Special Processes Institute

AS9102 FIRST ARTICLE INSPECTION GUIDEBOOK

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Contents and How to Use This Guide

This guidebook is a practical working reference for people who plan, create, review, approve or improve First Article Inspection (FAI) activity and First Article Inspection Reports (FAIRs). It is written around AS9102C and good quality practice, while recognising that contractual, customer, statutory and regulatory requirements may add to the baseline.

IMPORTANT AS9102C is a copyrighted standard. This guide explains the intent and practical application of FAI; it does not reproduce the standard or replace access to the controlled standard, customer requirements or contractual flow-downs.

Part	Purpose
Part A – Foundations	Why FAI exists, history, terminology, applicability, roles, benefits and planning.
Part B – Creating a FAIR	A step-by-step method from configuration baseline through Forms 1, 2 and 3 and final submission.
Part C – Special Processes	How FAI interfaces with heat treatment, NDT, coatings, welding, brazing, bonding and other special processes.
Part D – Reviewing and Approving	A disciplined independent review method for configuration, forms, evidence, characteristics and closure.
Part E – Practical Reference	Checklists, worked examples, common errors, KPIs, tools, glossary and reference sources.

The guide deliberately separates FAIR creation from FAIR approval. The person preparing the package is proving that requirements have been understood and verified; the reviewer is independently challenging whether the evidence actually demonstrates conformity.

PART A – Foundations

1. Introduction

1.1 Purpose

First Article Inspection is a structured production verification activity. Its purpose is not merely to inspect one part. It is to provide objective evidence that the planned production processes have been understood, implemented and are capable of producing product that conforms to the complete design definition.

A FAIR is the documented output of that activity. A good FAIR creates an auditable chain from the design requirement, through the manufacturing and inspection process, to the recorded result and supporting evidence.

1.2 Why a FAIR is Required

FAI is commonly required by contract or purchase-order flow-down. AS9102 itself is not automatically mandated by AS9100; IAQG guidance notes that 9102 may be contractually required or self-imposed. Where AS9102C is invoked, its requirements are complementary to customer and applicable statutory and regulatory requirements.

- Verify that the organisation has correctly understood and incorporated the complete design definition.
- Demonstrate that production planning, tooling, programmes, processes, inspection methods and supporting controls can produce conforming product.
- Identify omissions, misunderstandings and process weaknesses before they become repeated production escapes.
- Provide confidence at the start of serial production and following significant changes.
- Create a controlled baseline against which future partial FAI activity can be assessed.
- Support product safety, quality, delivery performance and customer confidence.

In **AS9100D (AS9100:2016)**, the requirement associated with First Article Inspection (FAI) is found in:

Clause 8.5.1.3 — Production Process Verification

1.3 The Function of FAI

CORE PRINCIPLE FAI verifies the production realisation system through a representative first production run. The FAIR is the evidence package; it is not the purpose in itself.

The strongest FAI programmes begin before the first part is made. Characteristics that will become inaccessible, special process evidence, digital product definition, inspection strategy, tooling and customer source requirements all need to be considered during planning.

1.4 What FAI Does Not Do

- FAI does not replace routine production inspection or process control.
- FAI does not prove long-term process capability from a single article.
- FAI does not replace qualification, validation, functional qualification or special process approval where those are separately required.
- FAI approval does not waive a nonconformance or change the design definition.
- FAI does not remove the manufacturer's responsibility for continued conformity after approval.

2. History and Development of AS9102

The aerospace sector developed a common FAI standard to reduce differing customer-specific approaches and establish a consistent method across the global supply chain. SAE records the original AS9102 issue in August 2000, Revision A in January 2004, Revision B in October 2014 and the current Revision C in June 2023.

Edition	Date	Practical significance
AS9102	Aug 2000	Established common aerospace documentation requirements for FAI.
AS9102A	Jan 2004	Expanded requirements for performing and documenting FAI.
AS9102B	Oct 2014	Established baseline requirements and became widely embedded throughout aerospace supply chains.
AS9102C	Jun 2023	Current revision; strengthened planning, evaluation and re-accomplishment concepts and updated FAIR documentation.

The International Aerospace Quality Group (IAQG) describes 9102 as a standard intended to harmonise FAI process and documentation requirements throughout aviation, space and defence supply chains, with expected benefits to quality, schedule and cost.

2.1 Revision C Mindset

Revision C reinforces a useful shift in thinking: a FAIR should be the result of a planned verification process, not a retrospective exercise in assembling paperwork after manufacture. The preparation team should know in advance what evidence will be needed, how each characteristic will be verified, which operations create inaccessible features, and what approvals are required.

3. Terminology and Core Concepts

Term	Practical meaning
FAI	The First Article Inspection process used to verify production processes and product requirements.
FAIR	The First Article Inspection Report: forms plus the supporting evidence that documents the FAI.
First production run	Product made using the planned production process intended for future production, rather than a prototype route that will not be repeated.
Design characteristic	A requirement of the design definition that must be accounted for and verified where applicable.
Full FAI	FAI addressing the complete applicable design definition.
Partial FAI	FAI addressing affected characteristics or requirements following an eligible change, while maintaining traceability to an accepted baseline.
Baseline FAIR	The prior accepted configuration/report used as the reference point for later partial FAI.
Objective evidence	Records that demonstrate what was required, what was done and what result was achieved.

3.1 FAI versus FAIR

These terms are often incorrectly used as though they mean the same thing. FAI is the activity; FAIR is the documented record. A technically excellent inspection with poor traceability can produce a weak FAIR. Conversely, a polished FAIR cannot compensate for a production process that was not representative or evidence that does not establish conformity.

3.2 Full versus Partial FAI

A full FAI normally establishes a complete baseline. A partial FAI is used when only part of the established baseline is affected. The partial FAIR must make the reason and baseline clear and must address every characteristic affected by the change, including consequential effects that may not be obvious from the changed drawing feature alone.

GOOD PRACTICE Use formal change-impact analysis before deciding the scope of a partial FAI. Ask what the change can influence, not merely which drawing line changed.

4. When FAI Activity is Required

The exact requirement must be confirmed against AS9102C, the contract and customer-specific requirements. Typical triggers include initial production and changes that may invalidate the established production baseline.

- First production run of a new product or part number.
- Design changes affecting product characteristics.
- Changes to manufacturing process, methods, tooling, numerical-control programmes or inspection methods where product conformity may be affected.
- Changes in manufacturing source or location where the established baseline may no longer be representative.
- Changes in material or approved sources where applicable.
- A lapse in production where the applicable standard/customer requirement triggers re-accomplishment.
- Corrective action or other circumstances where the organisation or customer determines that re-verification is necessary.

4.1 FAI Trigger Decision

Question	If YES
Is this the first production run?	Plan a full FAI unless a permitted alternative is contractually established.
Has the design definition changed?	Perform change-impact analysis; full or partial FAI may be required.
Has process, tooling, source or location changed?	Assess whether the prior baseline remains valid and define affected characteristics.
Has production lapsed beyond the applicable trigger?	Re-accomplish FAI to the required extent.
Is the proposed article representative of future production?	If no, do not treat it as the production FAI article without justified/customer-approved arrangements.

