



ICAO UNITING AVIATION

Harmonisation Initiative for De-icing Standards

EASA Annual Safety Conference
Cologne, Germany
15 - 16 October 2013

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Framework

Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640)



* intellectual property



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Hierarchy of ICAO Provisions



- **Standards & Recommended Practices (SARPs)**
 - ✓ States may file differences
 - ✓ Subject to USOP Audits
- **Procedures for Air Navigation Services (PANS)**
 - ✓ Complement SARPs
 - ✓ States may publish differences in AIP
 - ✓ Subject to USOP Audits
- **ICAO Manuals**
 - ✓ Guidance on compliance with SARPs

All published in: Arabic, Chinese, English, French, Spanish and Russian



“A flight to be planned or expected to operate in suspected or known ground icing conditions shall not take off unless the aeroplane has been inspected for icing and, if necessary, has been given appropriate de-icing/anti-icing treatment. Accumulation of ice or other naturally occurring contaminants shall be removed so that the aeroplane is kept in an airworthy condition prior to take-off.”



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ICAO Documents being Amended

- **PANS – Air Traffic Management (Doc 4444)**
 - Chapter 12 Phraseologies
 - Section 7 – Ground Crew/Flight Crew Phraseologies
- **Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640)**
 - Basic guidance with reference to respective SAE and other ICAO documents for detailed information
 - Examples of phraseologies and Scripts



- **PANS-ATM**
 - Proposal to be finalized by the SAE-ICAO-Council by end of October
 - Endorsed by the ICAO Flight Operations Panel early December
 - Preliminary review by the Air Navigation Commission (ANC) 1Q 2014
 - State letter circulated Q2 2014 expected applicability November 2014
- **Doc 9640**
 - Subject to the results of the PANS-ATM consultation
 - SAE documents
 - Third Edition expected by November 2014



- The ground de-icing/anti-icing initiative contributes to ICAO's strategic objectives;
 - Will produce a tangible operational improvement in terms of Safety and Efficiency
- Is a collaborative effort with SAE and IATA which will sync standards and guidance for;
 - States
 - Operators
 - De-icing/anti-icing service providers

SAE INTERNATIONAL

HARMONISATION INITIATIVES FOR DEICING STANDARDS

EASA Annual Safety Conference
Cologne, Germany
Capt. Miguel Marin and
Dr. Jacques Leroux
October 16, 2013



AGENDA

- Background
- SAE ICAO IATA Council for Global Aircraft Deicing Standards
- Update
- Summary
- Invitation to participate in the SAE G-12 Committees

Problem of Multiple Standards

- **Centralized deicing facilities (CDF): more than 80 airlines attempting to impose their own standards**
- **CDF face the impossible task of training staff to 80 standards**
 - Multitude of procedures
 - High training costs
 - Complexity with risk of non-compliance to multiple procedures
- **CDF impose one procedure with approval of national regulator**
- **Flying crews have different procedures at each CDF**
- **Complexity leads to higher risks and costs**

Background

- **Proliferation of deicing standards by regulators, ICAO, IATA, SAE, AEA, and others**
- **There is no single unified global standard**
- **IATA received a mandate from its Operations Committee to develop such a standard**
- **In May 2011, IATA asked SAE G-12 for its participation in this task**

Airlines realized that safety and costs would be improved by the adoption of globally harmonized deicing standards

The General Conditions

G-12 Steering Group welcomed the IATA request on conditions that:

- there would not be duplication of work
- there would be no duplication of standards
- IATA would not develop its own standards
- the SAE process would be used for developing the standards
- IATA and SAE would enter into a formal cooperation agreement


On November 11, 2011, a committee was created with SAE, ICAO and IATA as sponsors.


SAE ICAO IATA COUNCIL FOR GLOBALIZED AIRCRAFT DEICING STANDARDS



Charter and Terms of Reference

SAE Aerospace
An SAE International Group





SAE ICAO IATA Council for Globalized Aircraft Deicing Standards Charter and Terms of Reference

Foreword

This document provides historical background, governance structure and objectives of the SAE ICAO IATA Council for Globalized Aircraft Deicing Standards.

