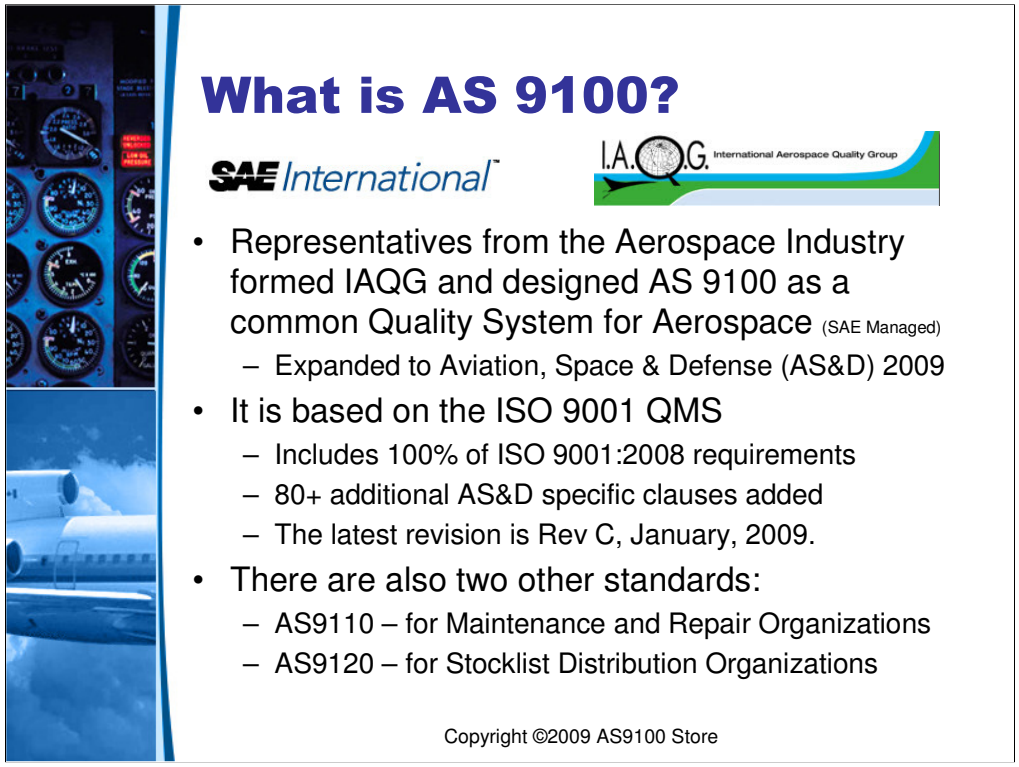
Introduction to AS 9100

Rev. C

Questions we will cover today:

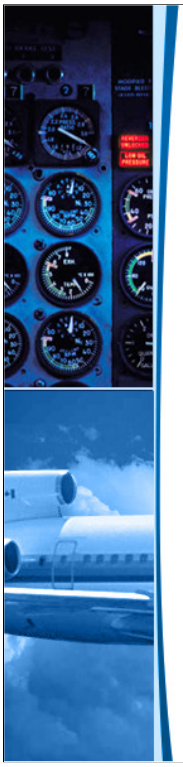
- What is AS9100?
- What does a company need to do to Register to AS9100 Rev C?
- What are the requirements?
  - Section 4 General Requirements
  - Section 5 Management Responsibility
  - Section 6 Resource Management
  - Section 7 Product Realization
  - Section 8 - Measurement, Analysis & Improvement
- What are the next steps for certification?



Each member country has representatives that make up a Technical Advisory Group (TAG). These groups draft the standard, then members comment and vote on the standard. The document then becomes a standard.

These standards are not regulations. They are a method of getting a standard set of criteria for quality management systems. An outside agency, the registrar, will then audit to see if you have all the required elements in place. If you do, you will get AS 9100 registration. This registration tells others all over the world that you have this quality system in place.

As we go through the training, and cover the requirements you will see that these requirements are basically just good business practice.



7.1.1 Project Management

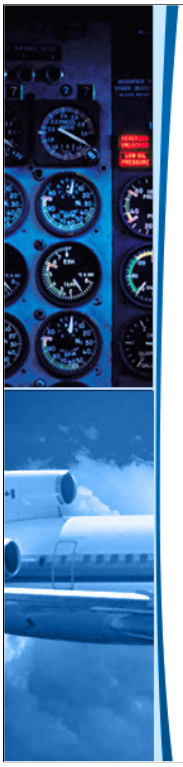
- Provides additional emphasis on planning and controlling product realization within constraints (risk, resources, schedule, etc.)

