
SUPPLIER QUALITY REQUIREMENTS

Approvals

_____ Carlos Benitez	_____ Sr. Quality Manager A&D Irvine Title	_____ Date
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1.0 PURPOSE

This document establishes requirements applicable to items ordered under the purchase order, of which this form is a part of, to assure that such items are of the required quality and reliability. It contains General Requirements for product assurance, which is applicable unless expressly excluded in the Purchase Order and the Quality Clauses requirements or Special Quality Clauses Requirements, which apply as designated by line item.

2.0 SCOPE

This procedure applies to ITT ICS, LLC and its supplier base.

3.0 REFERENCE DOCUMENTS

- 3.1 QDI-506-01, Receiving Inspection
- 3.2 QDI-506-2, Supplier Control
- 3.3 QDI-506-05, Supplier Source Inspection
- 3.4 QDI-506-06, Government Inspection at Supplier Facilities
- 3.5 QDI-514-01, Corrective/Preventive action
- 3.6 QDI-516-01, Records
- 3.7 QDI-1508, Normal Single Sampling Plan

4.0 INPUTS / OUTPUTS
Inputs:

- 4.1 Purchase Order
- 4.2 Customer flow down requirements
- 4.3 Regulatory requirements
- 4.4 ITT requirements
- 4.5 General and special product assurance requirements

Outputs:

- 4.6 ITT Source inspection at supplier facilities

- 4.7 Government inspection at supplier facilities
- 4.8 Documented evidence of compliance to requirements
- 4.9 Corrective action / improvement plans

5.0 DEFINITIONS

Purchase Order (PO) – The purchase order, subcontract or other written agreement with the Seller (supplier) in which this Form is incorporated by reference.

Buyer – A member of ITT ICS acting on behalf of the organization issuing the purchase order.

Seller – The legal entity, which is the contracting party with the Buyer, with respect to the purchase order.

6.0 RESPONSIBILITIES

- 6.1 It is the responsibility of ITT ICS to create and update the supplier quality requirements document based on customer flowed down requirements, regulatory requirements, ITT requirements, etc. Such document is to be communicated and provided to the supplier base thru Procurement and/or Supplier Quality activities or posted on the procurement designated website.
- 6.2 It is the supplier's responsibility to review this document for general requirements not specifically called out on the PO for applicability and to review the PO to find all applicable quality requirements and to provide evidence of compliance for the applicable requirements.
- 6.3 It is the responsibility of ITT ICS Receiving Inspection to review the PO for PO text requirements and all quality requirements specified thru designated codes and or text and to request evidence of compliance for all applicable requirements before product acceptance.

7.0 ENVIRONMENTAL, SAFETY AND HEALTH

Not applicable within this procedure.

8.0 PROCEDURE

QUALITY CLAUSES REQUIREMENTS (Mandatory)

Unless otherwise specified in the purchase order, the following requirements apply to all purchase orders:

Note: Clauses with Symbol (R) for Clauses verifiable at Receiving Inspection

Clauses with Symbol (V) for Clauses verifiable Vendor Qualification /Surveillance process

A PROHIBITED PRACTICES (V)

- 1 Unauthorized Repairs: Without Buyer's approval Seller may not repair by welding, brazing, soldering or adhesive bonding, parts damaged or found to be faulty during fabrication. Defects in castings or forgings shall not be repaired by any method unless authorized by the Buyer in writing.
- 2 Changes in Approved Processes, Materials or Procedures: Seller shall not change any process, material or procedure without prior Buyer approval if such process, material or procedure was originally subject to approval by buyer. As to any product which has been subjected to Buyer or Government specified qualification procedures to qualify the product or to permit the Seller to become a qualified source for the product, the Seller shall not change any process, material or procedure from that used to qualify without prior notification to Buyer and approval by Buyer or the Government, as appropriate.

Quality Assurance

- 3 Improved Re-submittal: Articles rejected by the Buyer and subsequently resubmitted to the Buyer shall be clearly and properly identified as resubmitted articles. Seller's shipping document shall contain a statement that articles are replacement or reworked and shall also refer to Buyer's rejection document.

A PROHIBITED PRACTICES (continued)

- 4 Unauthorized Submittal of Production Parts: When the purchase order requires Buyer acceptance of a first article, the Seller shall not submit parts from a production run for Buyer inspection prior to Buyer's acceptance of such first article, without written authorization.
- 5 Notification of Facility Change: Seller shall not relocate any production manufacturing and/or processing facilities during performance of the purchase order, without promptly notifying Buyer and affording Buyer an opportunity to examine such facilities for compliance with Quality Assurance requirements, including any necessary approvals.

