W Willan Omega Research & Engrg
Kevin Groeneveld, Goodrich Corp	James McNamara, Navmar Applied Science Corp	Kelvin Williamson, Basic Solutions
Ron Grzeskiewicz, ATI Allvac	Kartik Mehta, Parker Aerospace	Maurice Womack, DSCC
Ronald Hahn, SAE International		
Bryan Harrington, Deutsch Defense Aerospace		
Craig Harris Parker, Aerospace		
Bohdan Hasiuk, Defense Supply Center Philadelphia		

SAE International to participate at Farnborough Air Show



SAE International will have an exhibit booth this summer at one of the world's most iconic global aviation events, the Farnborough International Airshow in the United Kingdom. The biennial show (held once every two years) attracted a staggering 153,000 visitors in 2008. SAE Standards staff representatives will be available to discuss our standards, the development program, as well as highlight **new and recent activities such as Counterfeit Electronic Parts, Integrated Vehicle Health Management, Safety Management Systems, and Air Traffic Management (SESAR, NextGen).**

The Society's full suite of products and services—events, engineering education, certification (PRI), access to the global aerospace market, and membership—will also be showcased.

Event dates are July 19-25. Visit SAE representatives at **Hall 4, Stand E21** during trade days if you wish to learn what role you or your company can play in addressing SAE's new standards initiatives or the hundreds of SAE standards development committees that write the common engineering requirements for the advancement of the aerospace industry.

Delivery options for SAE Technical Standards

■ Individual Standards

All of SAE's standards, AMS, AS, AIR, ARPs, are available individually in both print and in electronic formats.

■ Collections

Aero Paks: Online Standards Plans – A customizable subscription plan that lets you pay for just the documents you need and use, full text search capabilities and an alert page keep you aware of changes and updates.

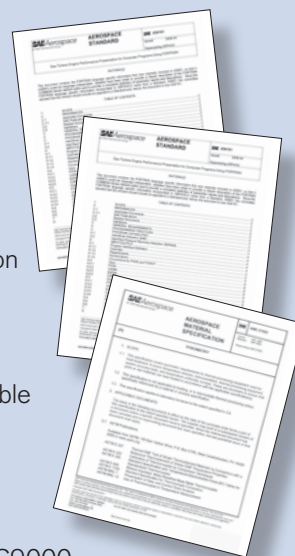
Indexes – Locate documents easily in these bound collections available for both SAE Aerospace Standards (which includes AS, ARP, AIR, and DODISS –adopted documents) and SAE Aerospace Material Specifications (AMS).

SAE Aerospace Quality Standards on the Web – A yearly subscription that gives you online access to the collection of critical AS9000, AS91000, and AS9101 quality standards.

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For detailed information, visit <http://www.sae.org/standards>

Gain a competitive advantage. Impact your bottom line. Invest in standards.

Standards. The workhorse documents that commonize practices, processes, and products throughout the aerospace industry are also paramount to the advancement of technology. Standards documents are more than the practices of today. They account for history and anticipate the future of technology, regulation, and business. The direct benefits of standards are simple in concept but extraordinary in their global impact toward ever-safer, cleaner, more efficient worldwide transportation.

Technical standards enable and enhance:

- consistent and clear expectations for product performance and reliability
- regulatory compliance
- consistent product quality
- compatibility and interoperability
- more efficient procurement

Standardization also:

- lowers trade barriers
- lowers purchasing costs
- decreases design time
- promotes innovation
- increases new technology speed to market

Because industry can rely on standards for globally harmonized solutions to common issues, individual companies can devote more time and resources to advance their proprietary technology. In this way, standards help foster competition, which advances the collective technology of industry and in turn, creates the need for new and revised standards. This has been the cycle for nearly a century of aerospace standards solutions.

And, at the heart of those solutions is SAE International, the world's largest, most respected aerospace standards development organization (SDO). From design to build, operate, and maintain, SAE International works hand-in-hand with the global aerospace community to advance industry.

While participation in the standards development process helps the advancement of the industry it can also contribute to the advancement of your company and personal career.

