



1.0 Purpose

The purpose of this Supplier Quality Requirements document is to communicate the expectations and requirements of Hanwha Cimarron to its suppliers.

These expectations are based on Hanwha Cimarron's policy of providing exceptional products and services to its customers.

The requirements within this document are provided as a supplement to, and do not replace or alter the terms or conditions within Hanwha Cimarron's Purchase Orders, Quality Agreements, engineering drawings and/or specifications, and/or any agreement between Hanwha Cimarron and the supplier.

In this document, sentences containing shall are requirements, and sentences in *italics or containing should* are provided for guidance only.

2.0 Applicability

This document, identified in the Purchasing Procedure CQS-005, applies to Hanwha Cimarron suppliers who provide:

- Supplies
- Raw Materials
- Assemblies
- Services, which directly impact product quality
- Testing and Inspection Agencies
- Contract Design and Development

3.0 Reference Documents

3.1 References

AS9100	Set of global requirements, which includes ISO 9001:20152 quality management system requirements and specifies additional aviation, space, and defense industry requirements, definitions, and notes.
ISO 11515	Gas cylinders — Refillable composite reinforced tubes of water capacity between 450 L & 3000 L — Design, construction, and testing
ISO 9001	Quality Management Systems – Requirements
ASME	American Society of Mechanical Engineer
DOT	Department of Transportation
CGA	Compressed Gas Association
CFR 49	Code of Federal Regulation – Hazardous



4.0 Definitions

Definitions are available in Appendix I (Section 13) of this document.

5.0 Responsibility and Authority

It is the responsibility of the supplier to understand and ensure compliance with this document and Hanwha Cimarron's engineering requirements, specifications, and drawings.

Quality personnel within Hanwha Cimarron are responsible for maintaining this document and establishing, maintaining, and evaluating approved suppliers.

6.0 Introduction

This document emphasizes:

- The importance of establishing defined and mutually agreed upon requirements.
- The expectation that suppliers develop and maintain a comprehensive quality system that ensures Hanwha Cimarron receives products and services that conform to requirements.
- A continual focus on improvement in quality, cost, and innovation, including sustainability, to mutually benefit the supplier and Hanwha Cimarron.
- Manufacturing in accordance with appropriate current Good Manufacturing Practices (cGMP).

6.1 Supplier Expectations

Hanwha Cimarron's suppliers shall develop and maintain a management system to assure consistent conformance of their products and services to specified requirements.

Note: A quality system that demonstrates conformity to ISO 9001 establishes a base from which a supplier can focus on quality and continually strive to improve. Although not required by Hanwha Cimarron, suppliers are encouraged to have their conformance confirmed by an independent audit (such as 3rd party certification).

6.2 Suppliers are fully responsible for the quality of their products.

Suppliers shall ensure that each of their products or services comply with all the requirements mutually agreed to with Hanwha Cimarron as well as all applicable requirements defined by regulatory agencies (such as FAA, DOT, and ASME). Suppliers are accountable for and assume full responsibility for the quality of the products or services they provide. Approval and verification, by Hanwha Cimarron, of the supplier's facilities, systems, and records do not absolve the supplier of the responsibility to provide an acceptable product.

6.3 Suppliers are fully responsible for their supply chain.



Hanwha Cimarron's suppliers are responsible for the quality and material compliance-related activities of their suppliers, subcontractors, service providers, and/or material sources. Suppliers shall document and verify that their suppliers' facilities, procedures, materials, and controls meet or exceed the agreed requirements. Hanwha Cimarron should request supporting data for these evaluations. Hanwha Cimarron shall rely on its suppliers to maintain control of its supply base but reserves the right to audit or evaluate these sources to ensure supply chain safety and/or understand other potential impacts to Hanwha Cimarron.

7.0 Quality System Requirements

Hanwha Cimarron's suppliers shall have a defined quality system. *This section specifies the requirements of a comprehensive quality system that is important to ensure Hanwha Cimarron receives products and services that conform to requirements.*

7.1 Quality Manual, Policy, and Objectives

The supplier shall document its quality system. *This should include a stated quality policy and quality manual.*

Note: A quality manual defines the structure of the quality system, by defining the scope of the quality system, describing how processes of the quality system interact, and referencing documented procedures used to implement the quality system.