B MATERIAL SUBSTITUTION PROHIBITION(v)

- 1 Unauthorized Material Substitution (General)

Unauthorized material substitutions are not permitted on Buyer's Goods. Unauthorized material substitution includes any deviation from the engineering definition of a raw material. Engineering definition includes Buyer design drawing and applicable specifications, product specification, form, size, shape, chemistry, melt method, origin, temper/condition, product testing or surface finish. Alternate materials specified in the engineering definition (and often described as approved material) Substitutions therein do not constitute unauthorized material substitution. Terms and definitions for metallic materials and processing used herein are clarified in SAE ARP1917 Clarification of Terms Used in Aerospace Metals Specification. Contact Buyer's Authorized Procurement Representative for details regarding deviations to authorized materials. Seller agrees and understands that such deviations only apply to this purchase contract, and only as indicated in the Buyer's authorized document.

- 2 **Metallic Materials (Specific)**

Temper or Condition Conversion - Unless specifically authorized by the engineering definition, conversion of a raw material (i.e. heat treat to change the temper or condition of the material) constitutes material substitution of the condition provided by the manufacturer.

Metallic Raw Materials – Buyer's engineering drawings may refer to obsolete or superseded specifications covering several forms, thicknesses, widths, etc. of the alloy or alloys. The required characteristics of these materials are defined not only by the objective test standards of the specification, but by the processes/methods by which this final form is achieved. These requirements are often captured in the definitions of the required material forms, and may not be explicitly called out in the detailed requirements. The raw material certification results from both the process used to make it and the tests to verify basic properties.

B MATERIAL SUBSTITUTION PROHIBITION (continued) (V)

Raw material must not be re-certified with respect to thickness, diameter, and width or cross sectional area or product form. Machining or cutting of thicker product or other product forms shall not be supplied in lieu of specified product unless specifically authorized by Buyer. Raw material certifications for material or parts shall reflect the form and size of the raw material as originally manufactured by the raw material producer.

3 Specification Suppression:

For government specifications and standards canceled after June 1994, Seller and subcontractors at all tiers shall use the last active revision of the cancelled specification and standard until an acceptable replacement is included in the requirements of this contract. Contact the Buyer's Authorized Procurement Representative in the event of any inconsistency in applicable specification or standard.

4 **Reports** (Full Pedigree from melt to final product) – Raw material certifications shall show clear traceability to the manufacturer(s) of the raw material including ingot source, all thermo-mechanical processing (i.e. forging, rolling, drawing, etc.), heat treatment, chemical processing and inspections as required by applicable raw material specification requirements.

5 **Chain of Custody** (Disguising intermediate ownership) – Suppliers shall not disguise the pedigree of material or chain of ownership by removal of a previous supplier's name, nomenclature or identification.

6 **Source of Additional Information** – Additional information and guidance may be found through Buyer's Supplier Portal or Buyer's Authorized Procurement Representative.

7 The substance of this Article shall be flowed down in all subcontracts at every tier.

C RESPONSIBILITY FOR CONFORMANCE (V)

Neither surveillance, inspection and/or tests made by the Buyer or his representatives at either the Seller's or Buyer's facility, nor the Seller's compliance with all applicable Special Product Assurance (Quality Codes) Requirements, shall relieve the Seller of the responsibility to furnish items which conform to the requirements of the purchase order.

D DOCUMENTATION (R)

The buyer may refuse to accept items delivered under the purchase order if the Seller fails to submit the certification, documentation, test data or reports specified in the purchase order, Quality Clauses Requirements or Special processes. Certificate and raw material test reports are **mandatory** with every shipment made to Aerospace and Defense facilities, documents required by type of product are listed but no limited as described on section E even though, they are not displayed on the purchase order, ITT Cannon Purchase order refers to latest Rev of QDI-506-12 (present document) and can be accessed via web on the following link. <http://www.ittcannon.com/terms-conditions/> .

