

Aerospace Standards

Newsletter

Volume III, Issue 4

December 2012

SAE International®

Creating globally harmonized standards. Moving industry forward.

A letter from the SAE International Aerospace Council Chair...

2012 was another year of challenges and opportunities for our industry. With that in mind, I want to take this opportunity to again thank all of our volunteers, who contribute their time and talent to help create the standards that serve as vital technical documents for our industry. This past year included many successes, large and small, and we have much to celebrate. The global relevance of SAE aerospace standards continues to grow and be recognized as we published nearly 600 new and revised standards in the past year.

In 2012, we saw a number of exciting initiatives for the program and continued to share our proven successes with other industry sectors. Our counterfeit electronic parts mitigation standardization efforts expanded further into the supply chain. Efforts into integrated vehicle health management now include 4 new standards under development. Furthermore, we've continued valuable new standardization efforts on such topics as runway lighting, underwater locator devices, composites in aircraft design, air traffic management, and the environment. From the Federal Aviation Administration (FAA), SAE received tasking orders to develop standards for portable oxygen concentrators and active cargo containers. Additionally, SAE is active on the Part 23 Aviation Rulemaking Committee (ARC) in order to help increase reliance on private-sector standards for aircraft certification purposes.

Participation on our aerospace committees by non-US experts grew by another 7% in 2012 and the number of SAE standards referenced by the industry's regulatory bodies around the world has increased. And, SAE continues to work closely with the European Aviation Safety Agency (EASA) on many initiatives including projects related to volcanic ash, air traffic management and others.

SAE International conducted a number of standards-related workshops around the world this year. Staff and members facilitated a workshop in the United Kingdom on the role of standards in promoting co-operation between UK industry contractors, military procurement, and the UK MoD and NATO—helping to define customer needs for equipment and services. SAE also coordinated and participated in aerospace standards workshops in both Bangalore and Hyderabad, India. As the aerospace market evolves in India and other developing regions during the coming years, SAE will be there to meet any new standardization needs.

2013 promises even more growth and improvement in the world's largest aerospace standards program as we continue to initiate new, globally-relevant standards projects. These projects will include standards to address the environmental challenges facing aerospace, standards for new materials and processes, and standards to facilitate innovations in manufacturing and testing. SAE will continue exploring ways to improve committee meetings, to better focus our efforts on projects and initiatives of clear relevance to the

continued on page 5

Issue Highlights:

2012 Counterfeit parts mitigation standards activities.....	2-4
Two major European companies join SAE Aerospace Council.....	5
Design, manufacturing, and economics of composites symposium to be held in Italy this January.....	6
Advanced concepts of IVHM explored in new SAE book.....	6
Standard for inspection, test quality systems for aviation, space and defense organizations published.....	7
SAE International Awards.....	7-9
New SAE committee chairs – your volunteer efforts are appreciated.....	9
Committees seeking experts and new members.....	9
2012 Document Sponsors.....	10
E-32 committee helps food bank.....	11
2012 Corporate Contributors.....	12
2013 technical committee meeting schedule.....	14

World Headquarters, 400 Commonwealth Dr., Warrendale, PA 15096 USA; +1.724.776.4841

Europe, 1 York Street, London, W1U 6PA, United Kingdom; + 44 (0) 207 0341250


www.sae.org

2012 SAE-I Document Publication

(thru Nov. 30)


The largest, most respected aerospace standards development organization.

SAE Document Publication Status	Number Published
Issued	89
Revised	424
Reaffirmed	802
Cancelled	22
Stabilized	206
To review recently published document titles, visit http://www.sae.org/standardsdev/aerospace/newastds.htm	

STOP counterfeit electronic parts from entering the supply chain, your inventory, your design.

Protection in a suite of counterfeit part standards from SAE International. SAE AS5553. Learn more.



Counterfeit parts mitigation standard for distributors published

"SAE AS6081: Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition," was published in November.

Developed by the **G-19 Counterfeit Electronic Parts Committee**, this standard sets practices and requirements for use by all distributors of electrical, electronic and electromechanical parts.

This standard was created in response to a significant and increasing volume of fraudulent or counterfeit parts entering the aerospace supply chain, posing significant performance, reliability and safety risks. It provides uniform requirements, practices and methods to mitigate the risk of purchasing and supplying fraudulent/counterfeit electronic parts.

AS6081 standardizes practices to: identify reliable sources to procure parts; assess and mitigate the risk of distributing fraudulent/counterfeit parts; control suspect or confirmed fraudulent/counterfeit parts; and report suspect or confirmed fraudulent/counterfeit parts to other potential users and authorities having jurisdiction

It is expected that AS6081 will be required for all independent distributors selling to aerospace and/or defense manufacturers.

New standard sets AS5553 certification requirements

"SAE AS6462: "AS5553, Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition Verification Criteria," was published in November.

Developed by the **G-19 Counterfeit Electronic Parts Committee**, this set of criteria is to be used by accredited Certification Bodies (CBs) to establish compliance, and grant certification to AS5553 ("Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition").

