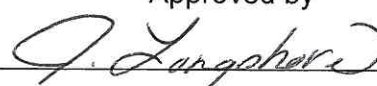


Clause

Document Number

Special Processes

QX6

Effective Date	Revision No.	Responsible Organization	Approved by
8/4/2015	Initial	Quality	

1.0 Purpose

- 1.1 This Quality Clause is a supplement to, and does not replace or alter other terms and conditions covered by purchase documents, procedures or requirements of drawings or specifications within the purchase order.

2.0 Scope

- 2.1 Special Processes are considered those that are required by purchase order, but cannot be verified prior to delivery to the customer, without the use of destructive testing.

3.0 Requirements

3.1 Welding

- 3.1.1 This clause applies to the qualification requirements of weld procedures in accordance with all drawing requirements.
- 3.1.2 The manufacturer shall develop a written procedure. The written procedure shall be qualified through the fabrication of an acceptable prototype test weldment. The procedure shall provide clear instruction and shall include a marked drawing and/or sketch(es) identifying joint locations with Weld Procedure Specification (WPS) references and joint cross sections.
- 3.1.3 To qualify the procedure, a sufficient number of weld passes from the test weldment shall be examined visually then sectioned for macro-examination by the supplier. Once the procedure has been developed and determined to produce conforming product, the procedure and sample shall be reviewed and approved by both the supplier and purchaser prior to production.
- 3.1.4 Each welder shall be required to produce an acceptable prototype structure test weldment to become qualified. A performance qualification test record shall be prepared and maintained on file by the manufacturer.
- 3.1.5 Following approval, the weld sample and approved procedure will be returned and is to be maintained by the supplier during the terms of the purchase order.
- 3.1.6 For all parts that have been in continuous production and have not been affected by design changes, resubmission of weld samples shall not be required unless the previously approved procedure is modified. Continuous production is defined as being engaged in the subject weld process with no break in production that exceeds 12 months.

3.2 Brazing

- 3.2.1 This clause applies to the qualification requirements of braze procedures in accordance with all drawing requirements.
- 3.2.2 The manufacturer shall develop a written procedure. The written procedure shall be qualified through the fabrication of an acceptable prototype test braze joint. The procedure shall provide clear instruction and shall include a marked drawing and/or sketch(es) identifying joint locations with Braze Procedure Specification (BPS) references and joint cross sections.
- 3.2.3 To qualify the procedure, a sample braze joint shall be examined visually then sectioned for macro-examination by the supplier. Once the procedure has been developed and determined to

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produce conforming product, the procedure and sample shall be reviewed and approved by both the supplier and purchaser prior to production.			
3.2.4	Following approval, the braze sample and approved procedure will be returned and is to be maintained by the supplier during the terms of the purchase order.		
3.2.5	For all parts that have been in continuous production and have not been affected by design changes, resubmission of braze samples shall not be required unless the previously approved procedure is modified. Continuous production is defined as being engaged in the subject braze process with no break in production that exceeds 12 months.		
3.3	Soldering		
3.3.1	Soldering shall be in accordance with MIL-STD-2000, TACOM soldering process specification 11655194, ANSI/J-STD-001 or other commercial soldering standards with L-3 CPS approval.		
3.4	Nondestructive Testing (NDT)		
3.4.1	This clause applies to the qualification requirements of NDT techniques and inspectors in accordance with all drawing requirements.		
3.4.2	Documentation of the training and qualification of NDT inspectors shall be maintained by the supplier conducting the inspection. These documents shall be available for review at the request of L-3 CPS.		
3.4.3	Foundry control and production x-ray technique review by L-3 CPS is required prior to initial shipment of castings.		
3.4.4	All NDT certifications shall include: • Method • Acceptance criteria • Number of parts accepted/rejected • Total number of parts inspected		
3.5	Surface Treatment		
3.5.1	This clause applies to the documentation requirements of surface treatment procedures in accordance with all drawing requirements.		
3.5.2	Supplier shall maintain inspection records indicating quantity accepted/rejected in accordance with the applicable specification. These inspection records shall be traceable to each lot of material as shall be available for review upon request.		
3.5.3	All surface treatment processes and material must meet the requirements of the drawing specification AND must be listed as an approved material on the Qualified Products List (QPL) when applicable.		
3.6	Heat Treatment		
3.6.1	Conformance to all drawing requirements related to the heat treatment of product shall be documented and listed on the heat treat certification.		



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- 3.6.2 Testing for part conformance after heat treat must be performed on actual parts. Samples may be used in lieu of actual parts only if correlation between the sample and actual part has been established and agreed upon by L-3 CPS.
- 3.6.3 Heat treat certifications must contain, at a minimum:
- Process/specification utilized (processes deemed proprietary must be revision controlled and the process revision must be included on the certification)
 - Media utilized
 - Actual results of drawing requirements
 - Acceptance / Rejection quantities

4.0 History of Changes

History of Changes		
Revision Number	Revision Date	Revision Summary
Initial	8/4/15	Initial Release