Documentation includes ITT ICS source inspection record when such source inspection is performed

E CHEMICAL AND PHYSICAL TEST ANALYSIS / REPORTS (R)

Raw Material chemical and physical test reports are required on this purchase order and shall be certified by the supplier. When material is ordered to a specific revision of a specification, this will be noted on the purchase order. The subject test report or certification must then evidence that specification. The test reports shall include actual data to demonstrate compliance against applicable specification. If more than one batch, heat lot, etc. of material is used to satisfy the purchase order, certification and test reports for each lot shall be provided and all material shall be marked or stamped with appropriate identification. Each certification must contain the printed or typed name; date, title, and signature of the individual authorized to sign and must be traceable to the ITT's Purchase Order by having linkage and clear traceability. requirements described on below Table 1.0

Table 1.0

Commodity	Common Documents compliance
Plated Parts	Plating type certification Salt spray testing as applicable.
Anodized Parts	Coating type certification
Metal raw material	Metal Alloy Chemical composition type certification Physical /Mechanical testing results as required by specification and or applicable standard.
Plastic raw material	Certificate of Compliance for resin grade Certificate of Analysis when required (optional). When COTS Certificate of Compliance
Plastic molded parts	Certificate of Compliance for used resin grade Certificate of Analysis when required (optional).
Rubber molded parts	Certificate of Compliance Compound Compound Physical /mechanical test results when applicable (Example: Shore A hardness, tensile strength, Elongation, Specific Gravity, etc.) (optional). When COTS Certificate of Compliance
Plated contacts	Metal Chemical composition test results from material used for contacts manufacturing. Plating type certification Plating thickness certification as required (optional). Mechanical insertion, retention test results when specific required. When COTS Certificate of Compliance
Metal Machined/ Cast parts	Metal alloy Chemical composition test results from material used for part's manufacturing.
Wire with plated conductors	When COTS Certificate of Compliance a) Plating certification if specific required to Vendor b) Metal Conductor Chemical composition test results. if specific required to Vendor
Connectors/ Assemblies	Certificate of Compliance When COTS Certificate of Compliance

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Miscellaneous	Certificate of Compliance Testing Results if specific required to Vendor When COTS Certificate of Compliance
Chemical Treated Parts	Chemical treatment certification stating test methods used showing compliance with ITT specification or corresponding standard.
Heat Treated Parts	Heat treatment certification stating test methods used showing compliance with ITT specification or corresponding standard.
Hardware	Metal alloy Chemical composition test results if specifically required to Vendor Plating type certification if specifically required to Vendor When COTS Certificate of Compliance

F CERTIFICATION OF COMPLIANCE AUDIT (V) (R)

Certification furnished under the terms of the purchase order shall be supported by test records and data and are subject to audit by the Buyer.

G LOT SAMPLING INSPECTION (V)

The Buyer reserves the right to use “Zero Acceptance Number Sampling Plans” for the acceptance or rejection of procured items.

Seller must install quality controls through the manufacturing stages as applicable Sampling plans aligned to ANSI/ASQC Z1.4 –Sampling Procedures and Tables for inspection by attributes & Zero acceptance Number Sampling Plans 5th edition (r) by Nicholas Squeglia.

When an specific Quality Inspection Instruction, Acceptance test Data sheet or customer or external specification requirement calls for an special code (S1,S2,S3, or S4) Special sampling Plans will apply

Sampling plans may be tighten by the buyer in cases where a Non-conforming product is found and reported to the seller.

Zero Acceptance number samplings plans, are to be used for all inspection sampling switching scheme or it is required by contract or a customer representative, then a solution would be to use the next higher or lower index value of the C=0 sampling plans, and use the sampling plans in that particular column.

H SELLER’S CERTIFICATION (R)

All Certifications, test data, and evidence of inspection must bear the name, title and signature of the responsible individual. An inspection stamp alone is not acceptable on certifications and test data. Certifications to the specification requirements and the revisions called out on the engineering drawings and/or the purchase order shall be submitted with this shipment (i.e. finish, heat treat, etc.).

I MATERIAL SUPPLIED BY ITT

When vendor performs work on material supplied by ITT. The vendor is to strictly maintain ITT lot identity and shall certify that the work was performed on the specific material provided and is in accordance with the engineering drawing, specification, and/or purchase order requirements. The material certifications and test reports on the supplied material shall be the responsibility of ITT. All Certifications to the specification requirements called out on the engineering drawings and/or the purchase order shall be submitted with this shipment

J CORRECTIVE ACTION REQUESTS (v)

ITT ICS may issue a request for a Supplier Corrective Action Report (SCAR) to the Supplier (Seller) when:

1. On-time delivery problem arises.
2. Nonconforming material, components, or assemblies are found.
3. Poor Quality Performance.
4. Supplier Development activities due low scorecard performance.

When a formal reply is requested (usually electronic media), the Supplier may be requested to use Corrective Action Report form (QDI-514-01-02 CA-PA).