AS6462 was created in response to the increasing use of AS5553 by industry due to the increasing volume and potential risk of procuring and using counterfeit electronic parts. As the industry has adopted AS5553, a standard set of conformity assessment compliance requirements needed to be established to validate compliance and justify issuance of certification to AS5553.

"Global" revision of AS5553 to be published

The revision of "SAE AS5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition," is expected to be published by the end of December, 2012.

Revision A of this standard, which is recommended for use by all contracting organizations that procure electronic parts, is a global re-write of the original standards published in 2009, updating content, modifying language to be more international, and adding global references.

AS5553 is being used more widely as a contractual requirement for aerospace and defense suppliers. It is recommended for use by all contracting organizations that procure electronic parts, whether such parts are procured directly or integrated into electronic assemblies or equipment.

It is expected that this revised standard will be quickly adopted by the UK Ministry of Defence and the UK defence industry.

SAE International web portal provides information to help combat counterfeiting

According to a study by the U.S. Department of Commerce Bureau of Industry & Security, the number of counterfeit incidents reported by 387 participants climbed from 3,868 in 2005 to 9,356 in 2008, an increase of more than 140 percent.

To help combat such counterfeiting, and complement its suite of related standards, SAE International offers its new "Counterfeit Parts Portal" at <http://counterfeitparts.sae.org>. The portal is designed as an information clearing house for manufacturers and engineers trying to cope with the counterfeit parts challenge. Building from SAE International's leadership position, the new portal aggregates news, articles, opinion pieces, blogs, and regulatory and legislative information related to the topic.

"We've really created a go-to website related to counterfeit parts and the challenges associate with them," Bill Cariello, Manager, Web Strategy/Operations, SAE International, said. "SAE International's new 'Counterfeit Parts Portal' provides important knowledge to help mobility engineering professionals deal with the challenges presented by counterfeit parts and help the industry as a whole eliminate them."

Counterfeit parts aren't just a problem in private industry; they extend into the government and military, as well. The US Senate Armed Services Committee found 1800 cases of counterfeit parts finding their way into weapon systems, involving over a million parts, in a two year period. 70 percent of these could be traced to China.

"There clearly is a problem, and we hope that SAE International's new 'Counterfeit Parts Portal' can help provide solutions," Cariello added.

Experts discuss risk mitigation, other topics at SAE Counterfeit Parts Symposium

The SAE 2012 Counterfeit Parts Avoidance Symposium was held November 2 in Phoenix, Arizona. The symposium provided an open technical forum for discussion about the negative impact of counterfeit electronic parts and the processes to mitigate that impact.

One of the main goals of the symposium was to provide information about SAE standards on counterfeit parts and how to apply them, said Kevin Sink, a member of SAE's G-19 Counterfeit Electronic Parts Committee, and Vice President of Total Quality at TTI Inc., premier sponsor of the symposium.

"SAE controls the industry's best-received standards," Sink told Aerospace Engineering Online, citing AS5553, covering avoidance, detection, mitigation, and disposition for OEMs, plus the forthcoming AS6081 (for independent distributors) and AS6171 (for test and measurement procedures).

"The defense industry highly anticipates these standards," he said. The symposium featured a presentation by **Phil Zulueta, Chairman of the G-19 committee**, titled "AS5553A and AS6081 Synergy: Challenges in an Evolving Counterfeit and Counterfeit Response Environment."

Topics covered in the symposium's technical sessions and panel discussions included identification, risk assessment, avoidance protocols, test methodologies, compliance, bacterial-based part authentication, and traceability in the age of globalization.

Nicholas M. Torelli, Director, Mission Assurance at the Department of Defense's Office of the Deputy Assistant Secretary of Defense for Systems Engineering, gave a presentation titled "Counterfeit Prevention in the DoD: A Technical Perspective."

"To make good acquisition decisions, we need to understand and manage the myriad technical risks involved in designing, developing and delivering some of the most complex systems ever deployed," Torelli noted in his presentation. He stated that a number of systems engineering challenges, including starting programs with strong early systems engineering, and performing robust reliability and maintainability engineering, must be considered in addressing counterfeit prevention.

The symposium will again be held in 2013 in conjunction with the SAE 2013 Aerotech Congress & Exhibition scheduled for September 24-26, 2013 in Montreal, Canada. Check the SAE website for details as they develop.



Significant efforts in 2012 on counterfeit parts risk mitigation standards

SAE International accelerated its efforts in 2012 to support the global mobility industry with standards on counterfeit mitigation and avoidance, providing new and revised standards on how to develop and implement counterfeit control plans.

These standards, for end-users, suppliers, and testers, are being widely used and accepted in U.S. government circles and the UK defense supply chain.

The counterfeit electronics parts risk mitigation standards released over the last 12 months are:

- AS5553: Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition (Revision A expected to be published in December 2012) This base document enables end-users to implement a control plan to reduce the risk of counterfeit parts entering their inventory. It is used increasingly as a contractual requirement for aerospace and defense suppliers. The 2012 revision includes updated content, and the addition of language and references relevant to the global market.
- AS6462: AS5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition Verification Criteria (Published in November 2012) This standard gives the industry criteria to certify compliance with AS5553.
- AS6081: Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition (Published in November 2012) This standard sets practices and requirements for use by all independent distributors selling to aerospace and defense manufacturers. By implementing this standard, distributors and suppliers can tell customers that they have a system in place to mitigate the risk of counterfeit parts.
- AS6174: Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel (Published in May 2012) This document standardizes counterfeit control plans for all types of material.
- ARP 6178: Fraudulent/Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors (Published in December 2011) This checklist enables purchasers of parts to evaluate a supplier's ability to prevent counterfeit electronic components.

