

 Hanwha	<b>SUPPLIER QUALITY ASSURANCE REQUIREMENTS</b>	Doc. Group	<b>SQAR</b>
		Doc. No.	<b>Q6000</b>

Rev. No.	Date	Description	Prepare	Review	Approval
0	2014.10.27	Initial Issue	NI Kim	SW Kim	YH Cho
1	2015.07.17	<b>Add Para 4.3.3</b> - Additional Q code requirement of SQAR <b>Amend Para 4.5</b> - Regulatory's authorities <b>Amend Para 4.7</b> - Control of subcontracting <b>Amend Para 5.3.2</b> - Request for postponement of RCCA submission <b>Add Para 5.3.3</b> - Control of overdue submission of RCCA <b>Amend Para 5.5.1</b> - Retention period change : 10 years → 15 years <b>Add Para 5.6.2</b> - Specific delivery requirement for Group 6A	KH Jung	SW Kim	YH Cho
2	2017.09.01.	<b>Add Para 3.3</b> - "KDS0050-9000 QMS Requirement" <b>Amend Para 4.1</b> - Requirement of QMS establishment <b>Amend Para 4.2</b> - Requirement of Quality Plan submission <b>Amend Para 5.1 and subclause</b> - Requirement of international QMS certification 1) 5.1.1 System establishment requirement 2) 5.1.2 AS9100 certification requirement 3) 5.1.3 Non-certified supplier requirement <b>Amend Para 5.5</b> - Simplification of quality record control	KH Jung	HC Lee	SW Kim

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## 1. Purpose

This requirements specifies quality assurance requirements that are outsourced designing suppliers of Hanwha corporation Aerospace Division(hereafter "Hanwha").

## 2. Scope

2.1 The outsourced items are classified according to the criteria below.

Class	Type	Remark
<b>Group 6A</b>	Engages in both designing and production.	Supplies both the finalized designing and its output of the R&D. Suppliers in this group shall also meet the requirements of Q1000.
<b>Group 6B</b>	designs the entire unit or a portion if it but does not engage in production.	Supplies only the outputs of the R&D.

2.2 This requirements applies to the suppliers and the subtiers of the suppliers when stated on the contracts or purchase orders.

### 2.3 Relations to other requirements

Suppliers shall meet all the requirements on the contract and are responsible for providing the relevant products and services to Hanwha. If the requirements on the contract do not conform to the this SQAR the priority shall be given to the requirements of the contract.

2.4 If the requirements on this SQAR cannot be met, the suppliers must notify Hanwha and discuss prior to signing the contracts and receiving the purchase orders.

2.5 Suppliers shall refer to the latest revision of this requirements. When the manufacturing cost increases as a result of revision of the requirements, the suppliers must notify Hanwha's purchasing department for discussion.

2.6 Suppliers which belong to either Group 6A or Group 6B shall meet the requirements of Q1000 along with this requirements.

## 3. Applicable Documentations

### 3.1 Aerospace Standards

3.1.1 AS9100 "Quality Management Systems - Requirements for Aviation, Space and Defence Organizations"

☞ Web site address: <http://www.sae.org/standardsdev/aerospace/hotaero.htm>

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### 3.2 Hanwha Corporation Engineering Documentations

Quality and engineering documentations applied on the drawings and specifications of the items found on the contract or purchase order.

ex) design specification and requirement, development request, etc

### 3.3 [KDS0050-9000 "Defense Quality Management System Requirements for ROK Government"](#)

[Web site address: http://www.dtaq.re.kr](http://www.dtaq.re.kr)

## 4. General Requirements

[4.1 Suppliers shall confirm requirements stated in this document\(SQAR\) and establish a quality system which can ensure the requirements prior to provision of the products and services.](#)

[4.2 Group 6A Suppliers shall prepare a quality plan based on this document\(SQAR\) and submit it to Hanwha within one month after contract and/or purchase order receipt if requested by Hanwha QA or contract and/or purchase order. After getting an approval from Hanwha, the quality plan can be applied to the production.](#)

### 4.3 Additional Quality Assurance Requirements

Supplier shall meet the following quality requirements in addition to the quality assurance system specified in this document.

4.3.1 Quality assurance/inspection requirements specified on the drawing and specification of the product.

4.3.2 Quality assurance/inspection requirements stated on the relevant government policy and contract related documents.

4.3.3 Additional quality requirements(Q0000) stipulated in the purchase order with Q6000.

4.4 Suppliers shall discuss all the engineering concerns which arise during the designing process with R&D team and quality assurance team of Hanwha prior to starting any operation.

