



Supplier Quality Manual

Quality Assurance Requirements for Suppliers and Subcontractors
JOHN COCKERILL DEFENSE – MQF-EN Rev. H

The original of this document is issued in French. In case of discrepancies or dispute between both versions, the French document shall prevail.



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Approval

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The value chain created by John Cockerill Defense arises from the products and services which you supply to us.

To achieve optimum quality, activities must be faultless and coherent: ours and those of our partners.

But everything starts with you, our suppliers.

Quality is at the heart of our business: your success is essential to our success.

This new version of the Supplier Quality Manual reaffirms our desire to co-operate with you in order to ensure the continuous improvement of everything we do together.



1 OBJECT

The Supplier Quality Manual (**SQM**) defined the measures deployed mutually by John Cockerill Defense and its suppliers, in the field of quality management and related fields (Environment, Workplace Safety, etc.) in order to meet the requirements of orders from our clients. It defines the contractual quality requirements applicable to suppliers. These requirements are based on the EN 9100 standard and on John Cockerill Defense quality management.

The SQM is referenced in orders or contracts issued by John Cockerill Defense. The latest version is available on the John Cockerill Defense Web site:

<https://johncockerill.com/en/documents-dedicated-to-suppliers/>

2 APPLICABILITY

The present manual applies to any product or service supplier to John Cockerill Defense, unless John Cockerill Defense states otherwise. Applicable to supplier orders. Applicable to suppliers and subcontractors who deliver or act in the production of components or products (including fluids).

The SQM is also applicable to:

- Suppliers of special tools, measurement and consumables for tests, trials and qualification (e.g., munitions)
- ...
- Service providers, analysis and miscellaneous test laboratories.
- Training organizations who issue required certifications or qualifications.

The SQM is an integral part of the orders and in no case its applicability can be totally or partially refuted without a written agreement from John Cockerill Defense QA.

3 APPLICABLE DOCUMENTS AND ET REFERENCE WEB SITES

The documents referenced in the Supplier Quality Manual and listed below are directly available on our website: <https://johncockerill.com/en/documents-dedicated-to-suppliers/>

Applicable documents	Title
[AD 1] 4-OP-002	Edition of a FAIR file
[AD 2] AQDEF.061	Request For Waiver
[AD 3] AQDEF.082	Acceptance Request
[AD 4] AQDEF.119	FAIR Form
[AD 5] AQDEF.404	Process Flow Chart Form
[AD 6] AQDEF.405	Special Process Qualification Check List
[AD 7] AQDEF.406	8D Problem Solving Worksheet
[AD 8] AQDEF.432	Certificate of Conformity (Template)
[AD 9] B-OP-DEF-003	Manufacturing of printed circuit board (PCB)
[AD 10] B-OP-DEF-004	Assembly of printed circuit assembly (PCA)

Reference Websites	Link
AMS	Aerospace Material Specifications - SAE International (paying site) https://www.sae.org
ANSI	American National Standards Institute (paying site) https://www.ansi.org/



Reference Websites	Link
ASME	The American Society of Mechanical Engineers (paying site) https://www.asme.org/
ASTM	ASTM International, previously American Society for Testing and Materials (paying site) https://www.astm.org/
DIN	German Institute for Standardization (paying site) https://www.din.de
ISO	International Organization for Standardization (paying site) https://www.iso.org
MIL	The MIL specifications are available on free download from the following Websites for: https://quicksearch.dla.mil/qsSearch.aspx http://everyspec.com/library.php
NATO	NATO Standards: https://nso.nato.int/nso/nsdd/listpromulg.html

4 DEFINITIONS & ABBREVIATIONS

4.1 DEFINITIONS

Key characteristics:	All identifications or parameters of the manufacturing process which may have an impact on the safety, regulatory compliance, shape, adjustment, functions, performance or future processes of the product constitute key characteristics. These often form the basis of the quality control plan for a product.
Client:	Designates John Cockerill Defense and its own clients.
Cloud computing:	Means a number of machines, network equipment and software maintained by a supplier, which users can access via a computer network. Allows users to save, share and access any files from any Internet-connected device anywhere in the world.
Applicable document:	Document (procedure, operating procedure, form...) that must be applied during the execution of the John Cockerill Defense order.
Reference document:	Document (norm, code, instructions, procedure...) on which the issuer is based on to write the John Cockerill Defense document.
Derogation:	Written authorization from an authority (John Cockerill Defense) to use or release a product that does not comply with the specified requirements. The derogation is limited to one item, one quantity and one supplier.
Deviation:	Written authorization from an authority (John Cockerill Defense) to deviate from the originally specified requirements for a product prior to its completion. The deviation may be limited for an item or not, for a specific quantity or period, and for a supplier.



Digital Data:	Designates all data, 2D and 3D models, machining programs, etc. supplied by John Cockerill Defense on computer media or transmitted or consulted by computer tools.
Supplier:	Designates any holder of a purchase order or contract issued by John Cockerill Defense and requiring the delivery of a product or service.
IPC:	The industry association for printed circuit board and electronics manufacturing service companies.
NADCAP:	(National Aerospace and Defense Contractors Accreditation Program): USA-based program for the accreditation of special aeronautical processes. Becoming mandatory in Europe under the pressure exerted by the majority of European of purchasers and manufacturers of aeronautical equipment. An extension of the AS/EN/JISQ 9100 quality management standard.
Specific tool:	Defines an instrument or tool designed for a specific use of John Cockerill Defense. This type of specific tool differs from the standard measuring instrument (IMS) such as compasses, multimeter...
Product:	Designates in general the subject of the purchase order (equipment, material, service, test, trial, documentation, programming, etc.).
Counterfeit work:	Refers to work that is, or contains elements that are, misrepresented as having been designed or produced according to an approved system or other acceptance method. The term also includes approved work that has reached an expected life limit or has been damaged beyond repair but is modified and misrepresented as acceptable.
Special Process:	Process used in an operation or sequence of operations in the manufacturing procedure to obtain the specified properties (physical, chemical or metallurgical), or capable of altering those properties if they are not directly controllable in the remainder of the procedure. Non-destructive testing (NDT) operations are considered as special processes.
Qualification:	<p>This term has two meanings:</p> <ul style="list-style-type: none"> • The ability of a supplier to implement a special process recognized by our clients. • The action by which the John Cockerill Defense quality department recognizes the ability of a supplier to produce a product in accordance with the specified requirements (standard, specification, etc.).



4.2 ABBREVIATIONS

AD	Applicable Document	NDA	Non-Disclosure Agreement
ATP	Acceptance Test Procedure	NDT	Non-Destructive Tests
ATR	Acceptance Test Report	OEM	Original Equipment Manufacturer
CNC	Computer Numerical Control (Manufacturing)	PCBA	Printed Circuit Board Assembly
NDT	Non-Destructive Test	PN	Part Number
CoC	Certificate of Conformity	PVA	Non-Conformity Report
CAR	Corrective Action Request	QC	Quality Control
EMS	Electronic Manufacturing Services	RD	Reference Document
ESD	Electrostatic Discharge	IMS	Integrated Management System
FAI	First Article Inspection	SN	Serial Number
FAIR	First Article Inspection Report	SOW	Scope of Work
FOD	Foreign Object Detection	SQA	Supplier Quality Assurance
ML	Military List	SQM	Supplier Quality Manual (corresponds to the wording MQF in English)
NC	Non-Conformity		

5 RESPONSIBILITIES

The supplier must make sure that they are in possession of the latest versions of documents referenced in the John Cockerill Defense order. If this is not the case, it is mandatory for the supplier to submit a request to the Procurement Department.

The supplier is totally responsible for the quality of the product, including activities that it subcontracts to a third party.