Additionally, AS6171, a document to standardize test methods and to ensure consistency across the supply-chain for test techniques and requirements, is currently in development.

continued from page 1

global aerospace industry, and ways to identify and address emerging technologies. And, our success will be the result of our collective ability to understand and act strategically upon those issues that are fundamental to our continued health as a consensus aerospace standards development organization.

We can all be proud of the strides that the SAE Aerospace Standards Development Program made this past year. Thanks to the participation of the best experts from around the world, the Aerospace Council and all the Aerospace Technical Committees are constantly finding ways to ensure that SAE's standards are globally recognized, accepted, and used as key enablers for our industry. As we continue on our successful SAE standards development journey, I extend my very best wishes to each of you in 2013!

Laura Hitchcock
External Standards Management, Strategy and Policy - The Boeing Company
Aerospace Council Chair, SAE International

Two major European companies join SAE Aerospace Council

Two major European companies have become new members of the SAE International Aerospace Council. The addition of the Russian-based United Aircraft Corporation (UAC) and the German company Lufthansa Technik AG is further demonstration that the membership of the council reflects the global aerospace market.

UAC becomes the first Russian organization to join the Aerospace Council. A conglomerate, UAC is comprised of the major design and manufacturing companies in the Russian aerospace industry, including Sukhoi, Irkut and Tupolev. The company's representative on the council is Andrei Shabrin, Deputy Director of Standardisation.

The addition of UAC to the council is significant in spotlighting the recent steps the Russian aviation industry has undertaken in playing a leadership role in global SAE standardization.

Lufthansa Technik is a leading provider of maintenance, repair and overhaul (MRO) services for aircraft. As much of the Aerospace Council membership comes from the design and manufacturing segment of the industry, the addition of a major MRO adds an important perspective to the council's make-up. Lufthansa Technik's representative on the council is Olaf Ronsdorf, Manager, Future Aircraft and Technology.

Aerospace Council members are executives from commercial, regional, general aviation, military, space, and government organizations. The council ensures that the SAE aerospace standards development program is well managed, progresses in a timely and efficient manner, meets user needs, and avoids duplication of effort.

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



Delivery options for SAE Technical Standards

The more than 10,000 standards in the SAE database now include historical standards, and can be accessed through one of the targeted solutions below:

- **SAE Digital Library** is the industry's most comprehensive resource, encompassing 175,000+ technical papers, standards, and related publications from SAE and other renowned organizations. A customizable corporate solution! digitallibrary.sae.org
- **SAE AeroPaks** is powered by the SAE Digital Library and offers a cost-effective way to access the 8,000+ SAE aerospace standards, aerospace material standards, specifications, recommended practices, and resource documents - plus 15,000 historical versions. Subscription plans start at 10 downloads per year. store.sae.org/aeropaks/
- **SAE Subscriptions** are online portfolios of SAE standards or technical papers focused on targeted technologies and industries. subscriptions.sae.org
- **Aerospace Quality Standards** include the complete collection of the 50 documents developed by the International Aerospace Quality Group (IAQG), are delivered through the SAE Digital Library, and can save you up to \$2,800 versus individual document purchases! saedigitallibrary.org/corporate/small-business/aeroquality/
- **Indexes** provide current and comprehensive listings of SAE AMS Standards and Aerospace Standards. store.sae.org/stanindx.htm

Design, manufacturing, and economics of composites symposium to be held in Italy this January

Experts from multiple industry segments will discuss topics related to design, tooling and manufacturing at the SAE 2013 Design, Manufacturing and Economics of Composites Symposium, to be held January 29-30, 2013 at the Torino Incontra Conference Centre in Torino, Italy.

The event, featuring composite experts from the automotive, aerospace, wind energy, and other mobility sectors, will also spotlight how composites are being used as a viable option to other materials.

Technical presentations will include: trends in automotive, aerospace, and bicycle composites; automated manufacturing methods; cost effective designing of composites; life cycle analysis and health management; structural and interior composites; recycling and reuse of carbon fibre composites; and out-of-autoclave processes.

The symposium will feature the participation of experts from Boeing Company, Lamborghini, Lockheed Martin Company, Alenia Aermacchi, the University of Washington, Ingersoll Machine, Exelis, and many other organizations. The event's keynote presentation will be "The Value in Design, Tooling and Manufacturing on the Economics of Composites."

The event will also feature an interactive panel session, an exhibition of innovative products and technologies, and peer-to-peer networking opportunities.

To register, or for more information on the SAE 2013 Design, Manufacturing and Economics of Composites Symposium, visit www.sae.org/events/dtmc, call 1-877-606-7323 (in the U.S. and Canada) or 1-724-776-4970, or email customerservice@sae.org.