Many products involve multi-tier partners and suppliers- This places additional focus on planning and the management of project plans throughout product realization

Implementation/Audit Considerations:

- Does the organization have a process to manage product realization planning to ensure quality and schedule are not compromised?

- How are project plans used to manage the successful completion of projects?



7.1.2 Risk Management

- Must implement a risk management process for the product realization process covering:
  - Responsibility
  - Risk Acceptance
  - Criteria for acceptance,
  - identification, assessment, and communication of risk
  - Identification and action to mitigate risk

Risk management must be in place throughout product realization

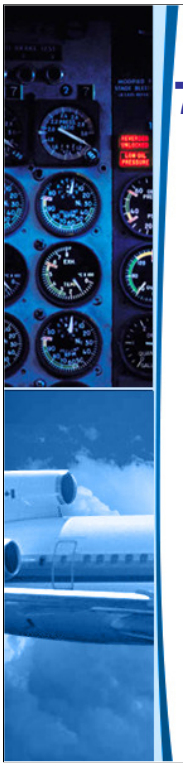
Requires process to manage risks in meeting all* requirements.

*Customer, Statutory, and regulatory

Consideration:

Who is responsible for each component of assessed risk

Guidelines for acceptance, identification, assessment, and communication of risk as well as the risk-mitigation actions



7.1.3 Configuration Management

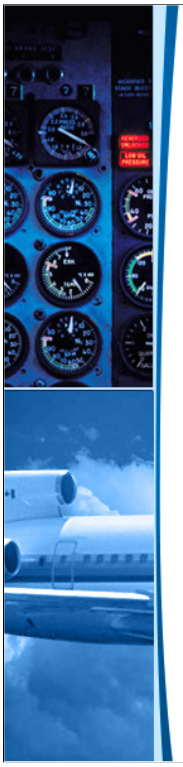
- Your organization must have a configuration management process
  - Document the plan
  - Make the plan appropriate to your product
  - This is specific to AS9100 – above ISO 9001

This clause was moved from 4.3 (Rev B) to 7.1.3 in 2009 Rev C to better align with ISO 10007 and shift focus to product configuration management.

All products must have some configuration management at all levels in the supply chain

You must have a configuration management process appropriate to the product. Any exclusions in Section 7 must not impact your ability to provide product that meets all* requirements.

*Customer, Statutory, and regulatory

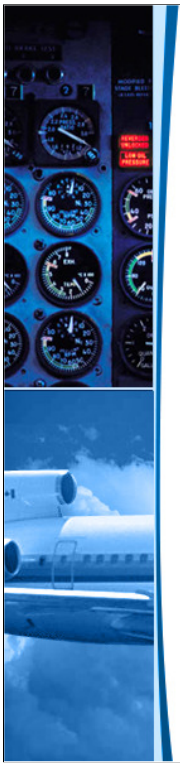


7.1.4 Control of Work Transfers

- Work transfers (temporary or permanent) must be controlled:
  - Between facilities
  - Between suppliers
  - Between organization and a supplier

Moved from 7.5.4 (rev B) to emphasize importance beyond temporary production transfers to ALL transfers.

You must have a process to plan and control all transfer activities



7.5 Production and Service Provision (First Article Inspection)

- 7.5.1.1 Production Process Verification
- Representative item to be used to validate production processes, documentation, and tooling can produce parts which meet requirements.
- Repeated when any changes nullify results

First Article Inspection (FAI) is a unique standard (AS9102) and thus not directly part of the AS9100 Rev C. However, Section 7.5.1.1 does require testing of a production part, which is the same as FAI. AS9102 becomes enforceable only when invoked by Customer

•If a Customer has not established any specific FAI requirements, then per AS9100, AS9102 is to be used as a "guideline" to perform FAI.

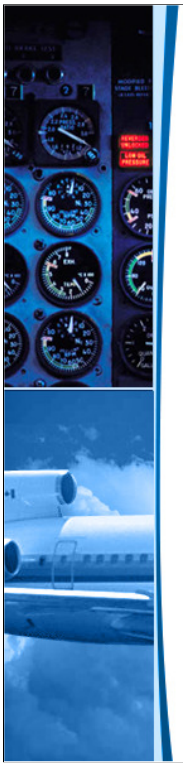
•However, if a Customer requires FAI to be performed per AS9102, then AS9102 is treated as a "Standard" and not a guideline. In this situation, every requirement of the standard must be met, unless exempted by the Customer.