5. The Business Case: Incentives for First Article Inspection

FAI is sometimes treated as an administrative cost. That is usually a sign that its preventive value has been missed. The cost of finding an omitted requirement during FAI is normally far lower than finding it after a production batch, assembly integration, delivery or in-service event.

Strong FAI behaviour	Business benefit
Early requirement extraction	Reduces missed drawing notes, specifications and hidden requirements.
Planned inspection sequence	Avoids discovering that a feature cannot be measured after assembly or processing.
Approved special process sources confirmed before manufacture	Reduces rework, scrap and invalid processing.
Variable data captured correctly	Improves confidence and supports trend/capability learning.
Clean traceability	Speeds customer review and reduces clarification cycles.
Independent internal review before submission	Reduces customer rejection and supplier-quality administration.
Learning fed back into planning/PFMEA/control plans	Prevents the FAIR becoming a one-time compliance exercise.

5.1 Measures of an Effective FAI Process

- First-pass FAIR acceptance rate.
- Average customer review cycle time.
- Number of FAIR findings per submission.
- Percentage of FAIRs completed before or with first production delivery as required.
- Repeat FAIR finding rate.
- Percentage of characteristics supported by unambiguous objective evidence.
- Special process evidence defects found internally versus by the customer.
- Time from change notification to agreed partial-FAI scope.

AVOID THE WRONG INCENTIVE Do not reward teams simply for producing FAIRs quickly. Speed without completeness can drive 'paper compliance'. Reward first-pass quality, traceability, prevention of escapes and timely closure.

6. Roles, Responsibilities and Competence

Role	Typical responsibility
Design / Engineering	Defines and controls the design baseline; supports interpretation of requirements and change impact.
Manufacturing / Process Engineering	Ensures the production route, tooling, programmes and methods represent intended production.
Quality / FAI Coordinator	Plans the FAI, controls the FAIR package and ensures characteristic accountability.
Inspection / Metrology	Selects suitable methods, performs verification and records objective results.
Special Process Owner / Supplier	Provides controlled processing and evidence against applicable specifications and approvals.
Configuration Management	Ensures correct revisions and change status are established.
FAIR Reviewer / Approver	Independently challenges completeness, traceability, evidence and conformity.
Customer / Source Inspector	Performs customer review/approval where contractually required.

6.1 Competence

FAIR preparers and reviewers should understand engineering drawings and digital product definition, GD&T, measurement principles, configuration control, material and special process certification, nonconformance control and the organisation's contractual requirements. Reviewers should also be able to recognise when an inspection method cannot credibly demonstrate the requirement.

7. Tools for Creating and Reviewing FAIRs

Tool	Use
Ballooning software	Uniquely identifies design characteristics and links them to characteristic accountability records.
FAIR management software	Controls Forms 1–3, attachments, workflow, approvals and revision history.
CMM / metrology software	Generates objective dimensional results; output should retain characteristic traceability.
Drawing / PDF markup	Supports manual ballooning and reviewer annotation when controlled appropriately.
Digital Product Definition viewers	Extracts model-based requirements, annotations and characteristics not shown on 2D drawings.
ERP / MRP / MES	Provides route, lot, serial, material, supplier and production traceability.
QMS / NCR system	Links nonconformances, concessions and corrective actions.
Approved supplier / process source database	Confirms special process and customer-source approval status.
Change-impact matrix	Defines the scope of partial FAI following design/process change.
FAIR review checklist	Standardises independent review and reduces reviewer-to-reviewer variation.

7.1 Automation with Caution

Automated ballooning and characteristic extraction can reduce effort, but the output still requires competent review. Automated systems may miss embedded notes, flag reference dimensions incorrectly, misunderstand multiple characteristics, or fail to recognise requirements contained in specifications and model-based definition.

PART B – CREATING a First Article Inspection Report

8. The FAIR Creation Process

Step	Output
1. Confirm requirement and scope	FAI plan and trigger rationale.
2. Freeze the configuration baseline	Controlled list of applicable design and contractual data.
3. Review the production route	Representative first-production process confirmed.
4. Extract and balloon characteristics	Complete characteristic accountability baseline.
5. Plan verification and evidence	Inspection/test method and evidence source for each requirement.
6. Manufacture the article	Traceable product made using intended production processes.
7. Capture results and supporting evidence	Complete, legible, attributable records.
8. Complete Forms 1, 2 and 3	Controlled FAIR record.
9. Perform internal independent review	Findings corrected before customer submission.
10. Submit, resolve findings and retain baseline	Accepted FAIR and controlled record.

9. Step 1 – Confirm Requirement and Scope

Start with the contract, purchase order and flowed-down quality requirements. Identify the invoked revision of AS9102, customer forms or portals, submission timing, source inspection requirements, retention rules, delegated approval arrangements and any customer-specific interpretation.

- Define whether a full or partial FAI is expected.
- Identify the part/assembly level at which FAIRs are required.
- Identify customer-mandated sources or approvals.
- Confirm whether software, embedded items, standard catalogue items or lower-level FAIRs need specific treatment.
- Identify delivery constraints, including whether approval is required before shipment.

10. Step 2 – Establish the Configuration Baseline

A FAIR cannot be correct if it is built against the wrong configuration. Establish the exact product baseline before characteristic extraction.

- Part number and part name.
- Drawing or digital product definition number and revision.
- Applicable engineering change status.
- Bill of materials and assembly structure.
- Material specifications and revisions where contractually controlled.
- Special process specifications and revisions.
- Manufacturing planning / route / traveller revision.
- NC programmes, inspection programmes and key tooling identifiers where relevant.
- Purchase order and customer-specific requirements.

REVIEWER MINDSET The first review question should be: 'What exact configuration is this FAIR claiming to represent?' If that cannot be answered quickly and unambiguously, stop and resolve the baseline.

11. Step 3 – Review the Manufacturing Route

The first article should be produced using the intended production process. Review the route from incoming material to final verification and identify every operation that can influence conformity.

Route element	FAI planning question
Raw material	What specification, condition, lot and certification must be retained?
Machining / forming	Which characteristics are created and when can they be measured?
Heat treatment	Is the processor approved and what certification/test evidence is required?
NDT	Which method, acceptance standard, personnel qualification and report are required?
Coating / plating / paint	What specification, class/type, thickness, preparation and approval evidence applies?
Assembly	Which characteristics become hidden and must be verified before closure?
Functional test	What procedure, revision, equipment and acceptance criteria apply?
Final inspection	Does final verification close all remaining characteristics and evidence gaps?

12. Step 4 – Characteristic Extraction and Ballooning

Characteristic accountability is the backbone of a FAIR. Every applicable design characteristic must be uniquely accounted for so that a reviewer can move from the design definition to the recorded result without ambiguity.

12.1 What to Balloon

- Dimensions and tolerances.
- GD&T feature control frames and associated datum requirements.
- Surface finish and edge requirements.
- Threads, holes, countersinks, radii and chamfers.
- Drawing notes that impose product requirements.
- Material and condition requirements.
- Special process requirements.
- Identification and marking requirements.
- Functional and performance requirements.
- Key, critical or special characteristics.
- Requirements contained in referenced specifications or digital product definition when applicable.