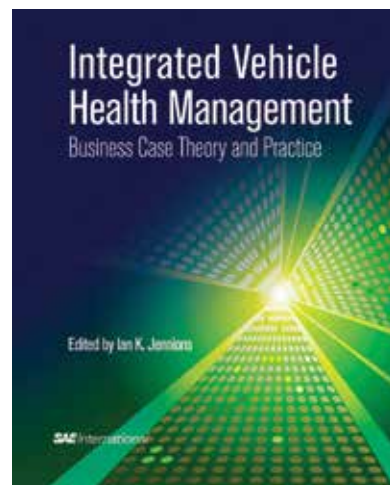
Advanced concepts of IVHM explored in new SAE book

Following the best-seller, "Integrated Vehicle Health Management: Perspectives on an Emerging Field," the new title "Integrated Vehicle Health Management: Business Case Theory and Practice" takes the subject to the next level. This new title addresses the commercial justification for the adoption of a new modus operandi in asset health management, and its impact on business strategy and servitization of technology.

Edited by **Ian K. Jennions**, Ph.D., Director of the IVHM Center at Cranfield University in the U.K., the book tackles the most important questions on the transformation of business from selling a product and deriving future income from spare part sales to selling a service in which income is received in return for effective maintenance of the asset. The resulting service business requires a much deeper understanding of how the product is used and should be maintained, thus providing the rationale for integrated vehicle health management (IVHM).

"Integrated Vehicle Health Management: Business Case Theory and Practice" includes interviews with manufacturers and suppliers on how they are marketing one-of-a-kind services, and opening up new and sustainable revenue streams. Case studies also are introduced to demonstrate the real value of condition-based maintenance, the advantage of cost avoidance, and risk mitigation for high-value assets. The objective is to provide the tools and techniques for constructing a business case while also providing some of the context in which these variables are framed.

Jennions, **member of the SAE Integrated Vehicle Health Management Steering Group**, is a Professor and Director of the IVHM Centre, Cranfield University, U.K., where he leads its development and growth in research and education. Previously, he had worked for a number of companies in the gas turbine industry over a 30-year career, including Rolls-Royce, General Electric, and Alstom.



This book is a recent addition to the many standard activities and resources SAE International is involved in moving this unique, groundbreaking field forward. For all SAE IVHM related resources visit:

www.sae.org/news/ivhm

Standard for inspection, test quality systems for aviation, space and defense organizations published

SAE International's Americas Aerospace Quality Standards Committee has completed "AS9003: Inspection and Test Quality Systems, Requirements for Aviation, Space, and Defense Organization."

This quality standard is designed for suppliers that produce noncomplex products for aviation, space and defense customers. This release replaces the 1994 version of AS9003 and is modeled after the current process-based version of AS9100 as well as the Mil-Q-9858/Mil-I45208 quality system architecture that existed for decades within the Department of Defense.

Standard AS9003 provides contractors a less costly alternative to AS9100 for smaller suppliers that manufacture simple build-to-print product. It provides a set of requirements that apply to the inspection and test of noncomplex product and provides assurance that product configuration requirements and customer expectations will be met. Non-complex products are defined as products whose conformity can be fully verified by the customer upon receipt.

"There is a strong industry need for this standard," said **Mike Gusha**, Manager of Quality Systems for Lockheed and **the industry team lead for the AS9003** rewrite effort. "The rewrite of AS9003 was an industry effort and involved representatives from original equipment manufacturers and NASA. I can't say enough about the support we received from the rewrite team."

Congratulations to the SAE International Award recipients!

Technical Standards Board Outstanding Achievement Award 2012, which recognizes individuals for outstanding service in the technical committee activities of SAE International. This includes valuable contributions to the work or leadership of SAE technical committees, significant contributions as an SAE representative to the accomplishments of other organizations committees, and outstanding contributions to SAE committee work in the form of research, test methods and procedures, and/or development of standards.

Mark Scott, (Boeing Co.) G-3, Aerospace Couplings, Fittings, Hose, & Tubing Assemblies Committee

Raki Islam, (Zodiac Aerospace) Aircraft Seat Committee Chair

David Zika, (Boeing Co.) Avionic Systems Group Chair

SAE Aerospace Chair Award 2012, which is 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.

Chris Winslow, (Boeing Military Airplanes) AS-3 ,Fiber Optics & Applied Photonics Committee Chair

Henry Souther Standards Award 2011, which acknowledges accomplishments in standards development in the disciplines of environment, safety, materials, testing and emissions.

Jacques Leroux, (Dow Chemical Canada ULC), G-12, Aircraft Ground Deicing Committee Chair

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).



Nominate a deserving individual for an upcoming SAE award

Submit nominations at www.sae.org/awards. Need assistance with an award nomination? Contact the SAE Awards staff at awards@sae.org, 1-877-606-7323 (U.S. and Canada only) or 1-724-776-4970 (outside U.S. and Canada).

The nomination deadline for the following awards is **December 31**, so submit your nominations now:

Technical Standards Board Outstanding Achievement Award... for outstanding service in the technical committee activities of the Society.

