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001	13 Aug 2019			Initial release	L. Visagie	H. Cosmé
002	13 Nov 2019	B.2.a-c D.2.e-g F.2.a, b, d F.3.a, F.4.a, F.5.a F.4.b, F.5.c A&R: 5,6 DI: 1a-b	A A A A A A A	Completion of SFAI Register. SFAIR document requirement stipulated. Incoming Goods Inspection duties. Quality Engineer duties. FAI Administrator duties. Responsibility for SFAI documents. Electronic - and hardcopy retention.	L. Visagie	M. Scherner
003	18 Feb 2021	B.4.b D.2.h-l; F.2.c-g	D A	Note about key and critical characteristics removed. Supply documentation requirements added.	J. Fourie	M. Scherner

* **A** - Added **M** - Modified **D** - Deleted

ABBREVIATIONS

- BOM: Bill of Material
- COC: Certificate of Conformance
- COTS: Commercial-Off-the-Shelf
- ERP: Enterprise Resource Planning (i.e. SAP)
- ECP: Engineering Change Proposal
- FAI: First Article Inspection
- OEM: Original Equipment Manufacturer
- PO: Purchase Order
- PRRM: Production Ready Review Meeting
- QA: Quality Assurance
- SFAI: Supplier First Article Inspection
- Supplier: aka External Provider(s)

PURPOSE

This procedure defines the circumstances that will necessitate a SFAI and outlines the process to be followed by suppliers and AAT Composites in the event that a SFAI is required. It describes the verification process, authorities, and responsibilities for the different activities.

SCOPE

This procedure is applicable to all SFAI's and references external standard AS9102 requirements. It is applicable to Project Engineering, Quality Engineering, Incoming Inspection activities, including requirements by the suppliers.

DOCUMENT REFERENCES

Doc. No.	Title
CP07	Process Analysis (Turtle Diagram): Supply Chain Management
AS9102	Aerospace First Article Inspection Requirement
BP CP02.01	Goods Receiving
BP CP04.08	Engineering Change Proposal
BP CP05.02	Industrialisation and Production Readiness Review
BP CP08.05	Quality Records
BP CP08.08	Incoming Goods Inspection
BF CP04.18(a-c)	First Article Inspection Report (FAIR)
BF CP07.09	Supplier First Article Inspection (SFAI) Register
<i>Electronic File</i>	<i>Factory-drive(S):\Quality Receiving Inspection\Supplier First Article Inspection\SFAI Register</i>
SFAIR-Site	Supplier First Article Inspection Reports Site
<i>Electronic Copies</i>	<i>Factory-drive(S):\Quality Receiving Inspection\Supplier First Article Inspection\SFAI Reports\<Supplier Name></i>

PROCEDURE

A. General

1. The purpose of a SFAI is to give objective evidence that all engineering, design, and specification requirements are correctly understood, accounted for, verified, recorded, and met.
2. The SFAI is required, at least for the following cases, which are considered as potential sources of risk:
 - a) Manufacture of product for first time,
 - b) Resumption of manufacture after a prolonged period of suspension,
 - c) Major change to product (dimensions, functionality, interchange ability, raw materials, etc.),
 - d) Change in manufacturing process (change in technology, equipment, place of manufacture, etc.),
 - e) Change in source of procurement,
 - f) Formal request from AAT Composites (as a result of customer requirements, for example).
3. The following items do not require a SFAI, unless otherwise directed by the quality department:
 - a) Metallic and non-metallic raw materials,
 - b) Consumables,
 - c) COTS items,
 - d) Items that are being purchased for non-production purposes.

B. Initiation of a Request for a SFAI:

1. The following instances will necessitate a SFAI, and describes the initiation of a SFAI request:
 - a) **First Time** Manufacture (or Change in Revision) of an Item:
 - i. Steps from point B.2 must be followed.
 - b) **Resuming** Product Manufacturing after a Prolonged Period of Suspension:
 - i. In the event that manufacturing will commence after a prolonged period of suspension, the Industrialisation and Facilities Manager will call a PRRM as per the (BP CP05.02) Industrialisation and Production Readiness Review procedure.
 - ii. During or after the PRRM, the quality and the procurement departments will be informed of the need for any SFAI's.
 - iii. From there, points B.2 onwards must be followed.
 - c) **Changes** to Product or Manufacturing Process at the Supplier:
 - i. This is changes in the supplier's manufacturing activities, for example change in technology, equipment, place of manufacture, etc.
 - ii. The supplier will notify the procurement department in writing (email or written notification) that a SFAI will be required.
 - iii. The procurement department will notify the project engineer and quality department about the changes, after which the project engineer will indicate the requirement for SFAI. Steps from point B.2 must then be followed.
 - d) **Change in Source** (Supplier) for Procurement:
 - i. The procurement department will notify (in writing) the project engineer and quality department about the required change.
 - ii. The project engineer will communicate the need for a SFAI and steps from B.2 must be followed.
2. When a requirement for a SFAI arise (as stipulated in points A.2. and A.3), the project engineer will register the required information on the electronic (BF CP07.09) Supplier First Article Inspection (SFAI) Register – completing the following information:
 - a) SFAI number – to be drafted in the following format, SFAI-YY-Number:
 - i. SFAI: Indicates it is a supplier first article inspection item,
 - ii. Linking hyphens (-): No spaces before and/or after,
 - iii. YY: Indicates the year in which the number is generated on the register (e.g. 2019 being -19-)
 - iv. Number: This is a sequential number with 4-digits being the minimum format, starting from 0001 (e.g. 0001, then 0002 etc.)
 - v. Example: SFAI-19-0001, then following will be SFAI-19-0002 if it is in the same year.
 - b) Date Logged: Is the date the SFAI is logged in the register; and
 - c) Part number: Is the part number awaiting the SFAI.
3. The project engineer will notify the following personnel in writing (using email or written notification) that a SFAI has been registered:
 - a) Design and development department – relevant quality engineer,
 - b) Procurement department – relevant buyer,
 - c) Quality department – incoming inspection inspectors.