Statements within the Supplier's systematic countermeasures indicating that the corrective action is to alert or retrain the operator, and/or increase inspection, alone, are NOT acceptable corrective actions. These kinds of actions would be considered insufficient and not address the real underlying root cause(s) of why the Supplier's policy, instructions, process, procedure, and/or system allowed the problem to develop and occur and not be detected by quality controls.

Unless otherwise requested by ITT ICS when notified, the Supplier shall respond to a request for corrective action as follows:

Required Action Timeline (from initial notification by ITT ICS) the Supplier shall promptly acknowledge receipt of notification and communicate to ITT ICS the immediate containment actions to be taken. Within 24 hours The Supplier shall provide an update of the containment plan to protect ITT ICS during the interim period. This update must include confirmation that the Supplier has identified all suspect products in process, in stock, in transit, and potentially at any ITT ICS site by lot number, ITT ICS contract number, and specific quantity.

Additional specific containment actions needed to be taken by the Supplier and/or ITT ICS within 72 hours.

The Supplier must submit the completed Corrective Action Report (QDI-514-01-02 CA-PA form) indicating the permanent actions taken, or to be taken, to prevent recurrence of the same problem, to prevent the occurrence of similar problems, and the applicable effectivity dates. Within 10 business days.

Irreversible Correction must not exceed 45 calendar days for implementation and 90 calendar days Total cycle time including ITT's Verification and follow up phases.

When corrective action is required for Government Source inspected items, the supplier shall coordinate such action with the Government Quality Assurance Representative assigned to his plant.

Depending on the impact, failure to the established timeframe to respond to a confirmed nonconformance may be subject to penalties such as new business hold, Purchasing Orders hold, and or definitive supplier disqualification.

K FOREIGN OBJECT DEBRIS/DAMAGE (FOD) PROGRAM (V)

Seller shall implement a Foreign Object Debris/Damage Program to establish general workmanship practices for the prevention and elimination of Foreign Object Debris/Damage (FOD) to ITT ICS supplied products.

L RECORD RETENTION (V)

Unless otherwise specified by ITT, the record retention period for all supporting documentation for product being shipped to ITT is defined to be 10 years from the date of delivery. Supplier shall define the controls needed for the identification, storage, protection, retrieval, retention and disposition of records. Records shall remain legible, readily identifiable and retrievable upon request by ITT personnel.

M SUPPLIER INFORMATION REQUEST (SIR) (R)

The Supplier Information Request form (MATL-201-17-1) is to be used to communicate any conflicting information, missing information, clarifications, exceptions taken, MRB requests, etc. to ITT. This form and the form instructions can be obtained from the ITT website listed below and is the prescribed process for these types of communications. The SIR is not considered as official deviation approval or engineering change.

<http://www.ittcannon.com/terms-conditions/>

Click on About ITT, then on Supplier Information Request link.

N PRODUCT DEVIATION (R)

Product deviation must to be provide by the official ITT design engineering order (EO) for specific batch, or limited engineering order (LEO) for determined time. The formal EO or LEO number must to be included in the ITT design records indicating is currently active and approved.

O SPECIFICATION REVISION (R)

The seller is responsible for performing to the latest revision of all specifications noted in the engineering, purchase order, and/or attachments provided, based on the time of purchase order placement. For ITT internal specifications, the seller must verify the correct revision prior to manufacturing/processing the contracted product and must include the specification revision on all certifications submitted to ITT.

P RAW MATERIAL LENGTHS (R)

For all metal rods (aluminum excluded) greater than 1.5" in diameter, the supplier will cut the lengths in half for safety and ease of handling. This is a standard ITT requirement for material that is in excess of six feet in length.

Q NON-CONFORMANCE ESCAPE (V)

In the event that a non-conformance is discovered internally that affects product shipped to ITT, a formal "Notice of Escapement" must be issued to the procuring activity at ITT within a 48 hour period. This communication can be submitted via SIR or suppliers internal document, but must include at a minimum:

- Delivery Dates
- Quantity
- Purchase Orders Affected
- Complete Description of Non-conformance

R CONFIGURATON CONTROL (V)

Latest revisions to specifications and drawings apply unless otherwise specified.

S INSPECTION AND TEST (V)

ITT reserves the right to perform any inspection and tests deemed necessary to assure product conformance at the supplier's facility.

T GAGES, MEASUREMENT AND TEST DEVICE AVAILABILITY (V)

The supplier's gauges, measuring and testing devices shall be made available for reasonable use by ITT personnel when required to determine quality of product. If conditions warrant, supplier's personnel shall be made available for operation of such devices and for verifications of their accuracy and condition.