Table of Contents

1. SCOPE	2
2. APPLICABLE DOCUMENTS	2
2.1. SAE PUBLICATIONS	2
2.2. ASSOCIATION OF EUROPEAN AIRLINES PUBLICATIONS	2
2.3. FAA PUBLICATIONS	2
2.4. ICAO PUBLICATIONS	3
2.5. TRANSPORT CANADA PUBLICATIONS	3
2.6. ISO PUBLICATION	3
3. BACKGROUND	3
3.1. INTRODUCTION	3
3.2. SAE ICAO IATA MEMORANDA OF UNDERSTANDING	4
4. SCOPE, OBJECTIVES AND EXPECTED BENEFITS	4
4.1. PROJECT SCOPE	4
4.2. OBJECTIVES	4
4.3. EXPECTED BENEFITS	5
5. GOVERNANCE STRUCTURE	5
5.1. NAME	5
5.2. ORGANIZATIONAL CHART	5
5.3. EXECUTIVE SPONSORS	6
5.4. MEMBERSHIP	6
5.5. COUNCIL LEADERSHIP	7
5.6. TECHNICAL COMMITTEES (METHODS, TRAINING AND QUALITY PROGRAMS)	7
5.7. COMMUNICATIONS	7
5.8. MEETING FREQUENCY	8
5.9. MAJOR INTERDEPENDENCIES	8

Scope

- 1. Aircraft ground deicing methods**
- 2. Training procedures for aircraft ground deicing**
- 3. Quality control procedures**
- 4. Phraseology between ground crews and flight crews**

Committees

- **SAE G-12 Methods (G-12 M) Committee is responsible for writing:**
 - the globalized aircraft ground deicing methods
 - the phraseology between ground crews and flight crews documents
- **SAE G-12 Training and Quality Programs Committee (G-12 T) is responsible for writing:**
 - the globalized training for aircraft ground deicing document
 - the globalized quality control procedures document

Objectives of the Council

- **Modify SAE methods and training documents to become accepted harmonized standards**
- **Facilitate the adoption of any other new SAE standards recommended by SAE ICAO IATA Council to achieve harmonization**