Provision by John Cockerill Defense to the supplier of production and/or inspection documents, tools or any other assistance does not in any way diminish the supplier's responsibility for the final quality of the product. By accepting an order or a contract issued by John Cockerill Defense, the suppliers acknowledge having received, being fully familiar with and accepted the entire contents of the Supplier Quality Manual.

6 GENERAL QUALITY REQUIREMENTS

The quality requirements of our own clients apply in cascade to the suppliers with whom we place orders for the products concerned. **The languages permitted for documents communicated by the supplier are French and English.**

No oral instruction from John Cockerill Defense must be accepted if it changes any aspect of the order or the requirements, whatever the origin. All changes must be specified in writing and may be communicated by fax, e-mail or any other electronic means to the Procurement Department only. In the event that the order (contract) between John Cockerill Defense and the supplier contains a Scope Of Work, the provisions of the SOW prevail over this Supplier Quality Manual.

In case of discrepancy between this Supplier Quality Manual and the specifications, the SQM is the minimal requirement. In that case, the additional provisions required by specifications are applicable.



6.1 SELECTION AND EVALUATION OF SUPPLIERS

Each supplier is selected and evaluated in accordance with John Cockerill Defense procedures. A list of qualified suppliers is managed by John Cockerill Defense .

The Supplier may ask the Procurement Department in writing to identify a qualified subcontractor for any particular domain. Suppliers are qualified for one or more domains. The period of validity of the qualification is modulated according to the risk (complexity, NC, technicality of the product).

A supplier's qualification is maintained as long as it produces and delivers on a John Cockerill Defense program with compliance to requirements.

A qualification is cancelled if the supplier has a production interruption exceeding 3 years. Disqualification is always possible in case of significant non-compliance with the John Cockerill Defense requirements.

6.2 COMMITMENTS

6.2.1 John Cockerill Defense

Agrees to:

- Supply all elements necessary for the production of the products, as contracted: documents (order, plans, specifications, etc.), digital data (models, programs, etc.), specific tools (production tools, verification tools, gauges, electronic box, etc.)
- Provide assistance to the supplier, within the limits of John Cockerill Defense's competence and resources, in all areas which contribute to final product compliance.

6.2.2 Supplier

The supplier must:

- Make sure that they are in possession of all required elements before executing the order or contract. Any discrepancy or difficulty in implementation (technical problem, documentation, etc.) which affects the contractual delivery date and/or compliance of the product must be reported to the Departments concerned: John Cockerill Defense Procurement and QC.
- Ensure the preservation of products and packaging (cartons, shuttle crates, etc.) against any cause of damage (handling, storage, transport, etc.).
- Ensure the identification and traceability of products, from the reception of raw materials to delivery.
- Inform John Cockerill Defense of any changes concerning certifications or qualifications obtained from certifying organizations or clients (special processes etc.), to enable John Cockerill Defense to update its databases.
- Inform John Cockerill Defense of any knowledge of obsolescence, change of raw material, change of production process, change of subcontracting. See § 6.28.2.
- Notify the Supply Chain and John Cockerill Defense QA in the event of a change in the organization. Address, production site, change of name, takeover, certification... John Cockerill Defense reserves the right to require a new FAI / or to refuse production batches made under the new organization before declaration.
- Supplier shall not relocate production, manufacturing and/or treatment facilities during the execution of the order without informing John Cockerill Defense as soon as possible.

John Cockerill Defense reserves the right to require a new FAI / or to refuse production batches made in the new installation.



- Upon request, communicate to the John Cockerill Defense QC, a copy of the updated inspection marks attributed by the supplier. (Only applies to suppliers who carry out marking and/or final inspection on behalf of John Cockerill Defense).
- The supplier shall provide John Cockerill Defense representatives (when performing an activity at the supplier's site) with a working space with a desk or table, chairs, electrical connection for computer etc.
- A reproduction service must also be available if required.

6.3 QUALITY SYSTEM

The requirements transcribed into the SQM are based on the EN9100 standard. The quality systems of our suppliers must be certified and/or have equivalent provisions to enable them to meet the requirements of the present SQM.

Note: NADCAP accreditation is considered to be advantageous. We encourage our suppliers to obtain ISO 14001 certification in order to apply eco-design principles and carry out ecological analyses of the life cycle of their product.

6.4 ACCESS RIGHTS

6.4.1 General

John Cockerill Defense, its clients, and official bodies or their representatives are under an obligation to monitor the products made by the official holder of a purchase order and its quality management system. They are therefore entitled to observe all stages in the production of any order placed by John Cockerill Defense, with the supplier.

John Cockerill Defense, its clients, official bodies or their representatives must have free access to the supplier's premises used for the manufacture of the product and to those of any subcontractors to the supplier and must be allowed every facility to fully accomplish their tasks. The exercise of monitoring does not in any way diminish the supplier's responsibility for delivering a compliant product. The supplier must also reserve the right of access to its own suppliers, as specified above.

6.4.2 NATO delegation

Independently of any John Cockerill Defense, requirements or acceptances inspections in accordance with AQAP 2110/20/30/31, Stanag 4107 and other standards can be carried out under NATO delegation to the supplier. These inspections and their results take precedence over John Cockerill Defense decisions.

6.5 AUDIT

John Cockerill Defense SQA carry out qualification, process and special (e.g., on recurrent non-conformities) audits. Audits are planned with the supplier. A schedule is drawn up and communicated to the supplier.

Non-scheduled audits may be performed on the supplier's premises during working hours. The auditor produces an Audit Report specifying conclusions, Corrective Action Request (CAR) and areas for improvement. The SQA is charged with circulating the Audit Report to the audited Quality Manager (or company chief), and with monitoring the effectiveness of the CAR's. The audit is declared closed when the effectiveness of corrective actions has been demonstrated.



6.6 QUALITY PLANNING

The supplier using subcontracting must transmit a Process Flow Chart ([AD 5] AQDEF.404) containing the subcontracted operations and the identification of candidate subcontractors. The document must be sent with the acknowledgement of receipt of the order.

Depending on the complexity or criticality of the products, the John Cockerill Defense SQA invitation to tender may ask the supplier to produce a written quality plan taking account of aspects of quality planning and risk management. This request may be simply expressed in writing by the Quality Department with no additional cost for John Cockerill Defense.

6.7 DOCUMENTATION

All documentation provided by John Cockerill Defense is subject to strict confidentiality rules and therefore the supplier must sign a Non-Disclosure Agreement (NDA) prior to any exchange. Under no circumstances shall documentation be communicated to a third party without the authorization of John Cockerill Defense . If documentation issued by John Cockerill Defense or the final client is used for design, production or inspection, the supplier must implement procedures to control this documentation.

6.8 REGULATORY OR LEGAL REQUIREMENTS

The supplier is responsible for identifying and applying established and applicable regulatory or legal requirements (national, European or international). This applies notably in the following matters:

- Safety.
- Environment.
- REACH: European regulation "Registration, Evaluation and Authorization of Chemicals".
- RoHS: European Directive "Restriction of Hazardous Substances" (electrical, electronic and optronics) Concerns electrical and electronic components.
- Transport by air, sea or road.
- Employment.
- Customs.

6.9 TRACEABILITY

6.9.1 General

The supplier must ensure the identification and traceability of products, from **the reception of parts and raw materials to delivery**. This includes the following documents:

- Manufacturing and assembly processes.
- Manufacturing orders.
- Inspection documents.
- Travelers/ job cards/ working sheet.
- Materials certificates.
- Treatment certificates.
- Certificates of conformity.
- Non-conformity documents.
- Qualification of operators.

The supplier must be able to provide product traceability data within two working days upon request by John Cockerill Defense.



6.9.2 Welding assembly

Traceability must be maintained individually for all the components of the welded assembly. The material batch (provided or not provided by John Cockerill Defense) must be traced and registered for each individual item for each mechanical welded assembly.