The quality policy defines a supplier's intent and direction with respect to Quality and serves as a general framework for action.

Measurable quality objectives shall be established. The supplier's quality objectives shall be measurable and consistent with the quality policy. Once quality objectives are established for relevant functions and levels of the supplier's organization, they shall be monitored by the supplier to ensure an effective quality system and customer focus.

The supplier shall identify its necessary procedures and records that ensure effective operation and control of its processes.

7.2 Control of Documents

The supplier shall identify essential documents relating to or pertinent to the quality system and control such documents. The supplier's document control methods shall ensure that only approved, issued, and effective documents are utilized.

Documents shall be legible and identifiable. With respect to documents that become obsolete but are retained, the supplier shall have a method of identification of such documents as obsolete and segregation of such documents to prevent accidental use.

7.3 Control of Records



The supplier shall maintain legible, readily identifiable, and retrievable records as evidence its products meet Hanwha Cimarron's requirements. *Examples of records a supplier should retain, to demonstrate its conformance to requirements, include test results, equipment verification records, and calibration records.*

The supplier shall define how it identifies, stores, protects, retains, and disposes of its records.

Note: A supplier should determine its record retention period to be equivalent to the lifetime of the product, as defined by the supplier unless Hanwha Cimarron defines the record retention duration per the Quality Agreement.

7.4 Management Responsibility

The supplier shall ensure that responsibilities and authorities are defined, documented, and communicated within its organization. The supplier shall maintain the appropriate resources for an effective quality system.

7.5 Management Review

The supplier shall regularly review its quality system to ensure the ongoing suitability, adequacy, and effectiveness of the quality system.

Note: A review of the quality system should include written documentation of audit results, customer feedback, process monitoring results, and product performance. After the review opportunities for improvement should be considered.

The supplier shall maintain records of its decisions or actions from the review in accordance with Section 7.3.

7.6 Design and Development Control

The supplier shall use specified requirements, specifications, and drawings as the basis for its design and development plan.

Note: The plan, sometimes called a quality plan, defines the design stages with the necessary steps and resources to assure the product satisfies Hanwha Cimarron's requirements. The plan should be maintained throughout the design process and should incorporate design reviews, verification and validation plans, monitoring activities, inspection criteria, or test requirements.

The supplier's design verification shall be planned and recorded to confirm the supplier's design meets requirements.

The supplier's design validation activities shall be planned and recorded to confirm the product meets the user requirements and is fit for use.

The supplier shall use its design outputs to establish a controlled operation at its manufacturing, test, or



inspection location.

Note: Design outputs are engineering drawings and specifications of the design, critical process parameters (CPP), critical to quality (CTQ), essential requirements checklist (ERC), essential to design outputs (EDO), and product acceptance criteria.

Hanwha Cimarron's suppliers shall implement a change process that ensures any effects on the product are understood. The supplier's change process shall include necessary reviews, verification of change, and validation of the product before the change is implemented in accordance with Section 9.0.

7.7 Purchasing Controls

Hanwha Cimarron's suppliers shall define requirements and establish a supplier selection process that ensures that their suppliers have the potential and ability to meet specified requirements.

The supplier is responsible for the quality of all components and raw materials it purchases for its product. Where components and raw materials do not meet specified requirements then the supplier shall document its mitigation activity. *If necessary, the supplier is responsible for additional controls to ensure its product satisfies requirements.*

When the supplier implements inspection or other activities to ensure that the purchased product meets requirements then these methods and results shall be documented. Records shall be maintained in accordance with Section 7.3 and made available to Hanwha Cimarron upon request.

Suppliers providing product, materials or services for Hanwha Cimarron's aerospace customers must have a process to prevent the use of counterfeit parts and flow down to external suppliers all applicable requirements, including customer requirements.

7.8 Production Provisions

The supplier shall document and control its production conditions to ensure its product meets specified requirements.

Note: This may require the supplier to make use of documented procedures, work instructions, reference materials, suitable equipment, and specific monitoring and measurement devices where the absence of such could affect quality.

The supplier's controls shall be established using the appropriate design outputs and available at the manufacturing, test, or inspection location.

Note: This should include current engineering drawings and specifications, critical process parameters (CPP), critical to quality (CTQ), essential requirements checklist (ERC), or essential to design outputs (EDO), and product acceptance criteria.

