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		Verantwortlicher / Responsible: Yvonne Birkle	

Between the company
hs2 engineering GmbH
 Boschstr. 8/1, 89079 Ulm
 - below called hs2 -

and the suppliers of production and development relevant parts

the following agreement about the enforcement of a common quality management is made with the goal to assure the quality of the products.

1. Foreword

The scale of the quality for the products is in their reliability and the satisfaction of our customers. As a customer-focused business we direct our quality management in a way that the needs of our customers are understood, captured, and met. For this it is necessary that we also include our suppliers in our quality management. We see ourselves as a link within the quality chain between our suppliers and our customers, and are therefore responsible for the patency of the fulfillment of the quality requirements.

The quality assurance agreement (QSA) consists of 2 parts:

General quality assurance agreement:

For the assurance of the high quality standards of hs2-products the agreement at hand defines the general principles and frame conditions for a cooperative collaboration in the common quality efforts, and administers the common approach as well as the measures of both partners for achieving the stipulated quality standards.

Product specific agreements:

These agreements apply to further written agreements for the product specification (see possible attachment) as well as possible agreements for the production of specific products. These separate agreements with the name „Product specific agreements“ regulate the parameters for the product specific quality characteristics in detail. Depending on the order they become an additional element of the QSA.

2. Scope

Both quality assurance agreements are independent contracts as an addition to the other contractual agreements between hs2 and the suppliers.

The supplier shall oblige subcontractors as to the adherence of incurred duties from this contractual agreement.

3. QM-system

3.1 Selection and demonstration of the QM system

The supplier has implemented a quality management system according to DIN EN ISO 9001 or higher and keeps it up to date.

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hs2 will be informed immediately, but at the latest within 21 days, about all important and relevant changes to the QM-system; especially the changes or discontinuation of certificates.

3.2 Auditing / Verification

The supplier has his QM-system supervised and certified by appropriate audits. Upon signing of this agreement hs2 receives copies of the attained certificates. In addition, hs2 and hs2-customers are granted the right to conduct audits of the supplier and sub-contractors who deliver for hs2-products upon necessity.

The same right is granted to the superior national and international authorities, the Luftfahrtbundesamt (LBA), the European Aviation Security Agency (EASA), and institutions accredited by these authorities. hs2 will be informed of such audits and/or their results.

3.3 Identification and traceability of products

Deliveries to hs2 are marked: with code numbers; serial or batch numbers; and, if applicable, with the manufacturer mark - according to the drawing rules - as long as they don't correspond to a valid norm.

In the case of a complaint, the clear conclusion to the rejected delivery has to be possible in order to isolate the quantity of faulty parts and the basic raw material; therefore keeping the effort for the correction low.

3.4 Control of special products

Before delivering special products with deviations to individual characteristics, which don't comply with the defined drawing specifications, a concession has to be obtained by hs2, and the concerned deliveries have to be marked clearly.

3.5 Spare parts

The supplier guarantees the delivery of spare parts at the usual marked price, and the same contractual terms of this order, for a period of 3 years from the date of the order. A discontinuation of the production of the parts by the supplier or his ancillary companies has to be announced to hs2 in such due time so that hs2 can place at least one comprehensive order for a sufficient amount. Upon violation of this obligation, hs2 is entitled to have such spare parts made without compensation - regardless of possible commercial property laws - and to use the supplier's samples and/or drawings for this, which have to be made available by the supplier immediately.

3.6 Storage

The supplier is obliged to store raw materials specifically bought for hs2, and special materials for the hs2 product respectively, separately from the other materials and to exclude mix-up or confusion with other, not suitable materials, by adequate measures.

The produced hs2-products and parts must also be stored separately in their own storage area, apart from the other products. It has to be ensured that no unauthorised personnel have access to these products and parts.

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3.7 Transport

For free deliveries the supplier is obligated to secure the delivery till its destination is reached. Corresponding to this requirement, the freight forwarders have to work according to the quality requirements of the supplier. Means of transport and packaging have to be approved by hs2.

3.8 Documentation / Quality records

In addition, the supplier guarantees the storage of all samples, drawings, quality relevant inspection and test records for a minimum period of 20 years after the last delivery of the product - and spare part respectively - delivered to hs2. These records have to be made available to hs2 free of charge upon request. They are to be kept in confidence.

3.9 Change of location

In the case of important changes to the place of production hs2 will be informed immediately.

4. Product or process specific requirements to quality assurance

The supplier is committed to advance the quality of the products by appropriate control and development of the used production technology and tools. The approval of hs2's quality assurance has to be obtained before changing the production technology previously agreed with hs2.