6.10 JOHN COCKERILL DEFENSE TOOLS MADE AVAILABLE TO THE SUPPLIER

If John Cockerill Defense supplies tools, the supplier must verify the following before manufacturing starts:

- The correct identification of the tools made available.
- Any unsuitability for the product to be manufactured.
- Any degradation (wear, damage...).

If any problem arises, contact the Procurement Department so that the appropriate steps can be taken. The supplier must maintain a list of the John Cockerill Defense tools in the supplier's possession.

Tools supplied by John Cockerill Defense must only be used for John Cockerill Defense orders. Tools remain the property of John Cockerill Defense.

Recall of tools by John Cockerill Defense: the supplier must return the tools on upon written request by John Cockerill Defense.

6.11 MATERIALS SUPPLIED BY JOHN COCKERILL DEFENSE

The supplier will check that material provided by John Cockerill Defense corresponds to the requirement specified in the order. The material must be identified in order to guarantee its traceability throughout the manufacturing process.

No material other than that supplied by John Cockerill Defense for an order must be used. In the event of an erroneous supply, John Cockerill Defense will replace the material. The raw material must be stored under appropriate conditions to prevent damage, corrosion, scratching, impacts, ...Attach to the acceptance request the copy of the John Cockerill Defense delivery note.

6.12 PARTS SUPPLIED BY JOHN COCKERILL DEFENSE

The supplier will check that parts provided by John Cockerill Defense correspond to the requirement specified in the order. The parts must be identified in order to guarantee traceability throughout the manufacturing process.

No parts other than those supplied by John Cockerill Defense for an order must be used. In the event of an erroneous supply, John Cockerill Defense will replace the parts. Parts must be stored under appropriate conditions to prevent damage, corrosion, scratching, impacts...Attach to the acceptance request the copy of the John Cockerill Defense delivery note.



6.13 SPECIAL PROCESSES

6.13.1 General

« A process of which the results cannot be fully verified afterwards by a product inspection or test, and for which the consequences of a defective process can only appear during product utilization.»

The supplier must identify the special processes used in manufacturing the product. These special processes must be qualified by the Supplier before use. The relevant parameters must be: identified, controlled and recorded. These requirements also apply to subcontracted special processes.

The qualification files for special processes required by John Cockerill Defense must be accepted by John Cockerill Defense before any production.

Any production carried out without previous validation of the qualification file could be refused. Qualification files for special processes not required by John Cockerill Defense must be available for consultation by John Cockerill Defense upon request.

The additional qualification test requirements requested in our specifications must be carried out.

List (non-exhaustive) of families of processes:

- Composites.
- Chemical surface treatments (including painting and varnishing).
- Coating applied by projection (including plasma).
- Heat Treatment.
- Laboratory Tests and Assays:
An ISO 17025 (general requirements for the competence of testing and calibration laboratories), BELAC, COFRAC or equivalent accreditation is required.
- Non-Destructive Tests (NDT).
- Non-conventional machining (water jet or laser cutting, EDM “Electrical Discharge Machining”, autofrettage, 3D printing...).
- Surface improvement (including shot peening...).
- Welding.
- Crimping (back shell, cables).
- Soldering with an iron (manual).
- Bonding.

By unilateral decision of John Cockerill Defense QC, a special process may be treated as standard if the supplier can demonstrate and document that the consequences of shortcomings in the implementation of the process have no impact on the product (particularly in terms of functionality, interchangeability, strength and length of life).

6.13.2 Qualification of special processes

This section describes the quality requirements applicable for the qualification and validation of special processes. These requirements are applicable for any special process used by John Cockerill Defense suppliers and their subcontractors. The qualification of special processes shall be carried out in accordance with this chapter.



Objective:

Ensure that the human and material resources, as well as the corresponding procedures used for the implementation of the special processes are adequate to obtain a reproducible, repeatable quality that meets the specified John Cockerill Defense requirements. You can apply the following procedure while adapting it to your case.

- Definitions of criteria for the review and approval of processes.
- Approval of equipment and qualification of personnel.
- Approval and use of specific methods and procedures.
- Definition of registration requirements.
- Validation and revalidation.

6.13.2.1 Sub-contractor with NADCAP certification

A subcontractor and its accredited NADCAP process can be qualified if the scope of the certification corresponds to the required process. The qualification file will consist of the following elements:

- NADCAP certificate with its scope corresponding to the required process
- The results of analysis and control on specimens or test pieces required by our specifications (if existing).

In this case § 6.13.2.1 is not applicable.

6.13.2.2 Suppliers of products whose design is NOT John Cockerill Defense

Special processes not specifically required by John Cockerill Defense but applied to the product must also be qualified internally. A review can be conducted during audits and a FAI review. In this particular case § 6.13.2.3 to § 6.13.2.4 are not applicable.

6.13.2.3 Qualification file

The file will consist of a completed [AD 6] AQDEF.405 "Special Process Qualification Check List" header page available on the John Cockerill Defense external website.

The qualification file must include the following at least:

- Performance requirements / results.
- Flow chart in accordance with [AD 5] AQDEF.404.
- A description of the installation and the associated measurement facilities.
- Calibration and/or inspection certificates for measurement facilities.
- Work procedures and instructions associated with the process.
- Registration of the control parameters and process control.
- A list of personnel qualified to implement the process.
- Qualification certificates of welders and NDT inspectors (Level II required).
- Analysis and inspection results for samples or test pieces required in our specifications or if necessary, all required elements to demonstrate the qualification of the process.
- Qualifications of other clients and accreditations of qualification organizations.

Do not submit an incomplete file, any incomplete file is not admissible and will not be examined.

6.13.2.4 Qualification

Qualification or requalification is declared by John Cockerill Defense Quality department after:

- Validation of the Product/Process pair.
- Validation of the Qualification File submitted by the supplier.



Additional analyses and/or inspections may be carried between John Cockerill Defense and the supplier. If requested by John Cockerill Defense, cross-testing with an approved laboratory may be required. These analyses and inspections are designed to verify the good correlation of results, in particular during the initial qualification of the process. The supplier will communicate the applicable documents (with version number and corresponding date) to John Cockerill Defense. All supporting documentation for qualification work undertaken by the supplier (qualification file, samples and/or test pieces, inspection records, operator certifications...) must be archived for a period of at least 30 years.

6.13.2.5 Validity

Qualification remains valid, except in the following cases:

- Production halted for more than three years.
- Confirmed deviation.
- Change in the means or equipment used, including processing and material.
- Change which may affect product quality (the supplier must qualify the special process again).
- Decision by John Cockerill Defense SQA.
- Loss of certification for NADCAP subcontractors.

Suppliers must immediately notify John Cockerill Defense of any change that may affect the performance of the qualified special process. Suppliers must notify John Cockerill Defense and obtain approval from the SQA unit before implementing the change.

6.13.2.6 Welding qualification

Prerequisite:

The subcontractor must be certified ISO 3834 (by a recognised external organisation) **or** have an organisation and procedures in place to achieve a similar level. Other standards or certification may be required contractually or by John Cockerill Defense specifications or plans.

Second step:

The subcontractor who carries out the welding must compile a welding file including:

- A welding book that lists, by equipment, all welded seals with the link to WPS et PQR.
- QMOS (PQR).
- DMOS (WPS).
- The qualifications of its welding staff.

In the contrary case, he must either initiate the qualification or use a subcontractor who has the qualification under his legal responsibility and compile a welding file. A company cannot use its own name the QMOS of another company unless the technical management is the same.

A welding file is relative to a part because the key parameters of the process depend on the substrate, the filler metal, the thickness, the type of welded seal, the shape, the number of passes...

The welding file (QMOS (PQR) + DMOS (WPS) + Welders Qualification) must be submitted for acceptance to the John Cockerill Defense SQA before any production. (The validation of the welding file is under the responsibility of a John Cockerill Defense welding engineer).

Any production carried out without prior validation of the welding file will be refused.