The supplier shall protect product, equipment, and personnel against potential contamination.



Hanwha Cimarron's suppliers shall employ process controls, which are consistent and appropriate for the operations being conducted. Where the operation may result in product not meeting specifications Hanwha Cimarron's suppliers shall implement documented mitigation activities, such as an enhanced control plan, verification, and inspection, or process control parameters.

Note: Process control is a system for ensuring that the product consistently falls within predefined process parameters (limits).

Equipment, monitoring and measuring, labeling, packaging, and release activities shall ensure the product meets Hanwha Cimarron's requirements. Records shall be maintained in accordance with Section 7.3 and made available to Hanwha Cimarron upon request.

7.9 Monitoring and Measuring of Process and Product

The supplier shall use appropriate measurement methods to monitor the planned results of processes to confirm its product meets specified requirements. *Defining test methods in an established control plan or similar document should ensure testing is conducted in accordance with the established limits and frequency.*

Hanwha Cimarron's suppliers shall monitor critical to quality (CTQ), essential requirements checklist (ERC), or essential to design output (EDO) product characteristics at appropriate stages of the production process to confirm that product produced meets requirements. Records of these results shall be used to authorize the release of the product to Hanwha Cimarron.

Note: Acceptance criteria for performance testing when planned and monitored are evidence the product meets requirements.

Products not meeting specified requirements are cause for the supplier to investigate the process for the cause and take appropriate corrective action as necessary. Controls shall be in place to prevent product delivery to Hanwha Cimarron until the conformity of the product is confirmed.

7.10 Product Identification and Traceability

The supplier shall establish a system for the control of all materials.

Note: Control procedures are to ensure that products are properly identified and do not become mixed with other orders.

The supplier shall identify product status throughout the production process to ensure that only product that has passed the required inspections and tests are shipped to Hanwha Cimarron.

The supplier shall establish a traceability system that tracks components from raw material through inspection, test, and final release operations, including rework and sub-supplier procedures.



7.11 Control of Inspection, Measuring, and Test Equipment

The supplier shall establish monitoring and measurement processes to ensure the product meets specified requirements. Measurement uncertainty shall be known. The supplier is responsible for its gauges, tool masters, fixtures, and measurement/test equipment and for verifying the accuracy of measurements to ensure the integrity of the measurement system.

Note: Measurement uncertainty or measurement error may be defined within the measurement instrument's specification by its manufacturer.

The supplier shall ensure measuring and test equipment is routinely calibrated, inspected, checked, and maintained with a documented procedure. Any standards the supplier uses for calibration shall meet applicable regulations and have specified directions and limits to ensure accuracy and precision. The supplier's records shall be available to Hanwha Cimarron upon request.

When nonconforming equipment is found the supplier shall confirm the validity of previous measurement results made with the non-conforming equipment. An impact analysis shall be performed by the supplier when a product is shipped after being approved by a measurement system operating outside of agreed-upon limits of variation. Hanwha Cimarron shall be notified immediately when the impact analysis concludes Hanwha Cimarron's product is impacted.

7.12 Internal Quality Audits

The supplier shall have an independent audit program; the program must ensure auditors cannot audit work that is their responsibility.

A supplier shall conduct internal audits in accordance with an established audit plan to ensure continued compliance with the quality system, internal procedures, and customer requirements. Results and actions taken shall be documented. Such records shall be made available to Hanwha Cimarron upon request.

7.13 Control of Nonconforming Product

The supplier shall have a documented process to control product that does not meet requirements. The nonconforming product shall be identified, segregated, and evaluated. The evaluation results of the nonconformance and its analysis of the impact on the product shall determine what action is to be taken with the product.

Disposition of the nonconforming product shall be reviewed and documented by an individual with the designated authority and appropriate expertise. The supplier shall record any actions, including any justification of use and approvals for the disposition of the nonconforming product.

If the nonconforming product is corrected by the supplier, acceptance criteria shall be used to confirm the product meets requirements.

If the supplier detects a nonconforming product after delivery, an impact analysis shall be performed by the



supplier. Hanwha Cimarron shall be notified immediately when the impact analysis concludes Hanwha Cimarron's product is impacted.