SAE Aerospace Chair Award... recognizes outstanding leadership demonstrated by chairs of committees under the Aerospace Council and Air & Space Group.

SAE Aerospace Engineering Leadership Award... for outstanding contributions to the field of aerospace engineering through his/her leadership skills.

Bruce R. Aubin Aerospace Customer Support Award for Excellence... recognizes an individual in the air transport industry working for an aerospace supplier (Tier 2 or Tier 3) whose efforts contribute to the excellence of the Prime manufacturers and the viability of airline operations.

Clarence L. (Kelly) Johnson Aerospace Vehicle Design and Development Award... recognizes individuals who have distinguished themselves by making significant contributions during their career in the innovative design and development of advanced aircraft and/or spacecraft.

Franklin W. Kolk Air Transportation Progress Award... 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... 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.

Wright Brothers Medal... recognizes author of the best paper(s) relating to the invention, development, design, construction, or operation of an aircraft and/or spacecraft presented at a meeting of the Society or any of its sections.

Additionally, the following award has a nomination **Deadline of February 1**:

William Littlewood Memorial Lecture... provides for an annual lecture dealing with a broad phase of civil air transportation considered of current interest and major importance.

New SAE committee chairs — your volunteer efforts are appreciated

Ian James (Aero Engine Controls), Aerospace Propulsion Systems Group

Peter Meecham (PC Meecham International Ltd), E-33, In-Flight Propulsion Measurement Committee

Hillary Yin (Microalloying International Inc.), EG-1B, Hand Tools Committee

Mark Chappell (Aerospace Testing Alliance), S-15, Gas Turbine Performance Simulation Nomenclature and Interfaces Committee

George Allen (Vibration Solutions LLC), EG-1A, Balancing Committee

Adele Cross (Air BP Lubricants), E-34, Propulsion Lubricants Committee

Duncan Chase (Rolls-Royce PLC), E-32, Aerospace Propulsion Systems Health Management Committee

Dave Christie (Honeywell), E-31, Aircraft Exhaust Emissions Measurement Committee

Fred Gyuricsko (RBC Bearings), ACBG, Airframe Control Bearings Committee

Dick Newman (US Navy), S-7, Flight Deck & Handling Qualities Standards for Transport Aircraft Committee

Gabriel Sampson (Averest Inc.), AGE-2, Air Cargo & Aircraft Ground Equipment and Systems Committee

Mike Spry (Boeing Commercial Airplanes), AGE-2A, Cargo Handling Committee

Robert Garner (Odyssey II Solutions Inc.), Aircraft Systems Group

Committees seeking experts and new members

- SAE AE-4 Electromagnetic Compatibility Committee
- SAE AE-5 Aerospace Fuel, Oil, and Oxidizer Systems Committee
- SAE AS-1 Aircraft Systems and & Systems Integration Group
- SAE A-4 Aircraft Instruments Standards Development Committee
- SAE S-7 Flight Deck and Handling Qualities Standards for Transport Aircraft Committee
- SAE S-9 Cabin Safety Provisions Committee
- SAE Airframe Control Bearings Group (ACBG)
- SAE E-25 General Standards for Aerospace & Propulsion Systems Committee
- SAE G-11 Reliability, Maintainability, and Probabilistic Methods (RM&P)
- SAE EG-1 Aerospace Propulsion System Support Equipment Committee

If you are interested in participating in these or other SAE standards committees, visit <http://www.sae.org/standardsdev/participateReq.htm>, or contact Kerri Rohall at kerrir@sae.org or 1-724-772-7161.

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

Volunteer recognition: 2012 Document Sponsors

The SAE Aerospace Standards Development Program wishes to thank 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.