4. When the configuration department issues the drawings (new or revision change that will affect the product) to the incoming inspection department:
 - a) The incoming inspection inspector must confirm the SFAI requirement to the electronic file (BF CP07.09) Supplier First Article Inspection (SFAI) Register and place the relevant drawings awaiting SFAI in a separate, clearly identified file - this will indicate the item requiring a SFAI when it arrives.

C. Notification to the Supplier for a SFAI Requirement:

1. The procurement department will ensure that the purchase order is marked to indicate that a SFAI will be required and will take action to clearly communicate this to the supplier.
2. The procurement department must inform the quality department of the estimated delivery date.

D. SFAI and SFAI Provided by External Providers (Suppliers):

1. The SFAI investigation is performed on products manufactured in conditions representative of the normal production process. It allows the approval of the product and the production means through the validation of a standard part (first reception being considered as first article in the absence of a standard part) and gives the supplier the authorisation for production.
2. Documentation and Forms:
 - a) The supplier shall complete the relevant documentation as described by the BS EN 9102 standard and will clearly indicate the results that have been obtained.
 - i. Should the supplier not have suitable documentation as part of their own quality management system, they may source and utilise (BF CP04.18(a-c)) First Article Inspection Report (FAIR) from AAT Composites, which must be completed and returned to AAT Composites with the relevant SFAI.
 - b) All documents must be prepared in English.
 - c) All documents (forms) shall be completed either electronically or in permanent ink.
 - d) When using the (BF CP04.18(a-c)) First Article Inspection Report (FAIR), continuation sheets and insertion of additional rows are acceptable.
 - e) All dimensions, notes and specifications on the part drawing, must be indicated on the supplied part drawing(s), with sequential characteristic numbers starting from 1.**
 - f) The dimensions measured from the SFAI part, must be listed on the SFAIR form 3 (characteristic accountability, verification, and compatibility evaluation), next to the corresponding characteristic number.**
 - g) The mark-up drawing must be attached to the SFAIR.**
 - h) Any additional special processes specified within the part BOM, issued with the part data, shall be listed in appropriate field on (BF CP04.18(a-c)) First Article Inspection Report (FAIR) .
 - i) Material certificates of **ALL** raw material used must be referenced in SFAIR and attached to SFAIR, for example: if the part is made from aluminium then anodised and primed, the aluminium and primer raw material certificates, of batches used, must be referenced in SFAIR, by specific batch and certificate in appropriate fields on (BF CP04.18(a-c)) First Article Inspection Report (FAIR).
 - j) A material COC includes the following information:
 - i. Specification number including revision,
 - ii. Manufacturer name and address,
 - iii. Delivery address,
 - iv. Delivery date,
 - v. Date of manufacture,
 - vi. Quantity,
 - vii. Part number and description,
 - viii. Purchase order number,
 - ix. Batch number,
 - x. Expiry date (if applicable).
 - k) The delivery notes of all raw materials must show that the raw material batch was delivered from an OEM of raw material up to the supplier. A raw material delivery note includes the following information:
 - i. Specification number including revision,
 - ii. Manufacturer name and address,
 - iii. Delivery address,
 - iv. Delivery date,
 - v. Date of manufacture,
 - vi. Quantity,

- vii. Part number and description,
 - viii. Purchase order number,
 - ix. Batch number,
 - x. Expiry Date (if applicable).
3. The SFAI part must be supplied to AAT Composites prior to commencement of series production together with the documents as stated in D.2.
 4. Identification on delivery:
 - a) SFAI parts must be identified by tags and/or markings as "Supplier First Article or SFAI".
 - b) The shipping documents from the supplier must also indicate that the consignment contains SFAI's by entering the words "Supplier First Article Inspection" or "SFAI" onto the delivery note.