12.2 Ballooning Rules of Thumb

- Use one unique characteristic identifier for each accountable requirement or logically controlled characteristic.
- Keep numbering stable and sequential where practical.
- Ensure repeated/multiple characteristics are handled consistently, and the result set proves every required location.
- Do not treat reference information as an acceptance characteristic unless another requirement makes it controlling.
- Do not stop at dimensions: notes, material, special process, marking and specification requirements are frequent sources of omissions.
- Ensure balloon numbers map directly to the characteristic accountability record.

COMMON ERROR A drawing can be 100% dimensionally ballooned and still be an incomplete FAIR if notes, material, special process, marking or specification requirements have not been accounted for.

13. Step 5 – Plan the Verification Strategy

Before manufacture, decide how every characteristic will be verified. This is especially important for characteristics that become inaccessible, require destructive testing, depend on a special process, or are defined in digital product data.

Requirement type	Typical evidence strategy
Simple dimension	Calibrated hand gauge, height gauge, CMM or other suitable measurement.
GD&T	CMM or suitable metrology method with datum strategy consistent with the design definition.
Material	Material certificate linked to heat/batch/lot and part traceability.
Heat treatment	Process certificate plus required test results / hardness / mechanical properties as applicable.
NDT	Controlled NDT report/certificate with method, acceptance standard and traceability.
Coating thickness	Process certificate and/or measured thickness results as required.
Marking	Visual verification against content, method and location requirement.
Functional performance	Test report against controlled test procedure and acceptance criteria.
Hidden characteristic	In-process verification before the feature becomes inaccessible.

14. Step 6 – Manufacture the First Article

The article must be representative of the intended production process. Maintain traceability throughout manufacture. If a deviation from the planned route occurs, assess whether it invalidates the FAI or changes the scope before simply continuing.

- Use released production planning.
- Use intended tooling, fixtures, programmes and process sequence.
- Use approved material and process sources.
- Record serial/lot/batch traceability.
- Capture in-process evidence when later access will be impossible.
- Control rework and nonconformance through the normal QMS.

15. Step 7 – Collect Objective Evidence

Objective evidence should enable an independent reviewer to establish what requirement was verified, what result was obtained, and how that result is traceable to the FAI article.

Test	Question
Identity	Can I tell which part, serial/lot or FAIR this evidence belongs to?
Requirement	Can I tell what requirement or specification was being verified?
Result	Is the actual result or unambiguous conformity status recorded as appropriate?
Method	Is the inspection/test/process method identifiable where needed?
Authority	Is the record attributable to an authorised person/system/supplier?
Validity	Were calibration, approval and specification status valid at the time?
Traceability	Can I follow the chain from product to material/process/test evidence?

16. Form 1 – Part Number Accountability

Form 1 establishes the identity and configuration of the FAI item and, for assemblies, accountability for constituent items. It is the configuration-control gateway to the rest of the FAIR.

16.1 Review Intent

- Identify the FAI part and its configuration unambiguously.
- Identify the FAIR and article/serial identity where applicable.
- State whether the FAI is full or partial and why.
- For partial FAI, identify the approved/baseline configuration on which it relies.

- For assemblies, establish accountability for lower-level parts, subassemblies and relevant catalogue/COTS items as required.
- Record completion/review/approval status.

16.2 Common Form 1 Problems

- Drawing revision does not match the manufactured article.
- Partial FAI does not identify a valid baseline FAIR.
- Reason for partial FAI is vague rather than describing the change trigger.
- Assembly BOM items are omitted, or their FAIR status is unclear.
- Serial number or FAIR identifier is inconsistent across forms.
- FAI is marked complete despite unresolved nonconforming design characteristics.

GOOD PRACTICE Treat Form 1 as the configuration index to the entire FAIR. A reviewer should understand product identity, baseline and FAI scope before opening Form 2 or Form 3.

17. Form 2 – Product Accountability

Form 2 is used to account for materials, special processes and functional testing associated with the FAI. It connects design requirements to the sources, specifications, certificates and test evidence that demonstrate conformity.

17.1 Material Accountability

- Record the applicable material requirement clearly.
- Verify material grade, condition/temper, specification and supplementary requirements.
- Ensure the certificate is traceable to the material actually used.
- Confirm lot/heat/batch identity where applicable.
- Check test results where the specification or contract requires more than a statement of conformity.

17.2 Functional Test Accountability

Where the design requires functional testing, ensure the controlled test procedure and acceptance criteria are identified and that the test report is traceable to the FAI article. 'Tested OK' is weak evidence if the requirement calls for recorded performance data.

17.3 Special Processes on Form 2

Special processes deserve deeper review than merely checking that a certificate exists. See Part C for the complete special process approach.

18. Form 3 – Characteristic Accountability, Verification and Compatibility Evaluation

Form 3 is where the design definition and objective results meet. For each characteristic, the reviewer should be able to establish the characteristic identifier, requirement, result and any relevant evidence or nonconformance reference.

18.1 Variable versus Attribute Results

Requirement	Weak	Preferred evidence
Ø12.00 ±0.05 mm	PASS	12.02 mm
Thickness 0.80–1.00 mm	OK	0.91 mm
M6 × 1 thread	PASS	Verified M6 × 1 with identified suitable method/gauge
Marking content/location	12.0	Attribute verification against specified marking requirement
Heat treat to specification	PASS	Traceable process certificate/test evidence referenced on Form 2 and characteristic record as appropriate

Where variable data are obtainable and appropriate, recording the actual measured value generally provides stronger objective evidence than a generic pass/fail statement. Attribute results remain appropriate for genuinely attribute characteristics.

18.2 Multiple Characteristics

Where a requirement applies in multiple locations, the record must demonstrate that the complete requirement has been verified. Do not record a single value if multiple values are necessary to prove every required location unless the controlled method/report clearly provides that traceability.

18.3 Designed Tooling and Qualified Tooling

If tooling or other approved methods are used as acceptance evidence, confirm that their status, applicability and controls satisfy the design/customer requirements. Tooling does not remove the need for traceable characteristic accountability.

18.4 Nonconforming Results

A nonconforming characteristic must be visible, traceable to the applicable nonconformance record and handled through the organisation's approved nonconformance process. Do not alter or hide an out-of-tolerance result to make the FAIR appear complete.

19. Digital Product Definition and Model-Based Requirements

When requirements are defined in 3D models or other digital product definition, the FAI plan must identify characteristics that may not appear on a traditional 2D drawing. This can include annotations, embedded tolerances, surface definitions, model-based dimensions and manufacturing information.

- Use an approved viewer and controlled data set.
- Confirm model revision/configuration.
- Extract all applicable product manufacturing information.
- Identify default tolerances and specification rules that apply to model dimensions.
- Maintain a method of characteristic identification that remains auditable.
- Retain evidence showing which digital baseline was used.

20. Nonconformance During FAI

FAI is valuable partly because it exposes problems before they propagate. A nonconformance discovered during FAI is therefore a useful process signal, not a reason to manipulate the record.