Note: When a product nonconformance is identified by Hanwha Cimarron, a Supplier Corrective Action Report (SCAR) may be issued to the supplier. If a SCAR is issued the supplier is expected to provide an appropriate response using the SCAR system.

7.14 Handling, Storage, Packaging, Preservation, and Delivery

The supplier shall comply with specified packaging requirements and instructions. Packing operations shall be controlled to prevent mislabeling, cross-contamination, and/or adulteration.

Suppliers shall establish and follow packaging standards and methods to ensure that material is adequately protected from alteration and damage during transit. *Every effort should be taken to ensure package integrity.*

Supplier labeling shall meet applicable regulations and standards, remaining legible and attached to the product during normal handling, storage, and distribution conditions.

If applicable or when required, the supplier shall ensure labels have the correct expiration date, control number, handling, storage instructions, and location of manufacture, and remain legible and affixed to the product.

7.15 Training

The supplier shall develop and maintain a competent workforce with the necessary education, skills, and experience to implement its quality system and ensure its product meets specified requirements.

When the supplier conducts training or takes other actions to improve the competence of its workforce, the effectiveness of training or other actions taken shall be periodically evaluated.

The supplier shall maintain records that document workforce competence. Records for personnel should include education, training, or experience.

Supplier personnel shall be aware of their responsibilities that prevent defects and ensure the quality of the supplier's product.

Note: The supplier can use defect awareness training to ensure personnel understands how improper job performance can cause product defects.

7.16 Analysis of Data

Hanwha Cimarron's suppliers shall use appropriate analysis of data to identify defects or opportunities to prevent defects. Such records shall be made available to Hanwha Cimarron upon request.



Note: The supplier should use data analysis to understand if its product conforms to requirements, if its processes achieve planned results, or if process or supplier trends may result in defects.

Hanwha Cimarron suppliers shall utilize the appropriate statistical techniques when making decisions about products and monitoring process performance (i.e., first pass yield, SPC, etc.).

7.17 Continual Improvement

The supplier shall implement continuous improvement efforts.

Note: The supplier should use its quality objectives, audit results, and management review process to facilitate the overall improvement of its quality system.

7.18 Corrective Action and Preventive Action

Hanwha Cimarron suppliers shall establish and maintain documented procedures for implementing corrective and preventive action with disciplined problem-solving methods.

Supplier corrective or preventive actions shall eliminate the causes of actual or potential non-conformities and be appropriate to the magnitude of the problem or risk encountered.

The supplier's corrective actions shall prevent recurrence when a nonconformance to specification or requirements occurs.

The supplier's preventive actions shall prevent the occurrence and eliminate potential nonconformance to specifications or requirements.

The supplier shall record any corrective and preventive action taken, and its result and review the effectiveness of the action.

Note: Hanwha Cimarron may require the Supplier Corrective Action Request (SCAR) process to be followed to make its root cause evaluation and conclusions available to Hanwha Cimarron.

7.19 Servicing (If applicable)

A supplier responsible for servicing shall document its process. Equipment, monitoring and measuring, labeling, packaging, and release activities shall ensure the product meets requirements. Records shall be maintained in accordance with Section 7.3 and made available to Hanwha Cimarron upon request.

8.0 Production Part Approval Process (PPAP) Submission

Hanwha Cimarron may require suppliers to obtain Hanwha Cimarron production part approval according to the Production Part Approval Process (PPAP) prior to production shipments. The Hanwha Cimarron PPAP



process ensures that the supplier's manufacturing process has the potential to meet specified requirements. A Hanwha Cimarron Supplier Quality representative can identify the appropriate PPAP submission level for the part or component and any documentation necessary to complete the process.

Hanwha Cimarron may request a control plan or equivalent description of the production process as part of the PPAP submission. Control plans provide a description of dimensional measurements and material and functional tests that occur before and after full production.

Hanwha Cimarron may request samples for the first article inspection to confirm product meets Hanwha Cimarron's requirements. When requested, Hanwha Cimarron requires that samples be produced using production-equivalent equipment and processes at the location that is to be used to produce future material.

9.0 Supplier Notice of Change (SNC)

Suppliers shall notify Hanwha Cimarron prior to making any change that may affect conformance to defined requirements, product quality, or a certification inspection.