U REMOVED

V SELLER'S QUALITY CONTROL SYSTEM (V)

The supplier's quality management system shall be certified to the requirements of AS9100, ISO-9001 as minimum. The supplier's Quality Management System may be subject to on-site assessment by representatives from ITT.

Interconnect Solution's Suppliers shall meet the requirement to have their QMS certified by a 3rd party register no later than January of 2018.

W GAUGE AND MEASURING DEVICE CONTROL (V)

The supplier's calibration system shall conform to the latest requirements of MIL-STD-45662, ISO-10012-1, ANSI/NC SL Z540-I, or equivalent as approved by ITT. The supplier's calibration system shall be subject to inspection and approval by ITT's Quality Department.

X LOT CONTROL AND MATERIAL TRACEABILITY (V)

Supplier shall maintain their own "lot" identity on articles or material supplied to this purchase order. This information is to be available for ITT's review upon request.

Note: A lot is a homogenous group of articles or materials manufactured on the same production line and receiving the same processing.

Y SHELF LIFE CONTROL (R)

The Seller shall have an effective system of control of items whose acceptability is limited by age of the item. The system must include a method of identifying the age of such items and provisions for the rotation of stock. Age control of rubber goods shall conform to the requirements of MIL-STD-1523 unless otherwise specified in the purchase order.

Seller shall indicate on the containers or certifications those materials having a limited or specified shelf life. The information provided shall include:

- a) Date of manufacture and/or cure date
- b) Lot and/or batch number
- c) Number and/or type of material
- d) Expected storage life
- e) Special storage and handling conditions as may be applicable.

This information shall be in addition to the normal identification requirements for each container, name, part or code number, size, quantity, etc.

Time lapse of product between cure or manufacturing date and date of scheduled receipt by Buyer under the Purchase Order shall have 75% of the shelf life remaining. A written waiver from the Buyer is required (each shipment) when material does not meet the 75% shelf life requirement.

Z MATERIAL REVIEW (MRB) AUTHORITY (V)

Vendor is expressly denied MRB authority. Material found Out of specification may be scrapped or reworked (not "repaired") to the blueprint at vendor's option. Any request for ITT disposition is to be addressed in writing to the ITT ICS Purchasing Department via the "Supplier Information Request" (SIR) form MATL-201-17-1

AA PRODUCT PRESERVATION AND PACKAGING (V)

The supplier shall incorporate good commercial practices for the preservation and packaging of all articles applying to this purchase order and shall identify each package permanently and legibly with purchase order number, manufacturer's name, part number, date shipped and packing sheet number

AB FIRST ARTICLE INSPECTION (V)

All procured parts are subject and must be in full compliance as per SAE AS9102, First Article Inspection (FAI) at the latest version.

First Article Inspection (FAI) is required prior to the first delivery of the product baseline configuration and must be submitted to the ITT facility specified on the applicable shipping address.

The Organization shall perform a full FAI, or a partial FAI for affected characteristics, when any of the following events occurs:

1. A change in design affecting form, fit, and function of the part.
2. A change in manufacturing sources(s), process(s), inspection method(s), location of manufacture, tooling or materials that can potentially affect form, fit, form and function.
3. A change in numerical control program or translation to another media that can potentially affect form, fit, form and function.
4. A natural or made-made event, which may adversely affect the manufacturing process.
5. **A lapse in production for 2 years or as specified by the customer.**

Once FAIR is completed has to be submitted to assigned ITT commodity supplier quality engineer (SQE) for approval; in case the FAIR is rejected, deviation request has to be submitted for ITT product engineer and SQE for revision.

ITT ICS Quality Assurance reserves the right to perform some or all aspects of the FAI activities at the supplier's or ITT ICS facilities.

Seller is not authorized to send parts prior to FAI approval by the supplier quality engineering representative. ITT disclaims responsibility for material delivered prior to first article approval.

All products manufactured after 7/31/2012 must have an approved AS9102 First Article Inspection Report (FAIR). Product manufactured prior to 8/1/2012 must have an approved FAIR (Seller forms are acceptable).

AC SUPPLIER IDENTIFICATION (V)

Supplier identification is required. The supplier's part number and name or trademark shall be affixed to the articles defined in this purchase order in accordance with MID-STD-130.

AD CERTIFICATION OF CONFORMANCE (V)

GENERAL CERTIFICATE OF COMPLIANCE

CERTIFICATION

We hereby certify that material and/or parts or processing furnished on this order have been manufactured or processed in accordance with all applicable instructions, drawings and specifications, and meeting all requirements. With the exception of material supplied by ITT, all physical and chemical data pertaining to this order is on file and available upon request.