Throughout the production process, the subcontractor must maintain, in accordance with the welding code, the qualification of the welders in the field related to the manufacturing.

6.14 METROLOGY LABORATORIES

Qualification of this type of laboratory comprises two parts:

- Evidence of the attachment of their standards gauge to the international system.
- ISO 17025 certification (General requirements for the competence of testing and calibration laboratories) through third party accreditation, the scope of which covers calibrated devices used for John Cockerill Defense.

OR

An ISO 9001 certification with the establishment of an organization conforming the additional requirements of ISO 17025 but not certified for it. Considering the uncertainties and the influence factors on the measurements. Compliance is demonstrated by the subcontractor (the laboratory).

6.15 SUBCONTRACTING BY THE SUPPLIER

6.15.1 General

- The requirements imposed in the contract or the purchase order must be transmitted to the lower level suppliers.
- The main supplier shall identify the quality requirements applicable to lower tier suppliers.
- The main supplier must guarantee the suitability and quality of all items and services purchased from lower tier suppliers.
- The supplier must be able to demonstrate the capability of a subcontractor.
- The supplier must apply all John Cockerill Defense requirements to its own subcontractors.
- The supplier must have qualified a subcontractor by means of clear, objective criteria.
- The main supplier must be able to provide technical assistance to lower level subcontractors as needed to achieve the required quality levels.
- The supplier must declare to John Cockerill Defense, if requested by John Cockerill Defense, the subcontractors used for John Cockerill Defense purchase orders.

John Cockerill Defense reserves the right to forbid, in writing, the use of a third-party subcontractor by the supplier appointed by John Cockerill Defense.

6.15.2 Subcontracting of special processes

Special process operations may be subcontracted. The supplier remains responsible for the subcontracted process.

6.15.2.1 Subcontractors qualified by John Cockerill Defense

Procurement will communicate on request the identities of special process subcontractors qualified for the special processes concerned by the order.

6.15.2.2 Subcontractors not qualified by John Cockerill Defense

If John Cockerill Defense does not have a qualified subcontractor for the special process, or if the supplier wishes to use a special process subcontractor who is not qualified by John Cockerill Defense, it must initiate the qualification procedure in accordance with § 6.13. In such cases, the supplier must submit the corresponding qualification file to John Cockerill Defense for prior approval and wait for its official validation before any implementation.



6.16 PRODUCTION SCHEDULING

6.16.1 General

- Scheduling must be compatible with manufacturing lead times for the product (including procurement lead times for components and/or raw materials).
- The supplier will implement a load/capacity calculation process for the short, medium and long term. The supplier will analyze the results and define the actions required to satisfy the Purchaser's needs and global demand (e.g., increasing machine capacities, extended working hours, externalization, multi-skilling of operators...).
- The supplier will implement a real-time production monitoring process and must be able at any time to communicate a reliable progress report to the purchaser concerning the products in the course of manufacture for a purchase order.
- The supplier will establish and maintain a work order for production and inspection procedure for each product, describing the industrial process for manufacturing the product, and procurements of raw materials and components, up to product delivery.

This document must include:

- The principal phases in manufacturing and inspection.
- Identification of major suppliers.
- Identification of bottlenecks.
- Storage.
- Special facilities and tools used.
- Associated documents (plans, procedures...).
- Critical factors (ex: identified process risks...).
- Key characteristics.
- Surveillance plan (significant parameters, identified risks...).

The range must be completed for each stage (if applicable).

- A document similar to a « traveler », listing each of the operations to be performed, will follow the products through fabrication and assembly. For each operation, the operator will:
 - Check that earlier operations were performed correctly.
 - Record the quantities of products accepted and rejected.
 - Certify that the operation was performed as specified or, in the event of a modification, that it was documented and authorized.

6.16.2 Risk management

The supplier must implement a process for the identification, regular evaluation and reduction of risks which might disrupt the industrial process and the contractual commitments concerning the quality of products and compliance with delivery dates. These risks may be linked to:

- Procurements (single source, obsolescence, change of source, continuity...).
- Product fabrication and inspection operations.
- Resources (machines, IT, ERP...).
- Staff.

For suppliers of functional components incorporating more than one technology (mechanical, electronic, optical...), the product risk (technicality, function, use...) must be taken into consideration. For all identified risks, the supplier must formalize the steps taken to reduce and manage those risks through an action plan.



6.17 MARKING

All John Cockerill Defense requirements concerning the marking of parts are detailed in the contractual documents. The application of marking is a routine quality assurance method for ensuring traceability. After the supplier has been qualified, a trigram is assigned to the supplier as a unique identification code. The trigram is assigned for one supplier and one production site. If the name of the entity changes, the supplier must submit a request for a new trigram to the Supply Chain department.

6.18 FAI - FAIR/PRODUCTION VALIDATION FILE

The operating procedure [AD 1] 4-OP-002, Edition of a "FAIR" file is applicable for products submitted to FAI. This operating procedure is available on our website on the page dedicated to suppliers (see §3).

6.18.1 Organization

6.18.1.1 FAI planning

- John Cockerill Defense, its client or its representative may require a FAI production plan before start-up.
- John Cockerill Defense may require the communication of a FAI progress report.
- John Cockerill Defense, its client or its representative may require the right to be present when FAI's are produced.

6.18.1.2 In-process inspection

During FA production, inspections may be carried out by John Cockerill Defense to evaluate the conformance of processes and the management of documentary requirements. All processes, welding procedures, quality systems, calibration procedures, NDT inspection procedures and Acceptance Test Procedures (ATP) will be reviewed and evaluated during this inspection.

6.18.1.3 FAI delivery

The supplier must e-mail the FAIR file to John Cockerill Defense SQA no later than with the request for FA acceptance.

Delivery documents concerning this article must state that it is a First Article subjected to FAI and the article itself must be marked as such in a non-permanent manner.

6.18.1.4 FAI validation and approval

Series production will be authorized only after validation of the FAI by John Cockerill Defense and its client and/or its representative (signature of FAIR for approval). Production is frozen: any modification gives rise to a new FAI for approval. Realization of FAI's in the presence of John Cockerill Defense, its client or its representative on the supplier's premises does not relieve the supplier of its obligation to supply an acceptable product and does not exclude the subsequent rejection of the product by John Cockerill Defense or its client.

6.19 MANAGEMENT OF MEASUREMENT AND CONTROL DEVICES

Measurement and inspection mean **used for products for John Cockerill Defense** must be listed, identified, kept in good condition, correctly stored, and calibrated in accordance with manufacturer instructions, recognized standards, or a calibration plan, or, failing this, at least once every two years. A life file must be maintained per item, depending on its calibration history.



The supplier must be able to prove that the calibration chain linking its means international or national standards is respected.

The supplier is permitted to carry out internal calibration of instruments in accordance with the national or international standards applicable (ISO, NF, BS, NBN, etc.). Reference standards must be linked to national or international standards and verified at least once every three years by an organization meeting the requirements of § 6.13.2.6.

Subcontracting: for the purposes of calibration, the supplier must use subcontractors meeting the requirements of § 6.13.2.6.

In the case where an instrument is not required to be calibrated, a label should be attached to the instrument indicating that no calibration is required or performed.

6.20 INSPECTIONS

6.20.1 In-process inspections

The supplier must:

- Attach to the acceptance request [AD 3] AQDEF.082 "Acceptance Request / Request for Receipt" the inspection records or reports to the delivery.
- Records must be kept to prove that the product has undergone inspections and/or tests.
- Those records must clearly show whether the product satisfied the acceptance criteria.

6.20.2 Final inspection

The supplier must:

- Attach to the acceptance request [AD 3] AQDEF.082 "Acceptance Request / Request for Receipt" the inspection records or reports to the delivery.
- Check that the attached documents are complete and correspond to the articles and orders concerned.
- Check that the necessary procedures have been applied and respected.