George Abelli		Ramon Garcia	Lockheed Martin Aeronautics Co
Sabit Ali	National Bronze and Metals Inc	Robert P Garner PhD	Odyssey II Solutions Inc
Diego Alonso-Tabares		Daniel A Garrett	PBY Plastics Inc
CEng	Airbus	Lee Gearhart	Moog Inc
Jagdish Amin	Lockheed Martin Aeronautics Co	Jonathan Golding	Spectrum Technologies USA Inc
Thomas L Anderson	Goodrich Corp	Dale K Gordon	Aerojet A GenCorp Company
William Arbiture	Rexnord Technical Services	James Greaney	Cryotech Deicing Technology
Russell H Ashleman Jr	Boeing Commercial Airplanes	David Griffith	Boeing Commercial Airplanes
Jacque S Bader	Rolls-Royce Corp	Kevin Groeneveld	
James Michael Baker	Thomas & Betts Corp	Ron Grzeskiewicz	ATI Allvac
David S Barninger	Piedmont Airlines	Scott B Gwilliam	JBT Aerotech
Daniel Basch	Parker Hannifin Corp	Frederick S. Gyuricsko	RBC Bearings
Frank L Bernhard	Moog Inc	Ronald A Hahn	
Pierre Bettini	SKF Aerospace	Bohdan Hasiuk	Defense Supply Center Philadelphia
Dr Prasannakumar		Juan Carlos Herrera	
Bhonge	Cessna Aircraft Company	Robert S Hodder	
Stan Biernat	Moog Inc	David Hotchkiss	Schatz Bearing Corp
Eric Boeker	US Dept of Transportation	Dr Robert Howard	Aerospace Testing Alliance
Tim Boysen	UTC Aerospace Systems	James Ide	Nexans
Michael Brandt	Alcoa	Steven Mark Iden	US Air Force
Lisa Brasche	Iowa State Univ	Raki Islam	Zodiac Aerospace
Charles E Bremer Jr	Honeywell Int'l Inc	Peter Keenan	Airbus UK
Gary Brown	Carpenter Technology Corp	James J Kernan	US Army
Gregg Butterfield	Crane Co	Richard E Knopf	GE Aircraft Engines
Randy Camp	Boeing Commercial Airplanes	Nicholas Kolar	Rexnord Aerospace
Dr James C Cannon	Oxygen Technology Advisors LLC	Norm Kosciusko	JBT Aerotech
Larry B Carlisle	Pratt & Whitney	Manuel Koucouthakis	Honeywell Aerospace
Gregory F Cederlind	Crane Aerospace	Robert Koukol	Honeywell Aerospace
Ken Christian	HellermannTyton	George Kunkel	Spira Manufacturing Corporation
Kenneth J Clark	Magnesium Elektron	Craig Kuznia PE	US General Services Administration
Roy Clarke		Dan T LaHue	Meggitt Aerospace Braking Systems
Richard Clutterbuck	Thales	Gary S Lane	
Cynthia Lynn Corbett	FAA	Christopher L Lanza	Moog Inc
Christopher Dann	Transport Canada	Stefano Angelo	
Bruce Delsing	Boeing Commercial Airplanes	Mario Lassini	GE Aviation
Walter Deutscher	Alten Technology	Kenneth Lefebvre	PRI
Colister Dickson	Lockheed Martin Aeronautics Co	Jacques Leroux PhD	Dow Chemical Canada ULC
Stephanie Divens	Parker Hannifin Seal Group Inc	Bruce Lewis	US Army
Michael Doane	Douglas Equipment Ltd	Michel Loignon	Parker Aerospace
Frank Doran	L-3 Communications	James MacLeod	National Research Council Canada
Ing Robert Duiuis CEng	KLM Royal Dutch Airlines	Puliyur V Madhavan	
Edward Duncan	United Air Lines Inc	David Martin	Neya Systems LLC
Tim Erhardt	Boeing Commercial Airplanes	Richard Maybaum	Accurate Bushing Co Inc
Dennis Evans		John Mazurowski	Penn State Electro-Optics Center
Barry Feltham	B N Feltham Consultant	Michael McCabe Sr	Seal Science Inc
David Flask	Honeywell Aerospace	Paul McMurtry	UTC Aerospace Systems
David J Flavell	Moog Inc	James McNamara	Navmar Applied Science Corp
Alan Fletcher		Scott McNeil	RBC Bearings
Mervyn D Floyd		Alan Miklos	Glenair
Todd A Fogde	Precision Aircraft Machining Co	Dinkar R Mokadam	Assoc of Flight Attendants - CWA
Clint Forrest		Wayne Moss	NAVSEA
David A Fox	Hamilton Sundstrand	Jeffrey Mothersbaugh	Parker Hannifin
Perry Freeman	Boeing	Inho Myong	TE Connectivity

continued from previous page

Timothy Neff	Spirit AeroSystems Inc	Herbert Josef Schlatt	Cassidian
Michael M		Robert Kyle Schmidt	
Niedzinski Ing	Constellium	William Scofield	Boeing Co
Ing Randy Normann		Anil C Shah	Cessna Aircraft Company
Patrick Oakes	Glenair International	Peter Simos	Pratt & Whitney Aircraft
Erwin Oman	Bombardier Inc	Maura E Simpson	RBC Heim Bearings Inc
Walter Opdycke PhD	Henkel Corp	Roger B Sines	Honeywell Aerospace
Ray Owen		Renatas V	
Jacob Padrul		Stanislovaitis	GE Aviation
Robert Neil Parfitt PE		Robert M. Steffen	Raytheon Precision Manufacturing
Nilesh Patel		Ralph G Swift	
A. W. Patterson	Lockheed Martin Aeronautics Co	Edwin E Taylor	Eagle Systems Inc
Larry Patzman	Lockheed Martin Space Systems Co	Eric Thomas	DuPont Co
Michael Peppas		Robert Tonkin	Cummins Inc
Eric M Peterson	Electron International II Inc	Marc Mario Tremblay	AMIL
Ronnie G Peterson		Tracy Tschauner PE	Triumph Aerospace
Scott Peterson	SIFCO Selective Plating	Dr Brian L. Uhlhorn	Lockheed Martin Corp
James N Phillips III	Unitron LP	Hans Van der Velden	
George E Poole		Jordan Wadsworth	Crissair Inc
Richard Porter	RTI International Metals Inc	Todd Walker	ES3 Inc
Edward Pugacz	Federal Aviation Administration	James Ward	
Charles Reed	Lockheed Martin Missiles & Fire Control	Ronald W Watson	TE Connectivity
Lawrence M Rice	Osram Sylvania	David Richard	
Michael C Roberts	Boeing Co	Westlund	Federal Aviation Administration
Sam J Robinson	Sherwin Inc	Craig Willan	Omega Research & Engrg
Susan Rogers	Sensata Technologies Inc	Alun Williams	Airbus SAS
Ken Sabo	Lockheed Martin Aeronautics Co	Christopher C Winslow	
Gabriel Sampson	Averest Incorporated	Maurice Womack	DSCC
Katie Sassaman	QuesTek Innovations LLC	Jeff Wood	
W Scott Schaefer	Moog	William R Woodward	Ursa Navigation Solutions Inc
		Phil Zulueta	Consultants to Management