Firm: _____ Address: _____ By: _____	Part No.: _____ Rev.: _____ P.O. No.: _____ Date of Manufacture: _____
(Must bear full signature of responsible officers of the company, e.g., J. Doe)	

Certification may be made on duplicate packing slips or on company letterhead accompanying the packing slip. Certification must be signed by duly authorized employee. Failure to supply proper certification will result in the material being rejected and payment withheld pending receipt of certification.

AE CONTROL OF SPECIAL PROCESSES (V)

The Seller must be approved by the Buyer to perform required special processes or preferable NADCAP certified.

Certification by a responsible representative of the Seller shall be included with each shipment. Certificate shall indicate all special processes performed, applicable specifications (including class, type, grade, etc.) and the name of the special processor(s).

Special Processes:

- Castings/Forgings
- Plating
- Heat Treating
- Metal Joining
- Surface Finish/Coating/Treatment
- Testing (NDT Chemical Environment, etc.)
- Adhesive Bonding and Plastic Fabrication
- Printed Wiring Board Fabrication
- Other, specified as: _____

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AF NOTIFICATION OF PRODUCT CHANGE (V)

The Seller shall not make any changes in product design, composition, configuration (including form, fit, function, or interchangeability), material, fabrication or processing, Seller's supplier(s), place of manufacturer, or outside processing without prior written approval from the Buyer. Seller shall flow down this requirement to Seller's suppliers.

E-mail's or verbal communication does not represent formal ITT's change notification approval, Supplier Quality Engineering representative shall provide guidance and definition of approval requirements, such a FAI, control run, reliability testing etc.

AG ENGINEERING CHANGE (R)

Formal product engineering modification provides by a change on revision level either by ECR (engineering change request) or DCR (Design Change Request) is the formal change communication; any other way of communication is not considered a formal approved engineering change.

AH FOUNDRY CONTROL OF CAST PARTS (V)

Foundry control castings are required when new tooling (patterns or molds) is made, when a change is made in gates, risers, chills, or as-cast shape, or when a pattern is transferred to a different supplier. Foundry control castings shall be submitted to the Buyer for review and approval, as required below, prior to initiation to continuation of production. Foundry control castings are in addition to purchase order end item quantity requirements.

- A. Radiographic film of foundry control castings and test report shall be reviewed and approved by the Buyer's Quality Representative at the Seller's radiographic department or agency. Applicable film and test reports will accompany foundry control castings delivered to Buyer.
- B. Seller will deliver to Buyer a minimum of one foundry control casting, heat treated and straightened to the casting drawing requirements, for examination and approval by the Buyer. Such casting(s) shall be representative of the foundry practices and processes to be used for the production castings.
- C. Seller shall submit a certified statement of the test bar mechanical properties with each foundry control casting. The test bar(s) shall be from the same melt and heat-treat as the foundry control casting.
- D. Seller shall submit a certified statement of chemical analysis of the material in the foundry control casting showing the percentage of each element contained in the specimen.
- E. Radiographic film of foundry control castings and test report shall accompany such castings when delivered to the Buyer for review and approval at Buyer's facility.

AI TOOL PROOFING (V)

Tooling required for production under this purchase order is subject to acceptance by ITT. The supplier shall notify ITT when tooling has completed inspection. ITT

acceptance will be contingent upon review of supplier data regarding inspection of applicable characteristics of a quantity of dimensional samples produced by the tooling and tool inspection data. The tooling and dimensional samples produced by this tooling shall conform to the tolerance limits of engineering drawings and specifications stated in this purchase order. This inspection may be under the surveillance of the cognizant ITT Product Assurance Representative at the supplier's facilities or the data and sample parts will be shipped to ITT for approval as directed by the Buyer. Dimensional samples shall be identified with the tool number.

AJ CERTIFIED SUPPLIER (R)

Apply Quality Assurance stamp and the following delegation statement to the pack sheet, "This supplier has been delegated ITT inspection authority for all parts manufactured under contract with ITT".

AK IDENTIFICATION (V)

- A Apply part number and revision letter per applicable drawing note.
- B Bag and tag parts.
- C Tag parts.
- D Identify per PO instructions and requirements.
- E Identify parts in accordance with MIL-STD-130 (latest revision as of the date of purchase order issuance).

SPECIAL PRODUCT ASSURANCE REQUIREMENTS (Quality-Codes)

The following Special Product Assurance Requirements are part of the purchase order when specified by the Quality Code Number in the body of the purchase order.