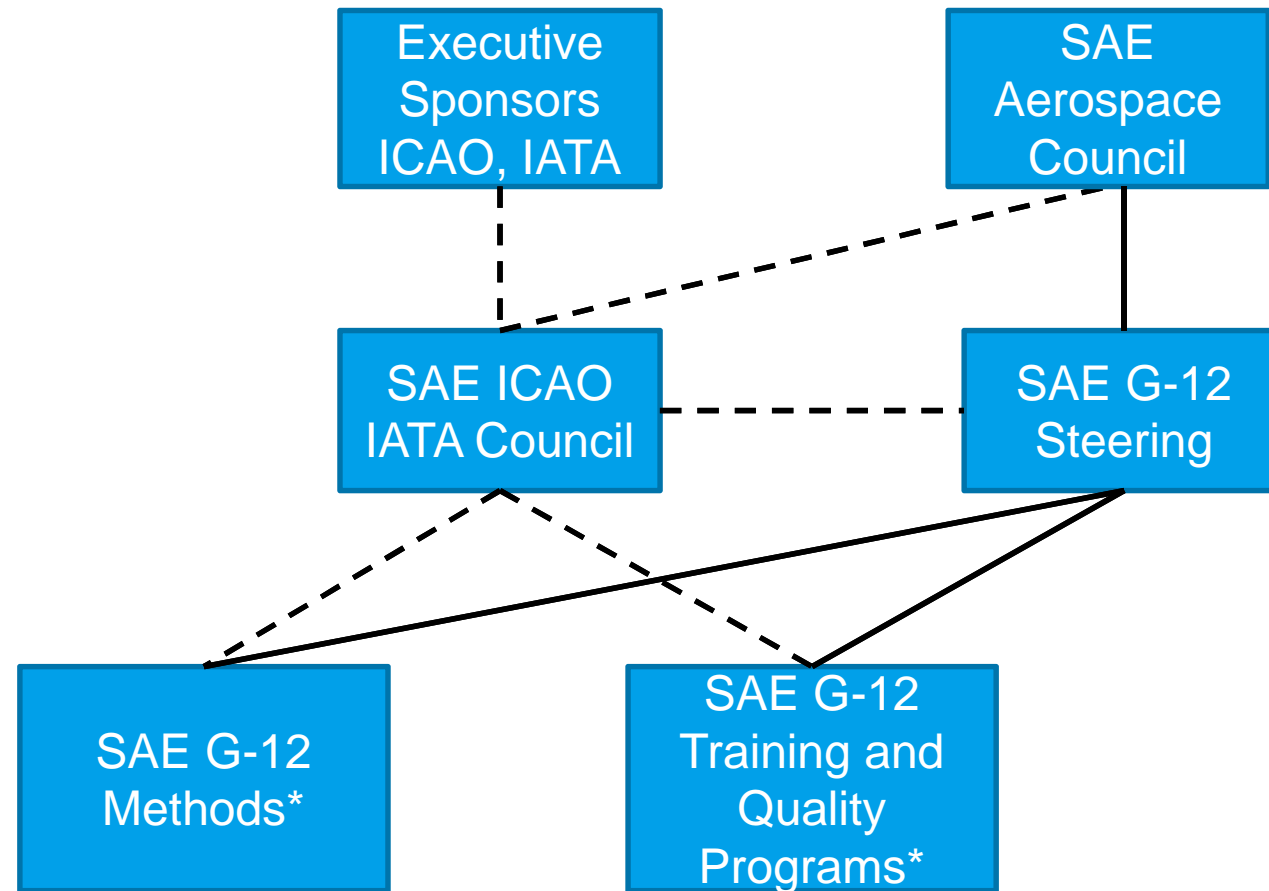
Council Goals

- **Promote participation in SAE G-12 Methods and SAE G-12 Training**
- **Use its resources to facilitate sharing of documents**
- **Make recommendations to SAE G-12 and other organizations to promote the development and harmonization of standards**
- **Facilitate stakeholder acceptance of proposed standards**
- **Recommend adoption of standards by regulators, airframe manufacturers, airlines, and service providers directly or by reference**

Expected Benefits

- **Reduction of the complexity level of deicing procedures for ground crews leading to improved safety**
- **Simplification of processes for flight crews leading to increased levels of safety**
- **Reduction in the number of training events**
- **Reduction of the number of standards**
- **More commonality in audit standards**
- **Cost reductions**
- **Better understanding and awareness worldwide of deicing requirements**
- **Improved communications between all stakeholders**

Governance



* Create workgroups, as required

-- Project reporting lines

— SAE reporting lines

Membership

Organizations	Regulatory Authorities	Airframers	G-12 Constituents
IATA DAQCP (Deicing Anti-icing Quality Control Pool)	CAAC	Airbus	Training & Quality Control Cmte Co-Chairs
DEVA (De/anti-icing Intl Vendor Audit)	EASA	Boeing	Methods Cmte Co-Chairs
IATA (sponsor)	FAA	Bombardier	AEA Liaison
ICAO (sponsor)	South American Regulator (TBD)	Embraer	Steering Group Chair
IFALPA	State Civil Aviation Authority Ministry of Transport of the Russian Federation		
AEA	Transport Canada		

UPDATE

Documents Under Development

- **Methods Document**

- Agreement reached on which parts of SAE ARP4737, Aircraft De-icing/Anti-icing Methods, and AEA Recommendations would comprise the new document

- **Phraseology Document**

- SAE ARP will adopt ICAO phraseology format
- ICAO plans to incorporate phraseology and reference SAE ARP in PANS – ATM (Procedures for Air Navigation Services – Air Traffic Management)

- **Training & Quality Documents**

- New AS will merge SAE ARP5149B, Training Program Guidelines for Deicing/Anti-Icing of Aircraft on Ground, with “Universal Deicing Training Curriculum”
- AEA Training Guidelines and Background Information Document will be transformed into SAE AIR

Intellectual Property Issues

- **AEA granted a copyright waiver to permit SAE to use excerpts from two AEA Recommendations in the new global standards**
- **Working to address intellectual property issues associated with the publication of similar phraseology content in ICAO and SAE documents**
- **Need to find mechanism that protects SAE IP but enables airlines to incorporate excerpts from global standards into their deicing manuals**

SUMMARY

Summary

- IATA initiated the project
- ICAO decided to participate and support
- SAE G-12 members are generating the standards
- AEA is actively participating and supporting
- Airlines are an integral part of the process
- FAA intends to harmonize AC 120-60 with the new SAE ARP 4737 and ICAO Doc 9640
- EASA will consider recognizing the global standards as means of compliance
- Transport Canada is working with ICAO to harmonize

Invitation

- This is an invitation to participate in the development of the global standards.
- Join the SAE G-12 Methods and SAE G-12 Training and Quality Program Committees
 - Membership is free
- Committees meet twice per year, in person.
 - October – “Mid-year Meeting” in Montreal
 - Next meeting October 28 to 31, 2013 in Montreal
 - May – General Meeting
 - Alternate locations in North America and Europe
 - Next general meeting, TBD, May 8- 15, 2013 (tentative).

Invitation

- To join SAE G-12 and participate in the development of global harmonized aircraft ground deicing standards:
- Send an email to: jleroux@dow.com

Thanks

- Miguel Marin, ICAO



- Tom Fodor, IATA



- Laura Feix, SAE



- Dow Chemical Canada ULC