1. Record the actual nonconforming result.
2. Raise the applicable NCR/QN/nonconformance record.
3. Obtain disposition through the authorised process; FAI does not grant concession authority.
4. Assess whether the cause indicates a planning, design interpretation, process or measurement-system weakness.
5. Correct the process/product as authorised.
6. Re-verify the affected characteristic on the appropriate production run and document the required FAI follow-up.
7. Update lessons learned, planning, PFMEA/control plan or work instructions where appropriate.

KEY POINT An accepted concession can permit use of nonconforming product, but it does not magically turn the measured characteristic into a conforming result. Keep the technical fact and the disposition traceable.

21. Assemble the FAIR Package

1. FAIR index / submission cover sheet if used.
2. Form 1 – Part Number Accountability.
3. Form 2 – Product Accountability.
4. Form 3 – Characteristic Accountability.
5. Ballooned drawing / controlled characteristic map.
6. Material certificates and traceability evidence.
7. Special process certificates and required test evidence.

8. Dimensional inspection / CMM reports.
9. Functional test reports.
10. Nonconformance / concession references where applicable.
11. Other customer-required supporting evidence.

21.1 File and Naming Discipline

Use a predictable naming convention, searchable PDFs where possible, logical attachment order and revision-controlled files. Avoid hundreds of ambiguously named scans. A FAIR that is technically correct but difficult to navigate wastes reviewer time and increases the chance of a false rejection or missed issue.

PART C – SPECIAL PROCESSES AND FAI

22. Why Special Processes Need Particular Attention

A special process is one where the resulting output cannot always be fully verified by subsequent monitoring or measurement, or where deficiencies may only become apparent after the product is in use. Examples can include heat treatment, welding, brazing, chemical processing, coatings, NDT and adhesive bonding depending on the application and controls.

FAI does not validate a special process by itself. Instead, the FAIR must provide evidence that the required special process was correctly specified, performed by an acceptable source, and supported by the required certification/test evidence.

22.1 The Special Process Evidence Chain

Link	Reviewer question
Design requirement	What exact process/specification/class/type is required?
Planning	Has the requirement been correctly flowed into the route and purchase order?
Processor	Was the process performed by an approved/authorised source where required?
Specification	Was the correct specification and revision/status used?
Product traceability	Does the certificate clearly relate to the FAI article/lot?
Process result	Are required tests, thickness, hardness, coupons or acceptance results present?
Approval status	Were Nadcap/customer approvals valid for the relevant commodity/process scope when required?
Form 2	Is the process and supporting certificate accurately accounted for?

22.2 Nadcap and Customer Approval

Nadcap accreditation or customer approval is not a substitute for product-specific conformity evidence. Accreditation indicates that a processor has been assessed for an applicable process scope; the FAIR still needs traceability showing that the FAI product received the required process and met the applicable product requirements.

22.3 Heat Treatment

- Confirm alloy/material and starting condition are compatible with the required heat treatment.
- Check specification, treatment condition and customer-specific source requirements.
- Verify furnace/process source approval where required.
- Check hardness, mechanical test, conductivity or other results when required.
- Maintain traceability between the processed lot and the FAI article.

22.4 Chemical Processing and Coatings

- Verify process type/class, material compatibility, preparation and thickness requirements.
- Check masking/selective-area requirements where defined.
- Confirm approved source and applicable specification.
- Review thickness, adhesion, corrosion or other test evidence where required.
- Ensure post-treatment requirements such as baking are addressed when applicable.

22.5 NDT

- Verify method and acceptance standard.
- Confirm the correct technique/class/sensitivity where specified.
- Confirm personnel and facility approvals/qualifications as contractually required.
- Check report traceability to the FAI article and actual acceptance result.
- Ensure NDT is performed at the correct manufacturing stage.

22.6 Welding, Brazing and Bonding

- Confirm process specification and approved procedure.
- Confirm operator/personnel qualification where required.
- Verify material/filler/adhesive/batch traceability.
- Check process parameters, cure/braze cycle or supporting records where required by specification/customer.
- Account for destructive test coupons or qualification evidence where applicable.
- Ensure visual, dimensional, NDT or functional acceptance evidence is captured as required.

COMMON ERROR A certificate stating 'processed to drawing' is not automatically sufficient. The reviewer must establish that the processor, process, specification, product identity and required results all form a valid evidence chain.

PART D – REVIEWING AND APPROVING A FAIR

23. Purpose of FAIR Review

FAIR review is an independent verification activity. The reviewer is not checking whether boxes contain text; the reviewer is determining whether the package provides credible, complete and traceable objective evidence that the applicable product requirements were satisfied by a representative production process.

REVIEW PRINCIPAL Presence is not validity. A certificate, CMM report or signature being present does not prove that it is applicable, correct or sufficient.

24. The Seven-Stage FAIR Review Method

Stage	Review objective
1. Configuration	Confirm the exact design and production baseline.
2. Scope	Confirm full/partial status and that change impact is complete.
3. Form 1	Verify product and assembly accountability.
4. Form 2	Verify materials, special processes and functional tests.
5. Characteristic map	Confirm 100% applicable requirement accountability.
6. Form 3 and evidence	Perform requirement-result-evidence verification.
7. Nonconformance and closure	Confirm findings, NCRs, corrections and approval status.

25. Stage 1 – Configuration Review

- Part number and name match the design definition.
- Drawing/DPD revision matches the manufactured article.
- Engineering changes are incorporated or explicitly controlled.
- Manufacturing planning revision is appropriate.
- Purchase-order/customer requirements are identified.
- FAIR number, serial/lot identity and form headers are consistent.

If the configuration is wrong, detailed characteristic review is premature. Resolve the baseline first.

26. Stage 2 – Scope and Trigger Review

For a full FAI, verify that the complete applicable design definition is accounted for. For a partial FAI, independently evaluate whether the stated trigger and affected scope are sufficient.

- What changed?
- What can the change influence directly?
- What can it influence indirectly through setup, datums, tooling, heat input, sequence or process interaction?
- Does the previous baseline remain valid for unaffected characteristics?
- Has the correct baseline FAIR been referenced?
- Has the organisation considered downstream and assembly effects?

27. Stage 3 – Form 1 Review

- Verify product identity and configuration.
- Check full/partial declaration and reason.
- Verify baseline FAIR reference for partial FAI.
- For assemblies, reconcile Form 1 against the BOM/parts list.
- Check lower-level FAIR references/status as required.
- Confirm completion status is consistent with any open nonconformance.

28. Stage 4 – Form 2 Review

28.1 Material

- Does the material certificate state the correct grade/specification/condition?
- Is the certificate traceable to the actual FAI product?
- Are required test results present and acceptable?
- Are material substitutions or equivalencies formally authorised?

28.2 Special Processes

- Is the required process correctly identified?
- Was the correct specification used?
- Was the processor approved for the relevant scope when required?
- Does the certificate identify the product/lot?
- Are required test results or supplementary records present?
- Are customer approvals valid for the date/process concerned?

28.3 Functional Testing

- Is the test procedure identified and controlled?
- Does the test report relate to the FAI article?
- Are acceptance criteria clear?
- Are actual results recorded where required?
- Was test equipment/status suitable?