Q-1 CONFIGURATON CONTROL (V)

Moved to Mandatory Quality Requirement (Letter R)

Q-2 MERCURY CONTAMINATION CERTIFICATION (V)

If an annual certification is not on file at ITT, a Mercury Free Certificate of Compliance shall be executed by a responsible officer of your company and shall be submitted with each shipment of product against an ITT purchase order stating "Mercury Free Certification required". The conditions of purchase forming a part of this order stipulate that: materials furnished under this order shall be free from contamination by presence of mercury. The requirements stated below form a part of this order.

BACKGROUND: Mercury is corrosive to gold, silver, nickel, stainless steel, aluminum and copper alloys. Accidental trapping of mercury in component could cause serious damage to vital parts. Mercury is also toxic if inhaled, ingested or absorbed through the skin. It is evident that grave consequences could result from small amounts of mercury vapor present in an un-replenished atmosphere.

- A. REQUIREMENTS: (Reference MIL-STD-767) material furnished under this purchase order shall not contain functional mercury in any form.
- B. Mercury-bearing instruments and/or equipment which might cause contamination

Quality Assurance

shall not be used in the manufacture, fabrication, and assembly or testing of any material furnished under this purchase order. The most probable causes of contamination are direct connected mercury manometers, mercury vacuum pumps, mercury seals, mercury-in-glass thermometers, fluorescent lights or handling of mercury in the immediate vicinity. In case of doubt or question or manufacturing procedures, you may call ITT ICS for assistance.

- C. In the event of any accident involving mercury contamination of the material being furnished on this purchase order or suspicion of such contamination, ITT ICS shall be notified immediately.
- D. Your sub-contractors must be notified of and must comply with the requirements of this notice.

Q-3 INSPECTION AND TEST

Moved to Mandatory Quality Requirement (Letter S)

Q-4 GAGES, MEASUREMENT AND TEST DEVICE AVAILABILITY

Moved to Mandatory Quality Requirement (Letter T)

Q-5 INSPECTION AND TEST PLAN

DELETED

Q-6 SELLER'S QUALITY CONTROL SYSTEM

DELETED

Q-7 SELLER'S QUALITY CONTROL SYSTEM

Moved to Mandatory Quality Requirement (Letter V)

Q-8 GAUGE AND MEASURING DEVICE CONTROL

Moved to Mandatory Quality Requirement (Letter W)

Q-9 CHEMICAL AND PHYSICAL TEST ANALYSIS / REPORTS

Moved to Mandatory Quality Requirement (Letter E)

Q-10 LOT CONTROL AND MATERIAL TRACEABILITY

Moved to Mandatory Quality Requirement (Letter X)

Q-11 AGE CONTROL AND MATERIAL TRACEABILITY

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Moved to Mandatory Quality Requirement and Change to Shelf Life Control (Letter Y)

Q-12 MATERIAL REVIEW (MRB) AUTHORITY

Moved to Mandatory Quality Requirement (Letter Z)

Q-13 PRODUCT PRESERVATION AND PACKAGING

Moved to Mandatory Quality Requirement (Letter AA)

Q-14 PROHIBITION OF MATERIALS AND CHEMICALS (V)

PROHIBITION OF PURE TIN:

The uses of Pure Tin Plated finishes are strictly PROHIBITED! Any Tin Plating or Solder processes shall contain no less than three (3) percent Lead composition, unless specifically authorized in writing by the Procuring Agency. These restrictions apply for all types and levels of procurements, with the Seller responsible for communicating these restrictions to subcontractors or sub-tier suppliers as required.

EXCLUSION OF HAZARDOUS MATERIALS ON EPA 17 AND DOD TOP 10 AND RoHS LISTS:

Every effort should be made to exclude chemicals and compounds found on the EPA 17, DoD top 10, and RoHS (and REACH) lists of hazardous materials (see Attachment 1) in the equipment of supplies furnished under this Purchase Order. In addition, every effort should be made to exclude hazardous materials found on said lists in the processes used to furnish equipment or supplies under this Purchase Order. Reasonable steps shall be taken to ensure that said equipment or supplies are not contaminated with any chemicals and compounds on EPA 17, DoD Top 10, and RoHS lists. Should the Technical Data Package require hazardous materials contained on EPA 17, DoD Top 10, and RoHS lists, notify the ITT buyer.

EXCLUSION OF MERCURY:

The equipment or supplies furnished under this Purchase Order shall contain no metallic mercury or mercury compounds and reasonable steps shall be taken to ensure that said equipment or supplies are not contaminated with mercury or mercury compounds. Should the Technical Data Package require mercury or mercury compounds, notify the ITT buyer.