E-32 committee helps food bank



The **SAE E-32 Aerospace Propulsion System Health Management Committee** participated in a community service project at the Cleveland, OH food bank on October 2.

Approximately 20 members of the committee took an evening during their meeting in Cleveland to sort canned goods and dry goods at the food bank.

The idea of getting involved in a service project is one that the committee hopes to carry forward for future meetings, said **E-32 Vice Chair Michael James**.

"It enables the committee to give back to a community, and it builds camaraderie," he said, noting that the committee members have expressed interest at finding service projects in locations where future meetings will be held.

Committee participants included **Steve Arnold, Duncan Chase, Kathy Elliott, Julien Faeu, Laura Feix, Richard Greaves, Chris Hickenbottom, Gene Iverson, Chris Pomfret, Michael James, Ian Jennings, Mike Roemer, Douglas Silva, Ginger Shao, Don Simon, Peter Smout, and Rhonda Walthall**.

continued on next page

Thank you...

for your contributions to the 2012 SAE Aerospace Standards Corporate Contribution Program

SAE International acknowledges the following organizations who have contributed to funding the Standards Development Program this past year—supporters who acknowledge the benefits common engineering requirements bring to a global industry and their businesses.

3M/ AC Technology	Leach International North America
Adel Wiggins Group	Lockheed Martin Aeronautics Company
Aero Mag 2000 Yul, Inc.	Meggitt Aircraft Braking Systems
Air BP Lubricants	Mi-Tech Metals, Inc
Air Cruisers Company	Moog Inc.
Airbus	N*ICE Aircraft Services & Support GmbH
Airlines for America (A4A)	NASCO Aircraft Brake, Inc.
Alcoa Fastening Systems	National Utilities Company/NUCO
Amphenol Fiber Systems International	Nexans
AMSAFE Aviation	Northrop Grumman Corporation
Astronics DME Corporation	Pacific Scientific Company
Cessna Aircraft Company	Pall Aeropower Corporation
Crissair, Inc.	Parker (Hannifin) Aerospace
Cryotech Deicing Technology	Polymod Technologies, Inc.
Curtiss-Wright	PPG Aerospace
EASA	Pratt & Whitney Corporation
Eaton Aerospace	Rainier Rubber Company
Electro Adapter, Inc.	Rockwell Collins
Electronics, Inc.	Rolls-Royce Corporation
Emhart Fastening Technologies	Rolls-Royce Corporation
Ge Aviation	Safe Flight Instrument Corporation
Glenair, Inc.	Sargent Controls & Aerospace
Global Ground Support	Satco, Inc.
Greene, Tweed & Company	Souriau
Hamilton Sundstrand Aerospace	Switlik Parachute Company, Inc.
HEATCON Inc.	Teledyne Microelectronics
Heroux Devtek, Inc.	Tensolite/Carlisle Interconnect Tech.
Honeywell	The Boeing Company
IPECO, Inc.	The Lee Company
Israel Aircraft Industries, Ltd.	Thermax/CDT, Inc.
J & M Products, Inc.	Thomas & Betts Corporation
JBT Aerotech	Tiodize Company, Inc.
Joslyn Sunbank Company, LLC	Trelleborg Sealing Solutions US, Inc.
Judd Wire, Inc.	Tri-Star Electronics International, Inc.
Kilfrost Inc.	Wesco Aircraft Hardware Corp
	WireMasters Inc.

Additional benefits to making annual corporate contributions to the program include: visual branding at SAE Aerospace Committee Meetings...visibility on the SAE website...recognition in the bi-annual SAE Aerospace Standards Development Newsletter... waiving of Aerospace Standards Technical Committee Meeting registration fees for all staff during the contribution year. To take advantage of the various benefits annual corporate contribution can bring your company, contact Laura Buckreis Metzler at phone +1.724.772.8542 or email lmetzler@sae.org

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
- Peer recognition for advancing your industry's sectors technologies
- Excellent networking and learning opportunities from product developers/users around the world
- Discover emerging technologies
- Contribute to the industry's body of technical knowledge

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

Become a better you. Volunteer for an SAE Standards Development Committee.

2013 technical committee meeting schedule

This list is current as of publication. For updates and changes, go to <http://www.sae.org/standards/aerospace/schedule>

New committees formed

AC-9, Aircraft Environmental Systems Committee, created a new task group, AC9-AS6323, to address Bleed Air Contamination Limits for Safety, Health and Comfort of Aircraft Occupants

EG-1B1, Ergonomics, Hand and Arm was also established.