The supplier's change control activities shall be planned and documented to assure compliance of products to requirements. *Hanwha Cimarron may require the supplier to make its evaluation data and conclusions available to Hanwha Cimarron.*

At a minimum, the supplier shall:

- Ensure that personnel executing the change are qualified
- Evaluate all changes for product or process risk (including efficacy and safety)
- Document and communicate changes to Hanwha Cimarron in writing prior to execution, and
- Obtain Hanwha Cimarron's approval, in writing, prior to implementation.

10.0 Approved Supplier Requirements and Locations

Hanwha Cimarron purchases materials, parts, assemblies, printed materials, services, and finished goods from suppliers that appear on Hanwha Cimarron's Approved Supplier List. Hanwha Cimarron shall evaluate and approve each supplier's manufacturing location independently.

10.1 Evaluation

Hanwha Cimarron evaluates and identifies potential sourcing partners prior to proceeding with supplier approval. The supplier evaluation is completed on a risk basis to determine if each supplier is capable of meeting Hanwha Cimarron's quality, delivery, performance, and continuous improvement objectives.

A typical supplier evaluation may include:

- *gathering and analysis of data about the supplier*
- *an on-site assessment of the quality system to be reviewed by Hanwha Cimarron personnel*
- *completing the quality agreement.*



Hanwha Cimarron may consider financial standing, cost, product expertise, past performance (if known), technology, logistics, ability to manufacture in accordance with appropriate standards, supply chain integrity, business continuity risk, and known significant environmental, safety or human rights compliance or other serious sustainability concerns when evaluating a potential supplier.

10.2 On-site Audit (Initial)

Hanwha Cimarron representatives may conduct an on-site audit to:

- *Assess the supplier's facilities, quality system, and process controls and determine if there is a potential impact on Hanwha Cimarron's manufacturing process*
- *Assign risk levels on parts/materials, as appropriate, and determine if there is a potential product or regulatory risk.*
- *Confirm the capability of the supplier to manufacture to Hanwha Cimarron's requirements.*

10.3 Quality Agreements

Hanwha Cimarron may require a quality agreement for suppliers of parts, materials, assemblies, services, and finished goods or with any other supplier as deemed appropriate. A quality agreement is a supplier's commitment to meeting Hanwha Cimarron's quality expectations.

11.0 Supplier Monitoring

Hanwha Cimarron entities may commonly use the following criteria to rate a supplier's performance:

- *Quality of products or materials provided*
- *Delivery performance*
- *Service provided*
- *Supplier responsiveness/communication*
- *Total number of SCARs, supplier response time, and or defective parts per million (PPM)*
- *Total Cost/Cost Containment*

Each Hanwha Cimarron entity may periodically communicate results to its suppliers.

11.1 On-site Audits, Assessments, and Reviews (Maintenance)

At the discretion of Hanwha Cimarron, an on-site process audit at the supplier may be deemed necessary. Conditions that should warrant audits include quality issues, engineering changes, process changes, plant location changes, or the criticality of the part. When an audit is necessary, Hanwha Cimarron should contact the supplier to schedule the on-site visit and confirm the agenda.

Hanwha Cimarron is committed to supplier development and may conduct supplier assessments and reviews to identify opportunities to improve quality, delivery, or productivity.

11.2 On-Time Delivery of Quantity Ordered



Hanwha Cimarron calculates safety stock and plans production based on an expectation of 100% on-time delivery. Supplier's not meeting this expectation should thoroughly investigate the cause of each late delivery and implement corrective and preventive action plans to achieve continuous improvement.

12.0 Business Practices

12.1 Ethics and Compliance

Hanwha Cimarron's suppliers shall be law abiding and comply with legal requirements relevant to the conduct of all their businesses. Suppliers shall fully comply with Hanwha Cimarron's Ethics and Compliance Standards for Suppliers. Confidential Information Disclosure and use of confidential information obtained from Hanwha Cimarron when conducting business is defined and agreed to within the contract. When it is necessary to discuss confidential matters, a nondisclosure agreement shall be executed between Hanwha Cimarron and the Supplier before exchanging any information.

