AS13100: Supplier Engagement Webinar
Wednesday 6th September 2023
DESIGN WORK: RM13008 & RM13011
Webinar Overview

We are **recording** today’s webinar and will distribute the video link following the close of the webinar. It will also be posted on the AESQ website for free viewing.

We will take **questions** during today’s webinar using the **Chat** feature.

**Please remain on Mute** during the presentation to prevent background noise. We will also be muting all lines at the start of the session.
AS13100 FOUNDATIONS & OEM DESIGN HIERARCHY
Aero Engine Industry - The world ten years ago

- Customers expect Zero Defects
- Airline passengers projected to double in size over the next 20 years
- Increasing level of supplier-made engine content
- Global Supplier Footprint
- Large number of common suppliers between engine manufacturers
- Wide range of Aerospace engine supplier businesses, from <$1M to >$2B
- Improving Safety, Quality, Delivery and Cost remained a key challenge

Aero Engine Manufacturers created a Collaboration working group in 2013 to address the challenges with key Global Suppliers

Used the Automotive example of QS-9000 with Ford, GM and Chrysler as the model
Aerospace Engine Supplier Quality (AESQ) wanted to simplify the Quality Management System (QMS) requirements to the Aero Engine Manufacturers and Supply Base

AS13100 was created to harmonize ISO 9001, 9100, and 9145 and customer specific requirements for aero engine manufacturing.
Aero Industry Requirements Flowdown (pre AS13100)

- **Regulator Requirements**
- **Customer Requirements**
- **Industry Requirements**
  - NADCAP
  - IAQG (AS9100, AS9145, AS9102, etc.)
  - ISO (ISO9001, ISO19011, etc.)

**AERO Engine Manufacturers**
- Rolls-Royce SABRe
- GE S-1000
- P&W ASQR-01
- Safran SAFe

**Aero Engine Supply Chain**
Aero Industry Requirements Current State

Regulator Requirements

Customer Requirements

Industry Requirements

NADCAP
IAQG (AS9100, AS9145, AS9102, etc.)
ISO (ISO9001, ISO19011, etc.)

AERO Engine Manufacturers

AESQ AS13100 Quality Management Requirements
(Supplemental Requirements to AS9100 & AS9145)

AERO Engine Manufacturer Specific Requirements
e.g. SABRe, S-1000, ASQR-01, SaFE

Aero Engine Supply Chain

AESQ – Aerospace Engine Supplier Quality Strategy Group
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Typical Hierarchy for OEM Design Requirements

Customer / Regulatory Requirements
(EASA Pt 21 (J) / FAA Part 21)

OEM Design Organisation

Quality Management System (QMS)
Internal process requirements

*RR - RRMS
GE - Policy QUAL-153

Design, Manufacture & Support Processes

Internal Technical Authority Records

Quality Requirements
(Supplier Assessment / Audit)

*RR - SABRe
GE - Document S-277

External facing Generic supplier requirements
(In addition to AS13100)

*RR - SABRe
GE - Policy S-1000

External Technical Authority Records

Product Design & Development requirements

*RR - RRES 90009
GE - Document P1TF133

OEM/Supplier Integration Document
(if applicable)

Supplier Design Surveillance

*RR - ESID

* Typical OEM Document References for info

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Vision

To establish and maintain a common set of Quality Requirements that enable the Global Aero Engine Supply Chain to be truly competitive through lean, capable processes and a culture of Continuous Improvement.
Guiding Principles

• Simplify and Standardize Aero Engine supplier requirements through the removal of duplication and waste
• Create a common language for Quality
• Build on existing industry standards, where they exist
• Create Requirements that are simple, prescriptive, and auditable
• Deliver results quickly
• Promote the use of standardized 3rd party training
• Focus on effective & supportive deployment
AS13100 REFERENCE MANUALS - REMINDER
AS13100 Supporting Reference Manuals

AS13100 Standard defines mandated requirements. The Standard is supported by free issue Reference Manuals from the AESQ Website:

https://aesq.sae-itc.com/supplemental-material

Reference Manuals provide industry best practice guidance and case study material on how to deploy quality tools effectively. Reference Manuals are maintained and updated by the AESQ Subject Matter Interest Groups and may be updated at any time when new or revised information becomes available.
Finding the AESQ Reference Manuals on the AESQ Website
## AS13100 Supporting Material

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We not only provide industry best practice guidance through the Reference Manuals but also offer forms, templates etc. as working material to support your implementation.

More to come in the future!
DESIGN SUBJECT MATTER INTEREST GROUP (SMIG) RM13008 / RM13011 ACTIVITIES
AESQ Design SMIG Company Members
Design SMIG Activities
Reference Manual content being reviewed to address feedback and focus on best practice and standardisation of the following subject areas:
- Design Reviews, Technical Delegations, Design Audit Requirements, Human Factors, Non-Conformance management
RM13008 Design Reviews

Design Reviews during APQP Development Phases
AS13100 Requirement Highlights

AS13100 Section 8.3 includes common Requirements for **Design & Development**. Key Supplemental Requirements include:

- Specifies AS9145 APQP & PPAP for Managing New / Changed Product Designs
- Defines Design FMEA approach to meet Design Risk Analysis requirement
- Requires the use of Cross Functional Teams for Design & Development Activities
- Defines requirements for Design for ‘X’ (Manufacture, Assembly, Servicing, Disposal)
- Specifies the use of AS9116 to manage Design Changes

Reference Manual RM13008 Provides Guidance for Design Work
Q & A SESSION

USE THE "CHAT" FUNCTION TO ASK A QUESTION...

CHAT NOW

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SUMMARY & CLOSE
Summary

All resources will be available on the AESQ website within a few days.

An email will be sent to all registrants with a link.
THANK YOU FOR PARTICIPATING