For further information on either of these, to participate, or to learn of upcoming meetings, contact Kerri Rohall at kerrir@sae.org or 1-724-772-7161.

January 8-9	AMEC Surface Enhancement Committee, Monterey, CA, USA
January 9-11	AMEC Aerospace Metals and Engineering Committee, Asilomar, CA, USA
January 21-25	S-18 Airplane Safety Assessment Committee, Austin, TX, USA
January 22-24	Aircraft Seat Committee, Sedona, AZ, USA
January 28-31	Aerospace Behavioral Engineering Technology (ABET) Committee, Melbourne, FL, USA
January 29-31	AE-2 Lightning Committee, Santa Fe, NM, USA
February 19-21	S-16, Turbine Engine Inlet Flow Distortion, Sedona, AZ, USA
March 5-6	A-20 Aircraft Lighting Committee, Las Vegas, NV, USA
March 5-6	AE-8 Executive Committee, San Antonio, TX, USA
March 5-7	E-36, Electronic Engine Controls, Fort Lauderdale, FL, USA
March 11-13	E-34, Propulsion Lubricants, New Orleans, LA, USA
March 13-15	G-3, Aerospace Couplings, Fittings, Hose and Tubing Assemblies, Indianapolis, IN, USA
March 15	AMS M, Aerospace Greases Committee, New Orleans, LA, USA
March 25-28	AMS Metals Group Committee Meeting, Austin, TX, USA
April 8-9	AGE-2A Cargo Handling Committee, Amsterdam, Netherlands
April 8-10	E-25, General Standards for Aerospace and Propulsion Systems, Savannah, GA, USA
April 9-11	A-5 Aerospace Landing Gear Systems Committee, Calgary, AB, Canada
April 16-18	Airframe Control Bearings Group, San Diego, CA, USA
April 16-18	AE-8A Systems Installation and AE-8D Wire & Cable Committees, Seattle, WA, USA
April 16-18	S-9 Cabin Safety Provisions Committee Carlsbad, CA, USA
April 22-26	AC-9 Aircraft Environmental Systems Committee/AC-9C Aircraft Icing Technology Committee, Charleston, SC, USA
April 22-25	Avionic Systems Group (AS-1, AS-2, AS-3, AS-4), Jacksonville, FL, USA
April 22-26	S-18 Airplane Safety Assessment Committee, San Francisco, CA, USA
May 6-9	A-6, Aerospace Fluid Power, Actuation & Control Technologies, Milwaukee, WI, USA
May 8-10	A-10 Aircraft Oxygen Committee, Washington, DC, USA
May 9-16	G-12 Aircraft Ground Deicing Committee, New Orleans, LA, USA

continued on next page

continued from previous page

May 14-17	AE-8C1 Connectors and AE-8C2 Terminating Devices Committees, New Orleans, LA, USA
May 14-16	Aircraft Seat Committee, Charlotte, NC, USA
May 21-24	AE-5 Aerospace Fuel, Oil & Oxidizer Systems, Plaisir, France
June 10-14	E-31, Aircraft Exhaust Emissions Measurement (Hosted by Joint Research Council) Ispra, Italy
June 11-13	AE-2 Lightning Committee, Big Sky, MT, USA
Jly 30 - Aug 1	S-16, Turbine Engine Inlet Flow Distortion, Snowmass Village, CO, USA
September 11-12	A-20 Aircraft Lighting Committee, Niagara Falls, NY, USA
September 16-19	G-14 AAQSC, AAQG, RMC and Team Meetings, Seattle, WA, USA
September 16-17	AE-2 Lightning Committee, Seattle, WA, USA
September 17-19	S-9 Cabin Safety Provisions Committee, St. Louis, MO, USA
September 17-19	Aircraft Seat Committee, Dublin, Ireland
September 23-26	AMS Metals Group Committee Meeting, San Diego, CA, USA
September 24-26	AE-5 Aerospace Fuel, Oil & Oxidizer Systems, Montreal, QC, Canada
September 24-26	AE-7 Aerospace Electrical Power and Equipment, Montreal, QC, Canada
October 7-11	AE-8 Aerospace Electrical/Electronic Distribution Systems Committee Meetings and AEISS Symposium, Tampa, FL, USA
October 15-17	A-10 Aircraft Oxygen Committee, Versailles, France
October 21-24	Avionic Systems Group (AS-1, AS-2, AS-3, AS-4), Portland, ME, USA

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.

For sponsorship levels and opportunities available contact:
SAE Sales 1.724.772.4078 or Aerospace Standards 1.724.772.8542
On the web, go to www.sae.org/standards and "Technical Committee Meeting Schedule"



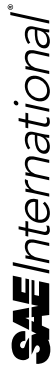
SAE International

P100853

Volunteer today!

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.



Customer Service
400 Commonwealth Dr. • Warrendale, PA 15094-0001 USA
1-877-406-7323 (U.S. and Canada) • 1-724-776-4970
CustomerService@sae.org • www.sae.org