6.20.3 Sampling Inspection

The following sampling standards may be required in the inspection instruction:

- ISO 2859: Sampling procedures for inspection by attributes - Part 1: Sampling procedures for batch-by-batch inspections, indexed according to the Acceptable Quality Level (AQL).
- ANSI/ASQ Z1.4: Sampling Procedures and Tables for Inspection by Attributes.

Where Spare Parts are concerned, the acceptance level for the sample is "zero defects", even if inspection instructions specify otherwise.

In the case of sampling checks, points § 6.19 and § 6.20.2 shall continue to apply. The supplier will attach a non-permanent, numbered identification to items, bearing the words "INSPECTION SAMPLE No. ...".

The item must be:

- Either packed individually with marking on the package.
- Or identified by a label attached by string, not by glue.

Marking with a marker pen or paint is prohibited.



6.20.4 Non-compliant products or disputes

Any non-compliance detected by the supplier must systematically be reported to the John Cockerill Defense QC and Procurement departments before delivery to John Cockerill Defense.

No non-compliant part or article may be invoiced. Non-compliant products must be marked using specific means and segregated from the remainder of production to prevent them from being used while awaiting a decision by John Cockerill Defense QC.

Segregation of non-conforming products must be guaranteed. Ideally, a quarantine area should be provided, clearly identified and locked. A register must be established and maintained to record the arrivals and departures of quarantined products. Any other arrangement to ensure the segregation of traceability of non-conforming products may be accepted if justified.

All non-compliances must systematically be the subject of non-compliance reports. The supplier may submit a derogation request to John Cockerill Defense by means of the form **[AD 2] AQDEF.061** "Request For Waiver". The supplier must declare non-compliance with the **[AD 2] AQDEF.061** "Request For Waiver" form before shipping the product to John Cockerill Defense. Delivery of non-conforming products from the supplier to John Cockerill Defense is allowed after approval of the waiver form. The latest version of the form is available on the John Cockerill Defense web site (supplier and/or download section).

John Cockerill Defense may ask the supplier for an additional analysis, corrective action or a root cause analysis (e.g. 8D...).

For 8D, the use of the John Cockerill Defense form is required **[AD 7] AQDEF.406** "8D Problem Solving Worksheet". The form is available on the John Cockerill Defense web site supplier and/or download section.

In all cases, the John Cockerill Defense QC will notify the final decision in writing. All non-conformities detected by John Cockerill Defense will systematically be subject to a John Cockerill Defense PVA (non-conformity report) and will be treated in accordance with John Cockerill Defense procedures.

6.20.5 Scrapped products

Any scrapped product will be held in the quarantine area until the end of the program, or until a final written decision is issued by John Cockerill Defense QC. John Cockerill Defense may recover scrapped products under a commercial agreement with the supplier. John Cockerill Defense may require that the product be rendered unusable, by cutting up, by machining a groove in the part or by any other required method.

The supplier must be able to issue destruction certificates for scrapped products, with photographs of all the products concerned.

Unless John Cockerill Defense QC agrees otherwise, a **Certificate of Destruction must:**

- State the name of the company and give details of its registration (registered address and company registration number).
- Bear the words "Certificate of Destruction".
- Bear a unique number.
- Clearly define the elements to which it relates:



- Quoting the John Cockerill Defense order reference (including line number).
- Providing a description of the articles, and in particular their John Cockerill Defense references (if applicable).
- Specifying the quantity concerned.
- Stating serial number(s) and the batch to which they belong (if serialized or batched), if more than one batch is involved, each batch must be separately identified.
- The supplier reference of the non-conformity.
- The reference of the request for acceptance, if carried out.
- The reference of the John Cockerill Defense non-conformity report (PVA), if issued.
- The reference of the FAI, if the product is subject to FAI.
- Contain a description of the method of destruction or the method employed to render the product unusable.
- State the number of appended photographs.

The certificate must be dated and signed by the supplier's quality control manager or authorized representatives. A standard form of destruction certificate can be supplied by John Cockerill Defense and is available on the John Cockerill Defense web site supplier and/or download section.

6.21 STORAGE, HANDLING, PACKING AND PACKAGING

The supplier must protect parts/products against all possible causes of deterioration during all operations for which the supplier is responsible.

The supplier must:

- Use appropriate means of handling.
- Use appropriate means of packaging, paying particular attention to the cleanness of the packaging so as to avoid delivering articles in poor condition (this applies to shuttle cases provided by John Cockerill Defense).
- Use specific means of protecting products which require particular conditions of storage (e.g. temperature, humidity...).
- Suppliers of products which are sensitive to electrostatic discharges must provide product protection during the process of manufacture and packaging for delivery (connector caps, bags, bubble wrap, etc.).
- The supplier must, where possible, dedicate storage areas for John Cockerill Defense raw materials, components and products.

6.22 CONFORMITY OF PRODUCTS

The supplier is entirely responsible for the conformity of its products (including those subcontracted or purchased), and for technical, quality, documentary and other requirements of a John Cockerill Defense purchase order or contract.

Unless otherwise stipulated in the order, the supplier must provide certificates of conformity for products supplied. Any errors, omissions, scratching-out or applications of correction products such as Typex invalidate the required documents concerned (e.g. inspection documents and certificates) and prevent the acceptance of products.

6.22.1 Certificate of conformity (COC)

The supplier certifies conformity of supplies by attaching a Certificate of Conformity. Unless John Cockerill Defense QC agrees otherwise, a COC must:

- State the name of the company and give details of its registration (registered address and company registration or register of commerce number).



- Bear the words "Certificate of Conformity".
- Bear a unique number.
- Clearly define the elements to which it relates:
 - Quoting the John Cockerill Defense order reference (including line number).
 - Providing a description of the articles, and in particular their John Cockerill Defense references (if applicable).
 - Specifying the quantity delivered.
- Stating serial number(s) and the batch to which they belong. If more than one batch is involved, each batch must be separately identified.
- Specifying the duration of conservation, if applicable, and the recommended storage conditions.
- Submitting any remarks applicable to the item (derogation or deviation reference, FAI number, etc.).
- Stating the reference of the COC delivered by any second-level subcontractor or equipment supplier and providing a copy of the document.
- **Contains a statement certifying that all items are in all respects compliant with all requirements expressed in the order or the contract and with all quoted specifications.**
- Quote any quality certificate issued by a third party for the products delivered, including its registration number.

The certificate must be dated and signed by the supplier's quality control manager or authorized representatives. A sample certificate is available on our website. Form [AD 8] AQDEF.432 "Certificate of Conformity Model".

6.22.2 Materials and treatments certificates

The supplier will provide a certificate of the level specified in the John Cockerill Defense order or the specification referenced in the order. Any product delivered with a certificate of a lower level will be refused. The supplier will confirm conformity and validity by adding the following to materials and treatment certificates:

- An inspection mark and the supplier's stamp.
- Date.
- Reference of the John Cockerill Defense order.
- Post.
- The reference of the part(s) concerned (Part number).
- The serial number(s) and the batch of the parts (except if already registered on the treatment certificate).

Materials certificate: the content of the certificate will, depending on its level, be in accordance with the latest applicable version of EN 10204 (Metallic products - Types of control documents). By default, a certificate 3.1 is required except when differently required on ordering.

Certificate of treatment: the certificate must state:

- The name of the company who carried out the treatment and information about its registration (official address and number of registrations of the company or commercial register).
- Bear the statement "certificate of treatment."
- Clearly identify the precise nature of the treatment carried out, the reference to the specification or standard.
- Bear a unique number.
- Clearly define the elements that it concerns:
 - By quoting the reference of the John Cockerill Defense command or the provider (in the case of subcontracting).