29. Stage 5 – Ballooned Drawing / Characteristic Map Review

The reviewer should independently reconcile the design definition with the characteristic map. Do not assume the preparer's balloons are complete.

- Scan every sheet and every note.
- Check title-block requirements and general notes.
- Check referenced specifications that impose product characteristics.
- Check all GD&T controls and datum requirements.
- Check multiple/repeated features.
- Check surface finish, edge break, thread and marking requirements.
- Check key/critical/special characteristics.
- Check digital product definition where applicable.
- Confirm no balloon is duplicated or missing and numbering maps to Form 3.

30. Stage 6 – Form 3 and Objective Evidence Review

30.1 The Three-Way Check

1. Requirement	2. Recorded result	3. Evidence
What does the controlled design require?	What value/status is recorded?	What record proves that result and its traceability?

Repeat this check for every applicable characteristic. The aim is not to re-inspect the part from scratch; it is to verify that the evidence chain is technically credible and complete.

30.2 Measurement Credibility

- Is the measurement method capable of resolving the tolerance?
- Are datums/setup consistent with the requirement?
- Is calibration status valid?
- Are units correct?
- Does a CMM report clearly map results to FAIR characteristic numbers?
- Are calculated or derived results supported by appropriate data?
- Are results near limits reviewed for transcription, rounding or uncertainty concerns where relevant?

30.3 Variable Data Review

Where actual measured values are expected, verify that values are recorded rather than generic statements. Watch for repeated identical values, impossible precision, unit conversion errors and copy/paste patterns that may indicate weak data integrity.

31. Stage 7 – Nonconformance, Findings and Closure

Review every nonconforming result and its disposition. Confirm the FAIR completion status accurately reflects unresolved conditions and that corrective re-verification has been completed where required.

31.1 Useful Review Finding Categories

Category	Use
Clarification required	Evidence may be acceptable but is ambiguous.
Correction required	Administrative or traceability error must be corrected.
Objective evidence missing	Required proof is absent.
Technical nonconformance	Recorded result does not meet the requirement.
Scope incomplete	Characteristic/change impact has not been fully accounted for.
Approval/source issue	Required process/source/authority is not demonstrated.

31.2 Writing Good FAIR Review Comments

Weak comment	Better comment
Form 2 wrong	Form 2 process entry does not identify the coating specification required by drawing Note 7; update the entry and provide traceable certificate evidence.
Missing cert	Material certificate for characteristic 004 is not included; provide the certificate traceable to material lot ABC123 used on the FAI article.
Dimension incorrect	Characteristic 036 requires 25.00 ±0.05 mm; Form 3 records 25.08 mm. Reference the applicable NCR/disposition and update FAIR completion status as required.
Wrong revision	Form 1 identifies drawing Rev C, while the ballooned drawing is Rev B. Confirm the manufactured configuration.

32. FAIR Approval

Approval should only occur when the reviewer has sufficient objective evidence that the applicable FAI requirements are satisfied and all required actions are closed. Approval is not a substitute for engineering acceptance of deviations, nor does it remove continued production-control obligations.

- Configuration confirmed.
- Scope confirmed.
- Forms complete and internally consistent.
- All applicable characteristics accounted for.
- Objective evidence valid and traceable.
- Special processes/materials/tests acceptable.
- Nonconformance status correctly controlled.
- Required customer/source approvals completed.
- Records retained in accordance with contractual and QMS requirements.

PART E – PRACTICAL REFERENCE

33. Worked Example – Fictional Aerospace Bracket

The following example illustrates the logic of a FAIR without reproducing proprietary AS9102 forms.

Item	Example
Part	SP-EX-1001 Mounting Bracket
Design	Drawing SP-EX-1001 Rev C
Material	Aluminium alloy plate to specified grade/condition
Processes	Machining → deburr → conversion coating → marking → final inspection
FAI trigger	First production run
Article	Serial FAI-001

33.1 Example Characteristic Map

Char.	Requirement	Verification	Example result/evidence
001	Material grade/condition	Certificate review	Material cert MC-24001; traceable lot L17
002	Overall length 100.00 ±0.10 mm	CMM	100.04 mm
003	Hole Ø8.00 ±0.05 mm	CMM	8.02 mm
004	Position requirement	CMM	0.11 mm against specified tolerance
005	Surface finish requirement	Comparator/instrument as applicable	Recorded measured/verified result
006	Conversion coating to specified process	Approved process source	Certificate PC-8842
007	Part marking content/location	Visual inspection	Conforms; inspection record IR-001

33.2 Example Review

The reviewer would reconcile drawing Rev C against the ballooned drawing, confirm characteristics 001–007 cover all applicable requirements, verify material lot L17 against the article route, confirm the conversion-coating supplier's required approval status, and check that the CMM report identifies the same serial/FAI article and characteristic numbers.

34. Creator Final Checklist

- Contract/PO and customer FAI requirements reviewed.
- Correct AS9102 revision and customer forms/portal identified.
- Full/partial FAI scope justified.
- Configuration baseline confirmed.
- First article represents intended production process.
- All drawing/DPD sheets and notes reviewed.
- All applicable characteristics uniquely identified.
- Hidden/inaccessible characteristics planned for in-process verification.
- Material evidence complete and traceable.
- Special process sources/approvals confirmed.
- Special process certificates/results complete and traceable.
- Functional tests complete and traceable.
- Variable data recorded where appropriate.
- Measurement equipment/methods suitable.
- Nonconformances correctly recorded and referenced.
- Forms 1, 2 and 3 internally consistent.
- Assembly/BOM accountability complete where applicable.
- Supporting evidence clearly named and indexed.

- Independent internal review completed.
- Submission package is legible, searchable and controlled.

35. Reviewer Approval Checklist

- Correct configuration independently confirmed.
- FAI trigger and scope are appropriate.
- Partial FAI baseline and change impact are valid.
- Form 1 reconciles with design/BOM.
- Form 2 reconciles with material/process/test requirements.
- All design characteristics independently accounted for.
- Balloon numbering maps correctly to Form 3.
- Actual results demonstrate conformity.
- Supporting evidence is applicable and traceable.
- Measurement methods are credible for tolerances involved.
- Special process approval and product-specific evidence are valid.
- Nonconforming characteristics are visible and correctly controlled.
- All review findings are closed or formally dispositioned.
- Completion/approval status is accurate.
- Record retention and customer submission requirements are satisfied.

36. Common FAIR Failure Modes

Failure mode	Why it matters	Prevention
Wrong drawing revision	FAIR proves the wrong configuration.	Configuration gate before ballooning.
Missing drawing notes	Incomplete characteristic accountability.	Independent note-by-note review.
Pass/fail used where variable data expected	Weak objective evidence.	Define data strategy before inspection.
Untraceable certificates	Evidence may belong to another lot/part.	Lot/serial traceability checks.
Unapproved special process source	Process may not meet contractual approval requirements.	Verify source approval before release.
Partial FAI too narrow	Change effects remain unverified.	Formal change-impact analysis.
CMM report not mapped to balloons	Reviewer cannot establish characteristic traceability.	Common characteristic identifiers.
Open NCR hidden by 'FAI complete'	Misrepresents product status.	Mandatory closure/status gate.
FAIR assembled after production	Evidence is missing or inaccessible.	Plan FAI before first production run.
Copying a previous FAIR	Carries forward obsolete errors and assumptions.	Use prior FAIR as reference, not as unquestioned truth.

