AS13100 OVERVIEW

STRUCTURE & KEY HIGHLIGHTS

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SUPPLY CHAIN DIVISION
GE AVIATION
Aero Industry Requirements Future Vision

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
AS13100 Creation Process

Starting Point
September 2018

OEM Unique Requirements

Existing Engine Maker
Supplier Requirements

Harmonized Requirements

Requirements

Existing & WIP
AESQ Standards

Supporting Guidance & Best Practice Material

Future Engine Maker
Supplier Requirements

Overall Number of Requirements
reduced by >50%

AS13100 Standard

AESQ Reference Manuals

AESQ – Aerospace Engine Supplier Quality Strategy Group

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# AS13100 Structure

<table>
<thead>
<tr>
<th>AS13100 Requirements</th>
<th>Chapter A AS9100 Rev D Supplemental Requirements</th>
<th>Chapter B APQP &amp; PPAP AS9145 Supplemental Requirements</th>
<th>Chapter C Defect Prevention Quality Tools to Support APQP &amp; PPAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clause Number</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td>1 2 3 4 5 6</td>
<td>DFMEA Process KCs Process Flow Diagram PMEA Process KCs Control Plan MSA Process Capability</td>
</tr>
</tbody>
</table>

### Example Extract

9.3 Management Review

9.3.1 General Reference 9100D:09/2016 requirements.

9.3.2 Reference 9100D:09/2016 requirements.

9.3.2.1 Management Review Inputs - Supplemental Requirements

Management Reviews shall be conducted at least annually and consider the following performance topics:

- Cost of Poor Quality (COPQ).
- Manufacturing / Assembly Right First Time / First Pass Yield.
- Customer scorecards (where available).
- Human Factors reporting.
AS13100 Customer Specific Requirements

Designed to Include Customer Specific requirements that could not be harmonized within AS13100.

These documents shall:

- Require Compliance to AS13100
- Signpost to Customer Specific Documents (where required)
- Definition of customer specific acceptance thresholds called out in AS13100 e.g., Cpk, GR&R scope, etc.
- Additional Customer Specific requirements not defined within AS13100
- Defines company specific key roles and accountabilities for approvals
- Includes specific IT interface requirements
Table 1 provides a guide to the applicability of AS13100 Sections to Organization scope.

Table 2 defines an agreed set of Certification Requirements, matched to the scope of the supplier’s activities.
Section 4.3.5 requires the organization to conduct a **Compliance Assessment** of their QMS to ensure that it captures all of the requirements of AS13100 and customer specific requirements.

The results of this review are to be provided to the customer upon request.

Any compliance gaps must be highlighted to the individual customer and a resolution agreed.

Reference Manual RM13009 provides information to support this requirement.

<table>
<thead>
<tr>
<th>Clause Reference</th>
<th>Clause Title / Subject</th>
<th>Organization Process Reference (or comments)</th>
<th>Compliance Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.3.4.3</td>
<td>Design Reviews – Supplemental Planning</td>
<td>Not a Design responsible supplier</td>
<td>N/A</td>
</tr>
<tr>
<td>7.2.2</td>
<td>Auditor Competence</td>
<td>Auditor competence requirements are defined in our GQB in procedure number CP900, Row D. This procedure fully complies with the requirements of AS13100 clause 7.2.2</td>
<td>G</td>
</tr>
<tr>
<td>7.2.3</td>
<td>Delegated Product Release Verification (DPRV) Representative Training</td>
<td>All relevant inspections are carried out in accordance with the requirements. It is defined in our GQB in procedure number CP900, Row B.</td>
<td>G</td>
</tr>
<tr>
<td>7.2.4</td>
<td>AS13100 Requirements Training &amp; AESQ Quality Foundation Training</td>
<td>We have identified key personnel within the business that require the training. Their training plans / job profiles have been updated to reflect this as a mandated training. Training is scheduled for July (in 3 month time)</td>
<td>A</td>
</tr>
<tr>
<td>7.3.1</td>
<td>Human Factors Awareness</td>
<td>We do not have a Human Factors program at the time. The organization's leadership team is currently reviewing our future approach to HF</td>
<td>R</td>
</tr>
</tbody>
</table>
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
AS13100 Requirement Highlights

AS13100 Section 8.4.1, 8.4.2 and 8.4.3 define the additional requirements for Supplier Evaluation, Selection, Control and Performance Monitoring.

Reference Manual RM13007 Provides Guidance for Supplier Management
AS13100 Benefits

1. Single AESQ Standard aligned to AS9100 / ISO9001
   - Less Requirements for the Supplier (>50% less)
   - Lower cost (suppliers do not need to buy multiple standards)

2. Supported by Free Issue Reference Manual Guides

3. Will minimise the content of OEM Supplier Requirement Standards (SABRe, S-1000, ASQR-01 and SAFe)

4. Creates a common language for Quality, OEMs have adopted standard approaches within their own operations.

5. Aligns to relevant existing industry standards (ISO, AS9xxx, Nadcap, etc)

6. Supported by global approved training resources

7. Enables the AESQ OEMs to provide a harmonised approach to Supplier Development

8. Supplier Compliance continues to be assessed through Customer Audit

9. Allows AESQ to focus on Supply Chain Capability Development
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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/content/aesq-documents

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.