- By providing a description of the items, and especially their references John Cockerill Defense (if applicable).
 - Specifying the quantity processed.
 - Indicating the serial number(s) and the batch to which they belong. In the case of several batches, each batch will be identified separately.
 - By submitting any kind of note applicable to the element (reference of waiver or deviation, FAI number, etc.).
- **Contain a statement certifying that all the elements are in all respects in conformity to the requirements defined by the order or the contract, and all specifications cited.**

Heat treatment certificate: the supplier will procure the treatment certificate and the temperature graph associated with it.

6.23 FINAL ACCEPTANCE OF PRODUCTS BY JOHN COCKERILL DEFENSE

Acceptance of the supply is declared by John Cockerill Defense **after qualitative and quantitative reception**. Inspection carried out on the supplier's premises, a delivery agreement or positive inspection by John Cockerill Defense is not valid for final acceptance of the product by John Cockerill Defense.

6.24 DELIVERY

6.24.1 Acceptance Request

Physical delivery of products cannot take place without the agreement of the QC and Procurement departments. This also applies to returned or replacement products after the declaration of a non-conformity (PVA) detected by John Cockerill Defense. In this particular case, the supplier must state the PVA number on the request for acceptance.

The supplier will submit an acceptance request, stating the date at which the products will be available. **Copies of all the quality documentation required or requested in the order must be sent with the request for acceptance. If anything is missing, the request will remain pending.**

The form [AD 3] AQDEF.082 "Acceptance Request" is available on the John Cockerill Defense web site (supplier and/or download section). **The form must be completed legibly and sent to John Cockerill Defense in accordance with the modalities specified in the form.** John Cockerill Defense returns the form, stating the type of acceptance.

If the form is not returned within 9 working days, the supplier must send a reminder to defense.ar@johncockerill.com. If this reminder is not returned within 24 hours (working day), the supplier may dispatch the products in accordance with the delivery dates stipulated in the order or contract. This dispatch authorization does not constitute acceptance of the parts or documentation required.

The same product (the same SN) may not be submitted for approval and refused more than 3 times.

In accordance with a prior written agreement between John Cockerill Defense and the supplier, a specific secure shared server may be used for exchanging information. In this precise case only, the provisions of § 6.24.2 and § 6.24.3 may be different.



6.24.2 Acceptance on the supplier's premises

The date and time of inspection are notified to the supplier through form [AD 3] AQDEF.082 "Acceptance Request". The inspection instruction / ATP must be validated by John Cockerill Defense before acceptance by the supplier. A John Cockerill Defense inspector may visit the supplier to validate the acceptance procedure. The supplier may deliver the products, accompanied by the delivery document and the request for acceptance validated by John Cockerill Defense QC.

6.24.3 Control on receipt at our workshops (Control IN acceptance)

The mention "control IN" is notified to the supplier via form [AD 3] AQDEF.082 "Acceptance Request". The supplier may deliver the products, accompanied by the delivery document and the request for acceptance validated by John Cockerill Defense QC.

6.24.4 Labels

Any product delivered to John Cockerill Defense must be accompanied by the John Cockerill Defense label (see example below), which enables John Cockerill Defense operatives to carry out product reception and ensure payment of supplier invoices at the appropriate time. Products delivered without the appropriate label will not be accepted by John Cockerill Defense store and will be returned at the supplier's expense. Any addendum added in a specification is applicable.

<http://barcode.cmigroupe.com>

	WBS/OTP :	
DEFENCE	PO/item :	4500281138/00010
	Quantity :	1 ST
Material / Part n°:		20236224 / 20236224
Desc :		CAPTEUR PRESSION/PTM.RS485.2
Batch: No		
Serie : No		
Quality : No		
Collect : No	A.A.:	Req: N. PIRSON

6.25 ARCHIVING

Documents, digital data and records relating to John Cockerill Defense must be kept up-to-date and retained to demonstrate compliance with the specified requirements and effective implementation of the supplier's Quality System.

Non-exhaustive list of the types of documents to be conversed by the supplier:

- Commercial records: contract, amendment, contract review, subcontract authorization, quotation, purchase orders.
- Design review and design verification.
- Subcontractor evaluation: evaluation record, qualification, performance, verification and follow-up purchase orders, acceptance document, audit report.
- Control of the product supplied by the client: anomaly reports, inspection and re-inspection reports, recalibration reports, inventories.
- Documents that provide and demonstrate continuous identification and traceability of the product.
- Records and data generated during the production phase: identification sheet, picking list, work order tracking sheet, technical change record.
- Special process qualification records (including test specimens and parts if not delivered to John Cockerill Defense).



- Qualification records of the purchased product, if required (including test specimens and test pieces if not delivered to John Cockerill Defense).
- Inspection and test records and records relating to inspection, measurement and test equipment.
- Records of non-conformities and corrective actions: internal and external, supplier, customer, certification, legislation...
- Staff records: recruitment, training, job description, qualification, detailed content of their clearance, list of qualified persons, record of stamps.
- Document concerning conformity (including test specimens and test pieces if not delivered to John Cockerill Defense).
- First Article Inspection and industrial validation file (including test specimens and test pieces if not delivered to John Cockerill Defense).
- Maintenance related records.
- Environmental records.
- Any other document or record specifically requested in writing by John Cockerill Defense in a contractual document or a John Cockerill Defense specification.

In practice, John Cockerill Defense imposes the following:

- A minimum archiving period of **30 years**.
- These records must be readable, stored and conserved so as to be easily retrievable, in facilities which provide an appropriate environment to prevent deterioration or loss.
- A computer (scanned) archive of paper documents.
- A computer backup in a separation location from the facility where data and paper and digital records are held.

John Cockerill Defense plans, John Cockerill Defense specifications and related documents must be stored in "on prem" (in house) spaces and applications. These data (or their copies) cannot be stored on a cloud.

The supplier must be able to provide documents, digital data and records relating to John Cockerill Defense orders within two working days of a simple request by John Cockerill Defense.

6.26 PENALTIES

6.26.1 Late delivery

If a delivery period agreed with the John Cockerill Defense Procurement Department is exceeded, late delivery penalties may be applied to the supplier as defined in the John Cockerill Defense General Conditions of Purchase.

6.26.2 Non-Quality

In the event of the part being scrapped, John Cockerill Defense reserves the right to pass on the costs of non-compliance in relation to the value of the loss suffered by John Cockerill Defense to its supplier.

6.26.3 Non-compliance with quality assurance requirements

In the event of non-compliance with quality assurance requirements, sanctions may be applied in accordance with our internal procedure for the selection, approval and evaluation of suppliers.



6.27 CODE OF ETHICS

This supplier code of ethics defines a number of standards of behavior and business practices that John Cockerill Defense suppliers must adhere to.

The provisions of the code of ethics are merely minimum standards. They are additional to, but do not replace, any specific obligation stipulated contractually between John Cockerill Defense and its suppliers.

Suppliers must:

- Comply with all laws and regulations applicable to their activities and require their representatives and suppliers to do the same.
- Refrain from making any payment or offering money or any other thing of value, whether directly or indirectly, to any person with a view inappropriately to obtaining or retaining a contract or for the purposes of obtaining for the supplier an inappropriate or undeserved commercial advantage.
- Refrain from entering into exclusivity agreements with any other supplier for the production of John Cockerill Defense parts. Only John Cockerill Defense may enter into this type of exclusivity agreement.
- Refrain from applying pressure to third party suppliers with a view inappropriately to obtaining or retaining a contract.
- Behave in an honest, direct and transparent manner in discussions with John Cockerill Defense, with representatives of regulatory bodies and public employees.
- Ensure the confidentiality of products, projects and information emanating from John Cockerill Defense. Use information provided by John Cockerill Defense solely for business purposes authorized by John Cockerill Defense.
- Exercise their activities without discrimination, make sure workplaces are free from sexual or any other type of harassment, and prohibit the verbal or physical abuse of employees.
- Comply with environmental laws and the corresponding regulations.
- Provide a healthy, safe working environment, respecting all applicable laws, regulations and practices in matters of health and safety.
- Comply with all laws in force regarding the minimum working age and never have recourse to child labor.
- Comply with all laws in force regarding remuneration, overtime, working hours and working conditions.