37. FAIR Process Maturity Model

Level	Description
1 – Reactive	FAIR assembled after manufacture; high rejection and missing evidence.
2 – Controlled	Templates/checklists exist; basic configuration and characteristic controls are repeatable.
3 – Planned	FAI planning occurs before manufacture; special processes and hidden characteristics are actively planned.
4 – Integrated	FAI links with APQP, PFMEA, control plans, configuration management, ERP/QMS and supplier controls.
5 – Learning system	FAIR findings, escapes and review data drive prevention, standardisation and measurable first-pass improvement.

38. Integration with Other Quality Activities

- Contract Review – establishes customer FAI and submission requirements.
- Configuration Management – controls the design and production baseline.

- APQP / Production Readiness – plans how requirements will be realised and verified.
- PFMEA – identifies manufacturing risks and controls that should be reflected in planning.
- Control Plan / Inspection Plan – defines routine process and product controls.
- Special Process Management – ensures qualified processes, sources and evidence.
- Nonconformance / Corrective Action – controls failures found during FAI and feeds learning back into the process.
- Change Management – determines when the established FAI baseline must be reconsidered.

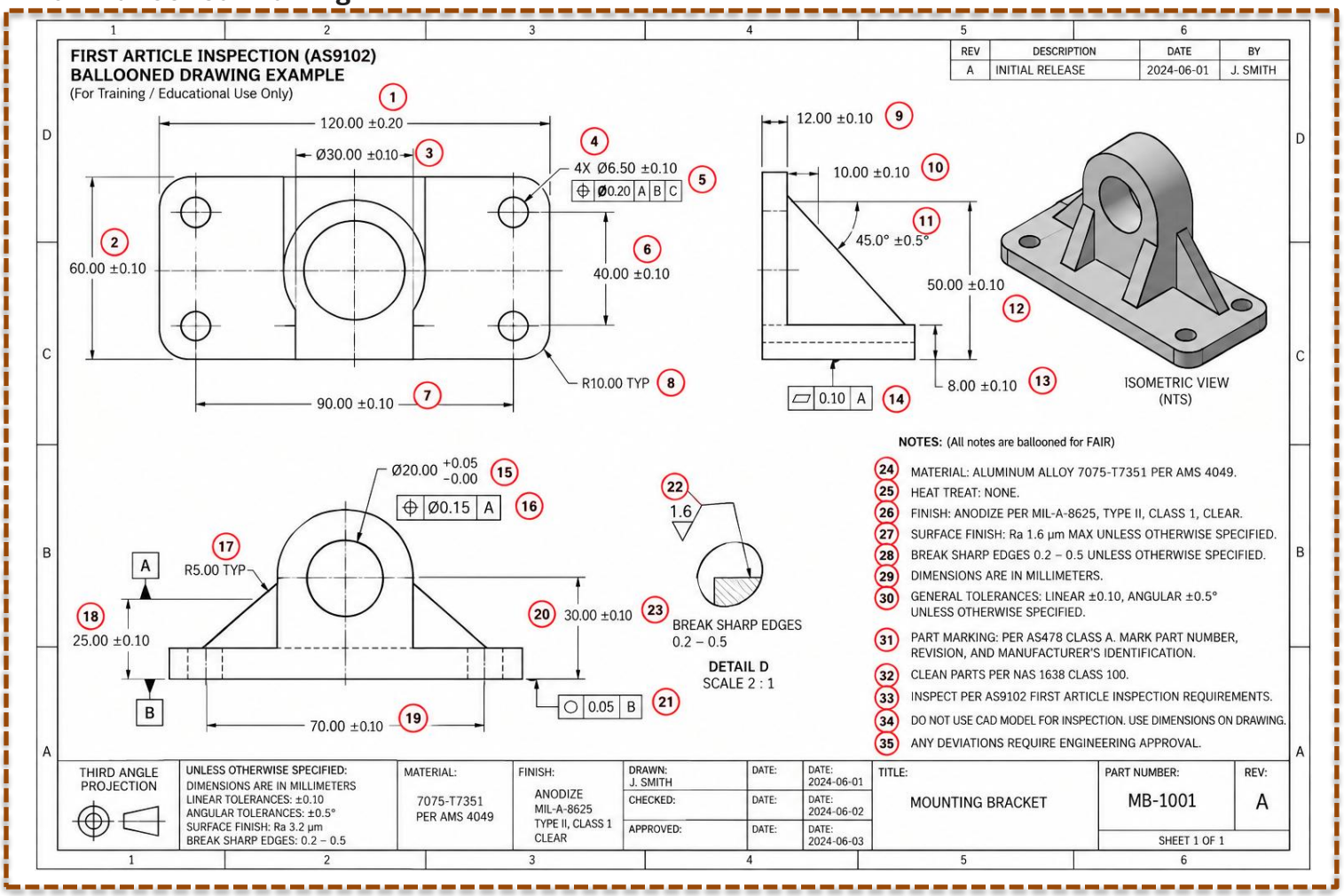
39. Behavioural Expectations

The quality of a FAIR is strongly influenced by organisational behaviour. World-class FAI is characterised by early collaboration, technical curiosity and willingness to expose problems while they are still inexpensive to correct.

- Do not treat the FAIR as paperwork owned only by Quality.
- Do not pressure inspectors to make data 'fit' the requirement.
- Do not submit known-incomplete packages simply to meet an administrative date.
- Encourage reviewers to challenge evidence respectfully and technically.
- Use FAIR findings as process-learning data rather than blame data.
- Recognise suppliers and teams that achieve sustained first-pass quality and strong evidence discipline.

40. Example First Article Inspection Report

40.1 Ballooned Drawing



40.2 AS9102 FAIR - FORM 1

Part Number Accountability

1. Part Number	MB-1001	**2. Part Name**	MOUNTING BRACKET
3. Serial Number	MB1001-FAI-001	**4. FAIR Number**	FAI-MB1001-001
5. Part Revision	A	**6. Drawing Number**	MB-1001
7. Drawing Revision	A	**8. Additional Changes**	None
9. Manufacturing Process Ref.	Router MB1001-001 Rev A	**10. Organization**	Example Aerospace Ltd
11. Supplier Code	EX001	**12. PO Number**	PO-260184
13. Detail / Assembly	Detail Part	**14. FAI Type**	FULL
15. Reason	Initial production / initial release	**16. FAIR Status**	Complete - Acceptable

Assembly / Detail Accountability	Part / FAIR Reference	Revision	Status
Detail part	MB-1001 / FAI-MB1001-001	A	Complete
Assembly FAIR	N/A	-	N/A
Sub-assembly FAIR	N/A	-	N/A
Additional changes	None	-	N/A