E. Internal Communication Relating to Hardware Revision Change(s):

1. To change, control and communicate hardware revision changes the (BP CP04.08) Engineering Change Proposal process must be used.
2. Each department authority, signing off on the ECP form, will be responsible to communicate the required information to all relevant personnel in their respective departments.

F. Receipt, Review and Approval of SFAI's:

Upon arrival of a SFAI item(s) at AAT Composites:

1. The incoming goods (receiving) personnel, will check that (as noted in point D):
 - a) All required paperwork is attached to the shipping documents containing the required identification for SFAI,
 - b) The SFAI parts are clearly identified,
 - c) Notify the incoming goods inspection inspectors (quality department) of the arrival and requirement.
2. The incoming goods inspection inspector of the quality department will do the following:
 - a) Inspect and verify the SFAI item, according to the inspection process as described in (BP CP08.08) Incoming Goods Inspection, making reference that it is a SFAI recording the SFAI register number on the inspection sheet.
 - b) Attach a COPY of the COC of the item to the SFAIR. The original COC will follow the standard COC workflow as described in (BP CP02.01) Goods Receiving.
 - c) Attach a copy of the supplier delivery note to SFAIR.
 - d) Add the supplier name as stated on delivery note in the field indicated "Supplier" of the register (BF CP07.09) Supplier First Article Inspection (SFAI) Register.
 - e) Attach the referenced raw material COC to the SFAIR.
 - f) Send a notification email to the quality engineer, requesting review and approval of the SFAI item and SFAIR, which includes the attached documents.
 - g) Detain the referred part until review is done by the quality engineer.
3. The Quality Engineer will do the following:
 - a) Review the SFAI item(s), the SFAIR and SFAI results from the incoming goods inspection inspector, hence giving "approved" or "not approved" status to the item.
4. Approved SFAI's:

When the SFAI is deemed acceptable by the Quality Engineer, the following must be done:

 - a) The Quality Engineer must:
 - i. Sign-off the SFAIR documentation using the QA stamp allocated to the incumbent,
 - ii. Notify the supplier and provide the approval number for the SFAI accepted, which is the register number followed by the letter "A".
 - iii. Hand the hardcopy SFAIR to the FAI Administrator for processing and archiving.
 - b) The FAI Administrator, must:
 - i. Update the (BF CP07.09) Supplier First Article Inspection (SFAI) Register, by completing the outstanding data and adding a space and letter "A" to the end of the SFAIR number (e.g. SFAI-19-0123 to be amended to SFAI-19-0123 A).
 - ii. Save an electronic copy of the full SFAI (which includes the copy of the COC):
 - To the following address: Factory-drive(S):\Quality Receiving Inspection\Supplier First Article Inspection\SFAI Reports,
 - Saving it under the relevant supplier name,
 - Saving the SFAI using the SFAI number of the register.
 - iii. File the hardcopy of the SFAIR into the offsite archiving systems for quality records as directed by the Quality Manager.

- c) At this point the item will be released to the stores (warehousing) department.
- 5. Not Approved SFAI's:
When the SFAI submission is deemed to be unsatisfactory by the quality engineer, the following must be done:
 - a) The quality engineer may request additional samples following correction of the cause of discrepancy by the supplier.
 - b) In cases where a SFAI had to be repeated, only the changed or added attributes must be stated.
 - c) In cases where a SFAI completely failed and retains the status of failure, the FAI Administrator must note the reason(s) for failure in the comment section of the (BF CP07.09) Supplier First Article Inspection (SFAI) Register. The SFAI number must remain WITHOUT an "A" to indicate that it has NOT been approved.

AUTHORITY AND RESPONSIBILITY

1. The relevant project engineer is responsible to register and communicate SFAI requirements.
2. The incoming goods inspection inspector is responsible to inspect the SFAI items, which includes the relevant documents referenced in SFAIR (material COC and material delivery notes), then notify the Quality Engineer when completed.
3. Only quality engineers are authorised to approve SFAI's.
4. The quality engineer is responsible to communicate results to the relevant project engineer, procurement department staff and when approved, the supplier.
5. The design and development requirements engineering department is responsible retain and maintain all documentational information relevant to SFAI's onsite.
6. Offsite storage and archiving of documented information (records) forming part of build history quality records will be controlled and managed as per instruction from the Quality Manager.

DOCUMENTED INFORMATION (RECORDS)

1. All SFAI documentation is considered quality records and forms part of the build history traceability of parts, therefore it must be retained by suppliers and AAT Composites.
 - a) Electronic copies of SFAI's must be retained for five revision cycles or 5 years, whichever is the longest, to ensure quick retrieval for informational purposes, controlled by the FAI Administrator.
 - b) Hardcopies of SFAI's must be retained as required by (BP CP08.05) Quality Records, of which off-site archiving facilities may be used the same as with the routing label retention.