John Cockerill Defense invites its suppliers to adhere to the United Nations Global Compact:

<http://www.unglobalcompact.org>

6.28 PARTICULAR REQUIREMENTS

6.28.1 Software

John Cockerill Defense plans, John Cockerill Defense specifications and related documents must be stored in "on prem" (in house) spaces and applications. These data (or their copies) cannot be stored on a cloud.

The supplier must complete the John Cockerill Defense ISO12207 self-assessment format and submit it to John Cockerill Defense for acceptance. The John Cockerill Defense self-assessment form is available on request. The self-assessment is a complementary requirement for supplier qualification.

Before modifying the software, the supplier must submit to John Cockerill Defense a written and documented request for all software modifications. Once approved by John Cockerill Defense, the supplier may proceed with the software modifications.



6.28.2 Management of obsolescence

The supplier will take all steps to identify potentially obsolescent materials, processes or products. The use of products with programmed obsolescence is not permitted. The supplier must immediately inform John Cockerill Defense Procurement of the obsolescence of any component of the product to be supplied as soon as the supplier becomes aware of this **and before the implementation of the change**, providing proof from the manufacturer and if possible, proposing an equivalent reference.

6.28.3 Anti-counterfeiting policy

John Cockerill Defense endeavors to ensure that its products present the highest possible level of quality and reliability. This means that John Cockerill Defense must avoid the use of counterfeit parts in its products.

The supplier must:

- Guarantee that no counterfeit products are delivered to John Cockerill Defense. This includes:
 - Unauthorized copies or substitutes of an original equipment manufacturer or original.
 - Parts that contain an external or internal material or component that is inappropriate or not in accordance with John Cockerill Defense or OEM requirements.
 - Parts that have been reworked, rebranded, relabeled, repaired, reconditioned but are represented as new or as genuine OEM.
 - Parts that have not passed all required testing, verification, selection and quality control processes.
- Establish a process designed to detect and report parts that are or are suspected of being counterfeit which may appear in its supply chain.
- Be aware of the origin of all parts and materials and ensure that they are authentic.
- Guarantee that no counterfeit work is delivered to John Cockerill Defense.
- Reply to any questions concerning the source of a part or material.
- Supplier shall immediately inform John Cockerill Defense of the relevant facts if Supplier learns or suspects that it has supplied counterfeit product or work.
- In the case where the product or work delivered for the contract or purchase order constitutes or includes counterfeit product or work, the supplier shall, at its own expense, promptly replace the counterfeit product or work with authentic product or work that meets the requirements of the contract or purchase order.

6.28.4 Control of any damage caused by a foreign object (FOD)

The supplier will take steps to avoid damage that might be caused by foreign bodies or unexpected objects.

6.28.5 Perishable or limited-life products

Information must be provided concerning products which may deteriorate over time due to storage or transport conditions. The supplier will state on the label the date of original product manufacture, with the storage life or the date of expiry. All products with limited storage life must have at least 75% of their useful life remaining on the date of delivery.

6.28.6 Electronic products

The following technical specifications are applicable:

- **[AD 9] B-OP-DEF-003** « Manufacturing of electronic circuit boards (PCB) ».
- **[AD 10] B-OP-DEF-004** « Assembly of electronic circuit boards (PCA) ».



Reminder: In case of discrepancy between this Supplier Quality Manual and the specifications, the SQM is the minimum requirement. In this case, the additional provisions required by the specifications prevail and are applicable.

6.28.6.1 Control of ageing of electronic parts

The supplier must only deliver parts manufactured less than

- 7 years before the date of shipment (for components)
- 2 years before the date of shipment (for printed circuit board assemblies)

A derogation request ([AD 2] AQDEF.061) must be issued for articles beyond these time limits.

6.28.6.2 ESD protection

The supplier will ensure ESD protection for all sensitive components or PCBA's until shipment of the components, PCBA or functional unit.

6.28.6.3 In-circuit test

The EMS supplier of PCBA's must be able to implement the in-circuit test required by John Cockerill Defense specifications. The PCBA supplier-designer must use ICT suitable for the de-risking of the product delivered.

6.28.6.4 Rework and repair process

The Rework/repair process should use as guidelines: IPC 7711/7721 Rework, Modification and Repair of Electronic Assemblies.

6.28.6.5 Burn In / debugging

The supplier must ensure that debugging is adequate for the product delivered.

6.28.6.6 Special processes

The processes listed below are special processes and must be treated in accordance with § 6.13: (non exhaustive list)

- Crimping (terminals, cables).
- Wave soldering, selective soldering.
- Soldering with an iron (manual).
- Paste printing.
- Remelting (furnace soldering).
- Gluing.
- PCBA cleaning.
- Varnishing, conformal coating.
- Potting.

6.28.6.7 Procurement

Non-traceable components must not be supplied. Authorized sources of supply for components are OEM (Original Equipment Manufacturer) and their authorized/official resellers/distributors. The use of brokers for the supply of (specifically identified) components is subject to deviation or derogation ([AD 2] AQDEF.061). Brokers may only be used if the components cannot be obtained from the OEM or their authorized/official dealers/distributors or due to a long delay affecting final delivery, proof must be provided by the supplier.

If John Cockerill Defense agrees, only the broker(s) - component(s) couples (or type of component) will be allowed. Further tests may be required to demonstrate the conformity of the components.



Only components coming directly from the OEM or their authorized/official resellers/distributors (classified as "traceable" in the seller's system) can be purchased from brokers. All components must be packed in the original OEM packaging.

An original OEM certificate of conformity is required.

John Cockerill Defense QA may extend or amend these provisions following an evaluation of the Supplier.

The use of used components refurbished (refurbishing) is forbidden.

6.28.6.8 Training and Certification Program

The IPC standards required for the realization of the product are required for the training and staff certification.

6.28.7 Control of non-deliverable software

The supplier will have to have established measures and records to manage versions, changes and computer security of software used in product manufacturing, inspection and testing. Software may include, without being limited to, machine control, CNC machining programs, etc. Arrangements must be documented, clearly stating the persons responsible for modifying and maintaining the software.

Computer programs used for the monitoring and surveillance of manufacturing processes must be validated before being made available for production and maintained. The organization must verify the production procedures used for loading the software. Production procedures must validate the correctness and integrity of loading operations, and the ability to initialize the target machine after loading.

6.28.8 Product qualification tests

When John Cockerill Defense or its client requires qualification tests, these must be planned, managed, reviewed and documented. The supplier must submit to John Cockerill Defense, for approval, the programs or test specifications identifying and defining the following:

- The product to be tested.
- Resources to be used.
- Test objectives and conditions.
- Parameters to be recorded.
- The corresponding acceptance criteria (John Cockerill Defense or defined by a standard).
- Procedures.
- Operating procedures.

The supplier must:

- Either provide its own file and obtain approval for it.
- Or be ISO 17025 certified (general requirements for the competence of testing and calibration laboratories) for the scope corresponding to the tests to be carried out.

If the supplier cannot meet the two above-mentioned conditions, the supplier must subcontract to a third party.

The supplier is authorized to subcontract to a third-party organization. **The third-party organization must:**

- Either provide its own file and obtain approval for it.
- Or be ISO 17025 certified for the scope corresponding to the tests to be carried out.

The supplier must guarantee:

- The correct configuration of the product to be tested.



- Compliance with the requirements of the test program, test procedures, operating procedure...
- The execution of the tests and recording of results.
- The results.

John Cockerill Defense is responsible for verifying that the acceptance criteria are met.