The standard outlines the documentation and inspection requirements when performing First Article Inspection of aerospace components.

Aerospace companies have somewhat common requirements for First Article Inspection (FAI), however, the documentation requirements differ. This non-uniformity of the documentation has created unnecessary errors, confusion and rework, and lead to AS9102.

Changes nullifying results may include engineering changes, manufacturing process changes, tooling changes, etc.

This requirement is not primarily a measuring and monitoring process, but a process that will be used to assure product realization under controlled conditions.



7.5 Production and Service Provision

- 7.5.2 Validation of processes for production and service
  - Process validation is required for special processes
  - Special processes are processes where the output or product cannot be tested or inspected to determine if the product conforms
  - The quality is ensured by validating the process, and qualifying the operator

An example of a special process would be

• a welding joint, where the strength cannot be tested without destroying the product

•The result of a test, where test data is the product. You cannot inspect the number and determine if it is correct

•Instead of inspecting, you must ensure the accuracy by making sure that the process is reliable, monitoring product characteristics and making sure the person performing the process is qualified

These processes must be validated. Demonstrate that the process works consistently, accurately.

Include:

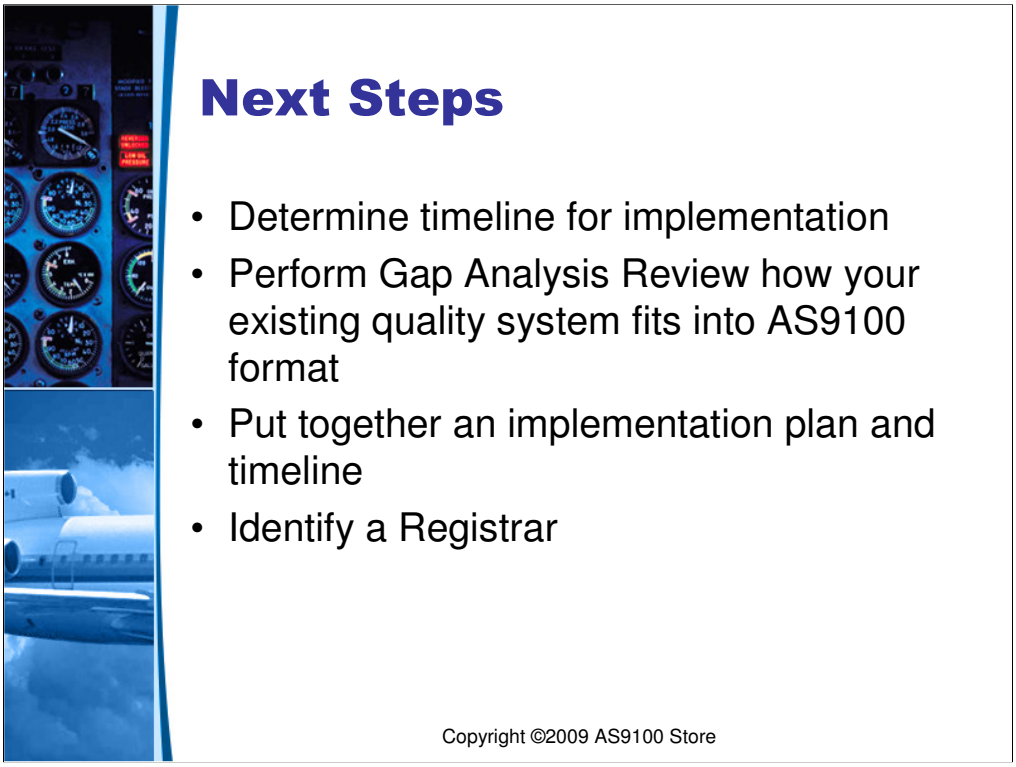
•Qualification of processes

•Qualification of equipment and personnel

•Use of defined methodologies and procedures

•Requirements for records

•Re-validation: when does the process need to be revalidated? What changes would require this?



Each organization will have its own way to approach the implementation

Performing a gap analysis of your current system versus the requirements of the standard will give you a task list to work from to plan your implementation project.

A good next step would be to identify and process map your key processes. The information you get from your Gap, combined with the process map and list of key processes should give you a good idea of what you will need to do to implement the standard. Then you can build a Gantt chart for the project, outlining the task you need to do and the documents you will need to get into place.