4.6 Hanwha and Hanwha's customers or regulatory agencies are authorized to evaluate suitability of the quality management system and the products on the site in order to approve them according to the requirements of the contract.

4.5.1 Suppliers shall provide quality records, equipments, and personnels required for such evaluation and verification.

4.5.2 Suppliers shall not utilize such verification method used by Hanwha as a means of accepting products.

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4.6 Suppliers shall ensure that its employees are aware of all the quality assurance requirements and apply them to production of the relevant items.

#### 4.7 Control of subcontracting

4.7.1 Suppliers shall not outsource and procure any items on the purchase order from Hanwha without any prior approval, and any violation to this could result in void of the contract and compensation of any incurred financial loss.

4.7.2 Group 6A shall confirm and guarantee the compliances of sub-contractors based on Hanwha SQARs such as production processes, quality assurance activities and its control. In addition, suppliers shall flow-down Hanwha SQARs to sub-contractors and get prior approvals from Hanwha in writing when they need to use any sub-contractors for outsourcing operations and procurements.

4.8 Suppliers shall have the finalized design approved by Hanwha and receive the official copy for application prior to beginning the production.

## 5. Quality Assurance Requirements

### 5.1 Quality Management System Requirement

[5.1.1 Suppliers shall establish quality management system that can comply the all the requirements of the Hanwha SQAR.](#)

[5.1.2 When contract/purchase order \(between Hanwha and supplier or between Hanwha and Hanwha's customer\) request,](#) suppliers shall establish quality management system which can satisfy AS9100 requirements. After establishment of the QMS, supplier shall attain and maintain the certificate from certification body which is registered by IAOG.

 Web site address : [https://www.sae.org/?PORTAL\\_CODE=IAQG](https://www.sae.org/?PORTAL_CODE=IAQG)

[5.1.3 Suppliers shall submit the plan in writing to get the AS9100 or ISO9001 certification and obtain conditional approval from Hanwha if supplier does not have any international quality management system certification or the certification is cancelled.](#)

### 5.2 Research & Development Management

5.2.1 Suppliers shall make a development plan which includes the following information and have it approved by Hanwha within 1 month time after receiving a contract/purchase order.

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- 1) Project name and scope of development
- 2) Achievement plan to meet R&D requirements
- 3) R&D schedule set up per each task
- 4) R&D review plan with Hanwha at each stage of development
- 5) Organization chart of the members involved in the project

5.2.2 Suppliers shall review each stage of research and development with Hanwha according to the approved plan, and No progression shall be made to the next stage before complete review is conducted on the current stage of research and development.

☞ Reviewing stages during research and development can be referred to as PDR or CDR.

5.2.3 If required by the contract or the customer, the relevant drawings and R&D documents shall be approved by the customer of Hanwha.

5.2.4 If design change is required, suppliers shall review impact(quality, price, PO date etc) of such change and discuss it with Hanwha.

5.2.5 Suppliers shall use the form which are provided by Hanwha for the output of the R&D, approval of the Hanwha is required if a different form is to be used.

5.2.6 Hanwha is authorized to take part in every stage of acceptance test(environmental test, performance test etc) to verify the validity of developed products, and suppliers shall support the Hanwha employee on carrying out these activities if they are performed at their facilities.

### 5.3 Corrective and Preventive Action

5.3.1 Suppliers shall carry out corrective and preventive actions in order to preclude reoccurrence of the nonconformance and present the proofs when requested by Hanwha.

5.3.2 Suppliers shall respond to the corrective action request issued by Hanwha in timely manner before the response due date and send result of the actions taken. If suppliers need more time to respond officially to Hanwha, suppliers shall submit a formal request in writing to extend the deadline in advance.

5.3.3 Hanwha can prohibit all deliveries of the supplier until the official response is received and its action is confirmed when the due date is expired over 15 business days without any notice or request.

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#### 5.4 Designer/Engineer Qualification Control

5.4.1 Suppliers shall establish a qualification plan which evaluates eligibility of the members participating in the contracted or purchase ordered R&D projects which are outsourced by Hanwha.

#### 5.5 Quality Record Control

Suppliers shall retain quality records for at least 15 years and present the documents to Hanwha within the specified period of time upon its request. Suppliers shall get an confirmation from Hanwha QA when they want to discard any quality records of defence/military products.

#### 5.6 Delivery Control

5.6.1 Delivery items are comply with manufacturing specification and contract requirements which are provided by Hanwha, and suppliers shall acquire approval from R&D team of Hanwha prior to their shipment.

5.6.2 If the supplier is Group 6A (the products are delivered to Hanwha with items), they shall meet 'Delivery Requirement' stated in Q1000 including First Article Inspection Report (FAIR).