Prepared By	J. Smith	**Date**	18 Sep 2026
Reviewed By	A. Reviewer	**Date**	18 Sep 2026
Customer Approval	Training example - N/A	**Date**	N/A

40.3 AS9102 FAIR - FORM 2

Product Accountability - Materials, Special Processes and Functional Testing

Part Number	MB-1001	**Part Name**	MOUNTING BRACKET
FAIR Number	FAI-MB1001-001	**Revision**	A

Type	Requirement / Specification	Supplier / Source	Certificate / Report	Drawing Balloon	Verification	Status
Material	Aluminium 7075-T7351 per AMS 4049	Example Metals Ltd	MAT-260417	24	Alloy, temper, spec and traceability verified	ACCEPT
Special Process	Anodize per MIL-A-8625 Type II, Class 1, clear	Example Finishing Ltd	PROC-260331	26	Process cert and lot traceability verified	ACCEPT
Heat Treatment	None required by drawing	N/A	N/A	25	Drawing requirement reviewed	N/A
Cleaning	NAS 1638 Class 100	Internal controlled process	CLN-260118	32	Process record reviewed	ACCEPT
Functional Test	None specified	N/A	N/A	N/A	Drawing reviewed	N/A

Form 2 review note: Confirm specification revision/status where contractually required, supplier approval status, certificate identity, lot/batch traceability and that the evidence relates to the actual first-article part or production lot.

40.4 AS9102 FAIR - FORM 3

Characteristic Accountability, Verification and Compatibility Evaluation

Part Number	MB-1001	**Part Name**	MOUNTING BRACKET
FAIR Number	FAI-MB1001-001	**Revision**	A

Char.	Drawing Requirement	Inspection / Verification	Result / Evidence	Status	Comments
1	120.00 +/-0.20 mm	CMM	120.06 mm	ACCEPT	
2	60.00 +/-0.10 mm	CMM	60.02 mm	ACCEPT	
3	Dia 30.00 +/-0.10 mm	Bore gauge	30.03 mm	ACCEPT	
4	4 x Dia 6.50 +/-0.10 mm	CMM	6.49 / 6.51 / 6.50 / 6.48	ACCEPT	
5	Position Dia 0.20 | A | B | C	CMM	Dia 0.08 mm	ACCEPT	
6	40.00 +/-0.10 mm	CMM	40.04 mm	ACCEPT	
7	90.00 +/-0.10 mm	CMM	89.97 mm	ACCEPT	
8	R10.00 TYP	CMM	10.01 mm	ACCEPT	
9	12.00 +/-0.10 mm	Micrometer	12.02 mm	ACCEPT	
10	10.00 +/-0.10 mm	CMM	10.03 mm	ACCEPT	
11	45.0 deg +/-0.5 deg	CMM	45.1 deg	ACCEPT	
12	50.00 +/-0.10 mm	CMM	50.02 mm	ACCEPT	
13	8.00 +/-0.10 mm	Micrometer	7.98 mm	ACCEPT	
14	Flatness 0.10 to datum A surface	CMM	0.04 mm	ACCEPT	
15	Dia 20.00 +0.05/-0.00 mm	Bore gauge	20.02 mm	ACCEPT	
16	Position Dia 0.15 | A	CMM	Dia 0.06 mm	ACCEPT	
17	R5.00 TYP	CMM / radius gauge	5.01 mm	ACCEPT	
18	25.00 +/-0.10 mm	CMM	25.03 mm	ACCEPT	
19	70.00 +/-0.10 mm	CMM	69.98 mm	ACCEPT	

20	30.00 +/-0.10 mm	CMM	30.04 mm	ACCEPT	
21	Circularity 0.05	CMM	0.018 mm	ACCEPT	
22	Surface finish Ra 1.6 um	Roughness tester	Ra 0.92 um	ACCEPT	
23	Break sharp edges 0.2-0.5	Visual / gauge	0.32 mm	ACCEPT	
24	7075-T7351 per AMS 4049	Certificate review	MAT-260417	ACCEPT	
25	Heat treat: NONE	Drawing review	None applied	ACCEPT	
26	Anodize MIL-A-8625 Type II Class 1 clear	Certificate review	PROC-260331	ACCEPT	
27	Ra 1.6 um max unless otherwise specified	Roughness tester	Max Ra 1.24 um	ACCEPT	
28	Break sharp edges 0.2-0.5 unless otherwise specified	Visual / dimensional	0.28-0.41 mm	ACCEPT	
29	Dimensions in millimeters	Drawing review	Verified	ACCEPT	
30	General tol. linear +/-0.10; angular +/-0.5 deg	CMM / drawing review	Applicable features verified	ACCEPT	
31	Part marking per AS478 Class A	Visual	MB-1001 / REV A / EX001	ACCEPT	
32	Clean per NAS 1638 Class 100	Process record	CLN-260118	ACCEPT	
33	Inspect per AS9102 FAI requirements	FAIR review	FAI completed	ACCEPT	
34	Do not use CAD model for inspection	Inspection-plan review	Drawing used as authority	ACCEPT	
35	Deviations require engineering approval	NCR / deviation review	No deviations	ACCEPT	

40.5 Documented Evidence and Certification Examples

FAIR MB-1001 Rev A	**TRAINING EXAMPLE** **NOT A VALID CERTIFICATE**
	Certificate / Report No: PACK-FAI-001

SUPPORTING CERTIFICATE PACK

FAIR	FAI-MB1001-001
Part	MB-1001 – MOUNTING BRACKET
Revision	A
Included evidence	Material certificate; special process certificate; cleaning/process record; dimensional inspection report; surface roughness report; certificate of conformity
Important	Actual FAIR evidence depends on the engineering definition, purchase order, customer requirements, processes performed and applicable specifications.

Example Metals Ltd	**TRAINING EXAMPLE** **NOT A VALID CERTIFICATE**
	Certificate / Report No: MAT-260417

MATERIAL TEST / CERTIFICATE OF CONFORMANCE

Customer	Example Aerospace Ltd
Customer PO	PO-260184
Material	Aluminium Alloy 7075-T7351
Specification	AMS 4049
Product form	Plate
Heat / Lot	H260417-07
Supplier batch	EM-7075-0918
Quantity supplied	1 plate / production lot
FAI part traceability	MB-1001 / FAI-MB1001-001
Country of manufacture	United Kingdom – fictional example

Property / Check	**Requirement**	**Reported Result**	**Status**
Alloy / temper	7075-T7351	7075-T7351	PASS
Material specification	AMS 4049	AMS 4049	PASS
Heat / lot traceability	Traceable	H260417-07	PASS
Visual condition	Free from detrimental defects	Acceptable	PASS
Chemical / mechanical data	Per applicable material specification	Original mill test data reviewed	PASS

We certify that the material identified above is represented by the stated heat/lot and conforms to the purchase order and specification requirements shown, subject to the original mill certification and applicable specification requirements.