12.2 Material Compliance

Suppliers shall agree to comply with all Hanwha Cimarron requests for information relating to material compliance, including but not limited to EU and other country Restriction of Hazardous Substances

Directives and related substance declarations or evidence as requested, human rights supply chain-related laws such as the U.S. Dodd-Frank Act (Conflict Minerals provisions) and related declarations, and EU and other country Registration, Evaluation and Authorization of Chemicals (REACH directive) data by providing the material content data on the products/materials Hanwha Cimarron purchases from a supplier. Supplier shall provide information in forms provided by Hanwha Cimarron or as agreed upon by the parties.

Suppliers of Finished Goods that are electrical or electronic in nature will provide Hanwha Cimarron a RoHS/RoHS-2 Conformity Declaration/Certificate in advance of the purchase of the finished good.

Hanwha Cimarron suppliers shall comply with all global environmental and human rights rules and regulations; including implementing programs to ensure products do not contain restricted or banned substances or take steps to ensure the raw materials do not originate from areas of conflict and significant human rights abuses (Conflict-Affected and High-Risk Areas as defined by the OECD) and make the proper documentation available on a periodic basis as requested by Hanwha Cimarron or its authorized representatives. With regards to requests for the origin of substances in products, suppliers agree to cooperate with Hanwha Cimarron and conduct reasonable due diligence of its upstream suppliers to facilitate Hanwha Cimarron's compliance efforts.

13 Revision History

Revision No	Description of Revision	Revised by	Date
0	New Release	K. James	10/10/2022



13.0 Appendix 1 – Definitions and Glossary for Supplier’s Use

As used in this document, the terms below have the following meaning. The definitions from the Hanwha Cimarron Glossary have been used as the basis for this glossary.

Approved Suppliers are suppliers that have demonstrated evidence of being able to meet Hanwha Cimarron’s requirements and are listed on Hanwha Cimarron’s Approved Supplier List.

Change is any modification to the design, structure, or intended use of a product, process, or system within the scope of the Quality System. A change includes the initiation, relocation, or retirement of a product, equipment, process, or system.

Correction is an immediate action taken to eliminate an existing exception or non-conformance.

Corrective Action is an action taken to eliminate the cause(s) of a detected, existing exception, non-conformance, or other undesirable situation, to prevent a recurrence.

Critical Process Parameter (CPP) - A process parameter whose variability has an impact on a critical quality attribute and therefore should be monitored or controlled to ensure the process produces the desired quality.

Critical to Quality (CTQ) - Key characteristics of a product or process whose performance standards shall be met to satisfy the specified requirements. CTQs may overlap with Essential Characteristics and Essential Design Outputs. Performance CTQs representing top performance characteristics, when fully defined, should be measurable with a target, specification limit(s), and have a quality goal.

Critical System is a system that has the potential to directly impact the quality of the product produced such as, but not limited to, Distilled Water, Environmental Air, and Process Air systems.

Design Input is the physical and/or performance requirements of a device that are used as a basis for device design.

Design Output is the iterative result of a design effort during design and at the end of the total design effort.

Installation Qualification (IQ) is the documented verification that a system is installed according to written and pre-approved specifications.

Operational Qualification (OQ) is the documented verification that a system operates according to written and pre-approved specifications throughout all specified operating ranges.

Performance Qualification (PQ) is the documented verification that a system can perform or control the activities of the processes it is required to perform or control, according to written and pre-approved specifications, while operating in its specified operating environment.



Preventive Action is an action taken to eliminate the cause(s) of a potential exception, nonconformance, or another undesirable situation, to prevent occurrence.

Product Change is a permanent or temporary modification made to the design or manufacture of a component or finished good.

Production Part Approval Process (PPAP) demonstrates the manufacturing process has the potential to produce a product that consistently meets all requirements.

Quality Manual defines the structure of a quality system with scope, a description of how processes of the quality system interact, and by referencing documented procedures used to implement the quality system.

Quality Records are original or true copies of documentation proving that activities required by the quality system have occurred. Examples of quality records include training records, change history files, test results, calibration records, exception reports, and master traveler records.

Requirement is a need or expectation that is documented in writing. Requirement may be related to the product, system, or process.

Specification is the physical, chemical, technical, and performance requirements of a product, written to an engineering level of detail, that are used as a basis for product design.

Supplier is any entity that provides goods and/or services to Hanwha Cimarron.