6.28.9 Overproduction

Every overproduced article must be:

- Traced on manufacturing orders, traveler files and subcontracting documents.
- Clearly identified with the article reference and version number.
- Held in quarantine.
- Recorded in an up-to-date register.

John Cockerill Defense cannot guarantee that overproduced articles will subsequently be purchased. Those articles must not be sold or transferred to anyone other than John Cockerill Defense. They must not be used or removed from quarantine without the written approval of John Cockerill Defense. John Cockerill Defense may require the articles to be destroyed.

6.28.10 Any use or release from quarantine without the written consent of John Cockerill Defense

Any use or release from quarantine without the written consent of John Cockerill Defense is prohibited. John Cockerill Defense may require the destruction of these products.

6.28.11 Design change on NO John Cockerill Defense conception.

Any changes affecting function or shape, or dimensions or performance must be notified in writing and approved in writing by John Cockerill Defense before implementation.

Information to be provided:

- Identity of the supplier.
- Origin/context of the request, John Cockerill Defense order number, contract reference.
- Description of the item, John Cockerill Defense item number, quantity of items affected.
- If existing, description and reference of the impacted sub-element.
- Reasons for the change.
- Probable origin.
- Type of cause: design, assembly, supplier, other (to be specified).
- Direct consequences.
- Suggested solution (if existing).
- Criticality (if known): critical, major, minor.

John Cockerill Defense can require complements of information or test.

6.28.12 Cables and harnesses

Unless otherwise specified in the drawings or specifications, cables and harnesses must comply with the standard: IPC -A-620 - Requirements and acceptance criteria for the assembly of cables and cable harnesses.



6.29 IMPORT – EXPORT LICENSES

6.29.1 Import license

We remind you that for all suppliers from Member States of the European Union, it is important that all material delivered be accompanied by a delivery note containing the following information:

- Purchase order number.
- Item number.
- The description of the equipment.
- The Part Number.
- The quantity.
- The value.
- The customs code.
- The origin.
- The weight and dimensions.
- The ML No. (Military List) and (if applicable) export permit number.

For all components that come from outside the European Union, an import permit requirement is applied. To do this, we need to receive prior to delivery (1 month before delivery outside of business closure) a proforma invoice for the supplier part with the information listed below. If for any reason, the supplier cannot issue a proforma invoice, an A4 sheet with its logo and its stamp containing all the required information is sufficient for us, in addition to the information listed below:

- Purchase order number.
- Item number.
- The description of the equipment.
- The PN (Part Number).
- The quantity.
- The value.
- The weight.
- The origin.
- The customs code.

6.29.2 Export License

John Cockerill Defense needs the export license to export its material (military use) outside of Belgium. Our suppliers are obliged to inform us if the equipment supplied is subject to an export license. To this end, it is their responsibility to contact the relevant administration to find out if the equipment provided to John Cockerill Defense is subject or not to the requirement for an export license. Consult the administration of each country which sets the rules to be complied with.

The supplier must inform John Cockerill Defense of the necessity or not of a document emanating from John Cockerill Defense to initiate its application for an export license or to be able to deliver the material to us.

It is important to know which document the supplier needs to initiate the application and who must sign this document so that it can deliver the material to John Cockerill Defense. The supplier may send a draft of this document to John Cockerill Defense.

Exempt from authorization is any transaction of arms and military equipment with the final destination Benelux. If the final destination is outside the Benelux, a license or authorization will be required (from the “Région Wallonne” website). Some suppliers forget this or are not aware of it. John Cockerill Defense will inform the supplier about the end user.



6.29.3 ITAR

Our suppliers are obliged to inform us if the material provided is subject to ITAR regulations.



7 DOCUMENT HISTORY

Issue	Date	Reason of Changes	Editor
A	24/04/2013	New document to cancel and replace the appendix of document 4.M.1.020.017	Pascal VERBRUGGHE
B	07/11/2013	Addition to § 3 Definition; Addition of § 5.4.2 NATO delegation; Details for § 5.8; Regulatory or legal requirements; Details for § 5.14.1; Supplier subcontracting, General; Multiple amendments and additions to § 5.17.4 Organization (FAI); Addition to § 5.18 Control of measurement and inspection apparatus; Details for § 5.19.3 Non-compliant products and disputes; Addition of § 5.19.4 Rejected products; Detail for § 5.21 Conformity of products; Addition to § 5.23.1 Acceptance request; Amendments and additions to § 5.24 Archiving; Addition of § 5.26 Code of ethics.	Pascal VERBRUGGHE
C	15/05/2014	Addition of multiple details (see mark in margin) § 5.16 split into §5.16.1 and §5.16.2; Modification of § 2, § 5.13, § 5.15.2 ; § 5.19 ; Addition of §5.14, § 5.20.3, §5.26.3, § 5.28.	Pascal VERBRUGGHE
D	22/09/2014	Amendments to § 2, § 5.13, § 5.15.2; § 5.19; Addition of §5.14, § 5.20.3, §5.26.3, § 5.28	Pascal VERBRUGGHE
E	17/06/2016	Addition of §5.28.8, correction to § 5.18.2, §5.28.1, details for §5.13.2.5, §5.28.7	Pascal VERBRUGGHE
F	07/11/2017	Addition of multiple details, clarifications and corrections (see mark in margin); Clarification and simplification of § 5.13.2 Qualification of the special processes; Revision of §5.14 Laboratory of metrology; addition of § 5.9.2 Welding assembly; Addition of § 5.28.6.9 Broker; addition of § in 5.28.10 Design change on NO John Cockerill Defense conception ; Addition of § in 5.28.6.11 Training and Certification Program; addition of § 5.29 Import- Export Licenses; Addition of § 7.1 Appendix - Documents John Cockerill Defense available on our Web site.	Pascal VERBRUGGHE
G	07/01/2020	This document is translated from the French document. Modification of CMID references and links by John Cockerill and John Cockerill Defense; § 3, addition of definition; § 4, 5.1, 5.2, 5.13, 5.17, 5.20.3, 5.20.4, 5.23, 5.24.2, 5.25, 5.28.1, 5.28.2, 5.28.6, 5.28.6.10, 5.28.9 clarification, addition of precisions; § 5.6 Quality planning: addition of the subcontracting declaration via the Process Flow Chart Form ([AD 5] AQDEF.404); § 5.18.2 FAIR: Required for form AQDEF.199 equivalent to the EN9102 form; § 5.24.1 Delivery: limitation of presentation of the same part on request for receipt; § 5.28.6.9 Electronic product - The "chapter" Broker becomes "Supply"; § 5.28.10 Change of design of products whose design is NON John Cockerill Defense: description of the information to be provided; § 5.28.11 addition of the paragraph "Cables and harnesses"; § 7.2 addition of the appendix "ARCHIVING - NON-exhaustive list of TYPES OF DOCUMENTS TO KEEP".	Pascal VERBRUGGHE
H	14/05/2021	Adds and changes to the following paragraphs: §3 APPLICABLE DOCUMENTS EN REFERENCE WEBSITES §4 DEFINITION & ABBREVIATIONS §6.2.2 Supplier §6.13.1 Special Processes - General §6.13.2.6 Welding Qualification §6.15.1 Subcontracting by the supplier - General §6.18 FAI - FAIR / PRODUCTION VALIDATION FILE §6.19 MANAGEMENT OF MEASUREMENT AND CONTROL DEVICES §6.20.4 Non-Compliant products and disputes	Pascal VERBRUGGHE



Supplier Quality Manual
Quality Assurance Requirements for Suppliers and Subcontractors

MANUAL
Ref. MQF-EN
Rev. H

Issue	Date	Reason of Changes	Editor
		§ 6.24.1 Acceptance Request §6.25 ARCHIVING §6.28.1 Particular Requirements – Software §6.28.3 Anti-counterfeiting Policy §6.28.6 Electronic Products	