4.1 Process abilities

The supplier has to secure the quality of products with suitable test methods, and to optimise the production process as best possible, in order to achieve the stipulated process abilities.

For function relevant characteristics the supplier will perform and document a detailed short-term process ability analysis. When suitable process ability is not met, either machine optimisations or 100%-checks are planned under consideration of economic aspects.

4.2 RoHS-conform production (EU-Directive 2002/95/EC)

hs2 is committed to delivering RoHS-conform products to the aircraft manufacturers. This means that brazing has to be performed lead-free: for production no toxic materials such as cadmium (Cd), hexavalent chrome (CR(VI)), quicksilver (Hg), lead (Pb), polybrominated biphenyls (PBB), or polybrominated diphenyl ether (PBDE) may be used. The supplier commits to also waive using these materials and to ensure the subcontractors follow this obligation too. In case conformity cannot be reached completely, this has to be indicated.

4.3 Obligation to indicate deviations of dimensions and process changes

In case deviations from the stipulated engineering data occur which cannot be eliminated - or when the manufacturing methods are changed which can influence the product quality - a deviation of dimensions is at hand, and hs2 has to be notified within 3 days. A deviation of dimensions is always treated like an error. A deviation of dimensions has to be approved by hs2: with this it is effective as released and can be continued to be used.

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4.4 Initial sample inspections

hs2 indicates, that according to EASA / LBA they are obliged to test initial samples including possible necessary destructive tests. Corresponding to this, the supplier is obliged to perform deliveries and documentation of prototypes, initial samples and pre-serial parts according to conditions which were agreed upon with hs2, and to submit test reports and factory certifications of the materials upon request.

The delivery takes place regularly after sampling. For the initial sampling test report all delivered parts are tested, as far as necessary, with a determined procedure defined by the development company, in possibly accredited laboratories and documented in the initial sample test report.

In principle initial samples have to be manufactured according to the work flow as intended for serial production and with the machines, tools and facilities as intended for serial production. In doing so, tests in production and final check have to be made with the test facilities and gauges as intended for serial production. Deviations from this can be necessary for statistic testing of the initial samples for examination of the process ability. For the determination of the short-term process ability the parts have to undergo a 100%-examination.

An approval as series supplier can only take place after the initial sample test report was assessed positively and the clearing of the product by hs2.

5. Goal of zero defects

Within the scope of the quality management the supplier is committed to the goal of zero defects. As required, hs2 agrees with the supplier in which space of time and via which sub-ordinate targets the goal of zero defects has to be reached. The supplier will notify hs2 immediately as soon as adverse deviances from the agreed target corridor become foreseeable.

The agreement of the targeted corridor doesn't affect the accountability of the supplier for warranty and indemnity claims by hs2 for deficits with a delivery. The supplier is accountable due to the contractual stipulations also for possible deficits when the defect frequency is within the frame of the agreed target corridor.

6. Accountability and warranty

6.1 Regulation of follow-up costs for faulty products

When the reworking of an imperfect product is necessary the supplier is committed to cover all disassembly and assembly costs. In addition the supplier covers all consequential harms caused by the defect including the costs of hs2 in connection with the processing of the warranty case, as long as they are not merely financial losses. The costs of the rework or the replacement delivery are covered by the supplier, except in an instance when an independent expert opinion comes to the conclusion that hs2 alone is responsible for the defect.

In the case of a delay hs2 can demand, and the supplier is obliged to pay, a generalised compensation of 2,5% of the order value of the delayed delivery for every begun week of the delay up to a maximum of 15% of the order value. The assertion of further compensation is not touched by this.

Independently from the liability for damages as regulated in the previous paragraphs the supplier is, upon request of hs2, committed to immediate action, in reasonable extent, in case of imminent assembly standstills. For example this could be rework which can be performed within the demanded

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timeframe, if required, by a third party as well. The costs that occur in the process have to be covered by the supplier.

6.2 Receiving inspections by hs2

Performing of the necessary tests in order to secure the agreed upon quality takes place at the supplier. The supplier confirms the quality and the RoHS-conformity with a company certificate and / or a certificate of conformity. hs2 tests the shipments regarding its product type, and externally on the packaging for distinctly visibly transport damages upon delivery.

As far as given under proper course of business, hs2 will either test the assembly which was manufactured with the use of the deliveries before the start of the following production sector, or put the manufactured finished product which was made with the use of the assembly to a test. Further obligations of hs2 according to § 377 HGB do not exist.

7. Validity

This quality assurance agreement is valid for all products which are delivered to hs2. The retention period for the quality documents is regulated under 3.8.

Ulm, 10.11.2014
hs2 engineering GmbH