Authorized by	A. Quality
Position	Quality Representative
Date	18 Sep 2026

Electronic/signature authorization: _____ 35

Example Finishing Ltd	TRAINING EXAMPLE NOT A VALID CERTIFICATE
	Certificate / Report No: PROC-260331

SPECIAL PROCESS CERTIFICATE OF CONFORMANCE

Customer	Example Aerospace Ltd
Customer PO / Process Order	PO-260184 / SP-031
Part number	MB-1001
Part revision	A
Quantity processed	1
Process	Sulfuric acid anodizing – clear
Drawing requirement	MIL-A-8625 Type II, Class 1
Process lot	AN-260331-04
FAIR	FAI-MB1001-001
Processor approval status	Example only – verify customer/Nadcap approval when required

Verification	Requirement	Result	Status
Process type	Type II	Type II	PASS
Class	Class 1 / clear	Clear	PASS
Coverage	Complete where required	Acceptable	PASS
Visual appearance	Uniform; no detrimental defects	Acceptable	PASS
Lot traceability	Required	AN-260331-04	PASS

We certify that the parts listed were processed in accordance with the stated process specification and customer order requirements. This fictional certificate is provided only as FAIR training material.

Authorized by	P. Process
Position	Quality Manager – Example Finishing Ltd
Date	18 Sep 2026

Electronic/signature authorization: _____

Example Finishing Ltd	TRAINING EXAMPLE NOT A VALID CERTIFICATE
	Certificate / Report No: CLN-260118

PROCESS / CLEANING RECORD

Part number	MB-1001
Revision	A
Serial / trace ID	MB1001-FAI-001
FAIR	FAI-MB1001-001
Process requirement	Clean per NAS 1638 Class 100 (as stated on training drawing)
Work order	WO-MB1001-001
Process date	17 Sep 2026
Operator	J. Operator

Step	Control / Requirement	Evidence / Result	Status
1	Part identity verified	MB-1001 Rev A	PASS
2	Approved cleaning process used	WI-CLN-004 Rev C	PASS
3	Post-clean visual inspection	No visible contamination	PASS
4	Packaging / protection	Protected after cleaning	PASS

Process record reviewed and accepted for the FAIR training example.

Authorized by	P. Process
Position	Quality Manager – Example Finishing Ltd
Date	18 Sep 2026

Electronic/signature authorization: _____

Example Aerospace Ltd – Inspection	TRAINING EXAMPLE NOT A VALID CERTIFICATE
	Certificate / Report No: DIM-260918-01

DIMENSIONAL INSPECTION REPORT

Part	MB-1001 – MOUNTING BRACKET
Revision	A
Serial	MB1001-FAI-001
FAIR	FAI-MB1001-001
Drawing	MB-1001 Rev A
Inspection date	18 Sep 2026

Balloon	Characteristic	Method / Equipment	Equipment ID	Actual Result	Status
1	120.00 ±0.20 mm	CMM	CMM-01	120.06 mm	PASS
2	60.00 ±0.10 mm	CMM	CMM-01	60.02 mm	PASS
3	Ø30.00 ±0.10 mm	Bore gauge	BG-030	30.03 mm	PASS
4	4 × Ø6.50 ±0.10 mm	CMM	CMM-01	6.49 / 6.51 / 6.50 / 6.48	PASS
5	Position Ø0.20 | A | B | C	CMM	CMM-01	Ø0.08 mm	PASS
11	45.0° ±0.5°	CMM	CMM-01	45.1°	PASS
14	Flatness 0.10	CMM	CMM-01	0.04 mm	PASS
15	Ø20.00 +0.05/-0.00	Bore gauge	BG-020	20.02 mm	PASS
16	Position Ø0.15 | A	CMM	CMM-01	Ø0.06 mm	PASS
21	Circularity 0.05	CMM	CMM-01	0.018 mm	PASS

Inspection results shown are fictional examples. In a real FAIR, the complete dimensional results and measurement evidence would be retained and traceable to calibrated inspection equipment.

Authorized by	Q. Inspector
Position	Quality Inspector
Date	18 Sep 2026

Electronic/signature authorization: _____

Example Aerospace Ltd – Metrology	TRAINING EXAMPLE NOT A VALID CERTIFICATE
	Certificate / Report No: SR-260918-01

SURFACE ROUGHNESS INSPECTION REPORT

Part number	MB-1001
Revision	A
FAIR	FAI-MB1001-001
Drawing balloons	22 and 27
Requirement	Ra 1.6 µm maximum
Instrument	Surface roughness tester SRT-02
Calibration status	In calibration – fictional example
Inspection date	18 Sep 2026

Location	Requirement	Measured Ra	Status
Specified surface – balloon 22	≤1.6 µm	0.92 µm	PASS
Representative general surface – balloon 27	≤1.6 µm	1.24 µm	PASS

The reported surface roughness measurements meet the drawing requirements shown in this fictional training example.

Authorized by	M. Metrology
Position	Metrology Inspector
Date	18 Sep 2026

Electronic/signature authorization: _____

Example Aerospace Ltd	TRAINING EXAMPLE NOT A VALID CERTIFICATE
	Certificate / Report No: COC-260918-001

CERTIFICATE OF CONFORMITY

Customer	Example Customer
Customer PO	PO-260184
Part number	MB-1001
Description	MOUNTING BRACKET
Revision	A
Quantity	1
Serial / trace ID	MB1001-FAI-001
FAIR	FAI-MB1001-001
Work order	WO-MB1001-001
Date	18 Sep 2026

Conformity statement: We certify that the product identified above has been manufactured and inspected in accordance with the applicable purchase order, drawing and referenced specifications, and that the supporting records are retained and traceable. Any approved deviations would be identified on this certificate; none apply to this fictional example.

Material certificate	MAT-260417
Special process certificate	PROC-260331
Cleaning record	CLN-260118
Dimensional report	DIM-260918-01
Surface roughness report	SR-260918-01
Deviation / NCR	None

Authorised release of the fictional training product.

Authorized by	A. Quality
Position	Authorized Quality Representative
Date	18 Sep 2026

Electronic/signature authorization: DP 12 _____

41. References and Further Learning

Use the current controlled versions of applicable standards and customer requirements. The following sources were used as authoritative background for this guide:

- SAE International, AS9102C, Aerospace Series – First Article Inspection Requirements, revised 28 June 2023.
- International Aerospace Quality Group (IAQG), 9102 First Article Inspection Requirement overview.
- IAQG Supply Chain Management Handbook (SCMH), Section 3.2 First Article Inspection guidance, examples and webinars.
- IAQG, Summary of Changes Revision B to C / 9102 Rev C support material.
- Applicable AS9100-series, customer, statutory and regulatory requirements as contractually invoked.

The IAQG 9102 and SCMH 3.2 resources provide current guidance, worked examples and educational material. Organisations should maintain their own controlled process defining how FAI is planned, performed, reviewed, approved, retained and flowed to suppliers.

42. Special Processes Institute

The Special Processes Institute provides a wide range of free web-based tools and resources covering Quality Management and Special Processes, including dedicated resources for First Article Inspection (FAI).

Explore the full collection of webapps at: https://sp-i.org/webapps.html

43. Document Revision Control

Rev	Date	Change	Author
1	19 Sep 2026	Established the First Article Inspection Guidebook	Konrad Burgoyne

SPECIAL PROCESSES INSTITUTE

sp-i.org