Corporate Benefits

- Input into the direction of the standards
- Competitive intelligence through advance knowledge of standard direction
- Advance warning of pending regulations and influence over the technical basis of the regulation
- Product liability protections
- Strong relationships with customers and suppliers
- Association with the leading society for advancing mobility technology

Individual Benefits

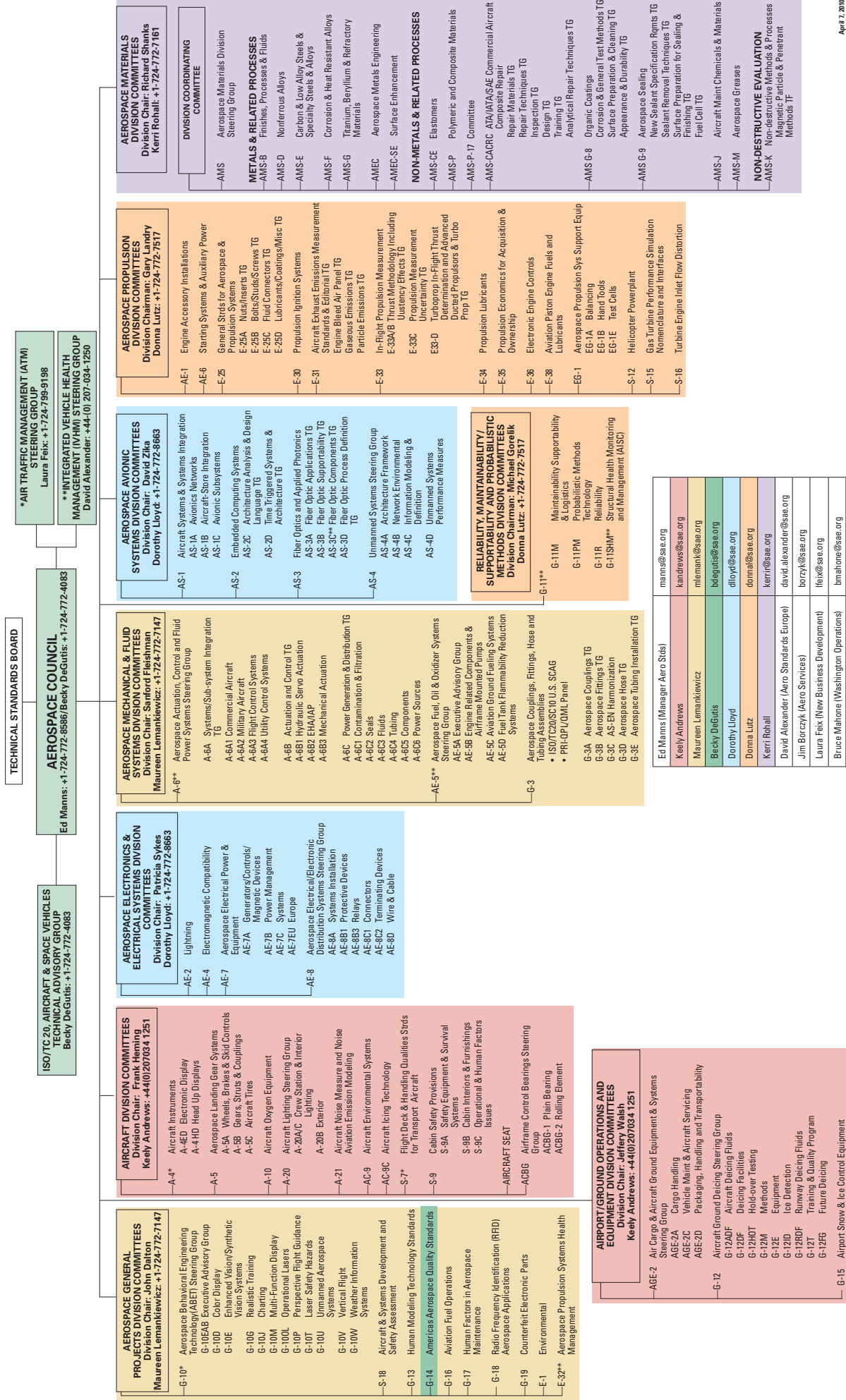
- Professional development from working contact with peers
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To learn more about SAE Technical Standards Development—and for a schedule of Technical Committee meetings—visit us on the web at www.sae.org/standardsdev

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SAE Aerospace Council Organization Chart

Match your expertise with the many SAE Technical Standards Development Committees that are writing the common engineering requirements for the advancement of the aerospace industry.





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