ELIMINATION OF OZONE DEPLETING CHEMICALS:

The Clean Air Act (42 U.S. C. Section 7401) Title VI, Section 602A, as amended November 15, 1990, bans the production of Class 1 Ozone Depleting Chemicals (ODC) effective 1 January 1996. Process changes associated with the elimination of these chemicals, as applicable to the manufacture of the item(s) on this purchase order, must be approved by ITT prior to implementation. Notification must include technical rationale validating the new process. Should a reference for ODC be found within the Technical Data Package, please notify the individual whose name appears in the buyer field of the purchase order.

Every effort should be made to exclude Class 2 Ozone Depleting Chemicals in the equipment or supplies furnished under this Purchase Order. In addition, every effort

should be made to exclude Class 2 Ozone Depleting Chemicals found on said lists in the processes used to furnished equipment of supplies under this Purchase Order. Reasonable steps shall be taken to ensure that said equipment of supplies is not contaminated with Class 2 Ozone Depleting Chemicals. Should the Technical Data Package require Class 2 Ozone Depleting Chemicals, please notify the individual whose name appears in the buyer field of the Purchase Order.

Q-15 SAMPLING INSPECTION

Deleted & Moved to Mandatory Quality Requirement (Letter G)

Q-16 SELLER'S CERTIFICATION

Moved to Mandatory Quality Requirement (Letter H)

Q-17 MATERIAL SUPPLIED BY ITT

Moved to Mandatory Quality Requirement (Letter I)

Q-18 PREFERENCE FOR DOMESTIC SPECIALTY METALS (V) (R)

Any specialty metals (as defined by the clause) included in any article delivered under this Purchase Order, must comply with the DFARS clauses 252.225-7008, 252.225-7009, & 252.225-7010. The Supplier must flow these DFARS clauses down to all sub-tier suppliers who provide articles made from or containing specialty metals which are delivered under this Purchase Order.

Q-19 FIRST ARTICLE INSPECTION

Moved to Mandatory Quality Requirement (Letter AB)

Q-20 SUPPLIER IDENTIFICATION

Moved to Mandatory Quality Requirement (Letter AC)

Q-21 LIQUID PENETRATE EXAMINATION

The supplier shall certify Liquid Penetrate Examination to MIL-STD-271.

Q-22 LIQUID PENETRATE EXAMINATION

The supplier shall certify Liquid Penetrate Examination to NAVSEA document 0900-LP-003-8000.

Q-23 MATERIAL HARDNESS MEASUREMENT (V) (R)

Material hardness readings are required. Actual readings as specified on drawing or purchase order shall be taken and recorded individually.

Q-24 LIQUID PENETRATE EXAMINATION

The supplier shall certify Liquid Penetrate Examination to NAVSE4 document NTR-1.

Q-25 CERTIFICATION OF CONFORMANCE

Moved to Mandatory Quality Requirement (Letter AD)

Q-26 SPECIAL CERTIFICATE OF COMPLIANCE

DELETED

Q-27 GOVERNMENT SOURCE INSPECTION (V)

Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the Government Representative who normally services your plant so that appropriate planning for government inspection can be accomplished.

Q-28 CONTROL OF SPECIAL PROCESSES

Moved to Mandatory Quality Requirement (Letter AE)

Q-29 NOTIFICATION OF PRODUCT CHANGE

Moved to Mandatory Quality Requirement (Letter AF)

Q-30 FOUNDRY CONTROL OF CAST PARTS

Moved to Mandatory Quality Requirement (Letter AH)

Q-31 CONTROL OF NONDESTRUCTIVE TESTING (NDT) (R)

Items requiring NDT shall be submitted, complete with part drawing or document establishing NDT requirement, to a laboratory acceptable to Buyer. Test results shall be reported in writing to the Buyer, identifying the laboratory and the certified technician who performed and/or evaluated the tests, signed by a responsible laboratory representative. An adequate method of identifying and cross-referencing each x-ray film exposure, report, and item must be provided. When parts are serialized, serial numbers must appear on the report and film with the control number.

- A. Minimum radiographic requirements are included in this purchase order on attached sketch.
- B. Radiographic film of each lot and other NDT results, including foundry control NDT, shall be inspected by the Buyer at the laboratory performing the work prior to shipment. The Seller shall notify the Buyer when the film is ready for review.

- C. NDT reports shall be submitted with each shipment to the Buyer and shall include x-ray film when radiographic inspection is required.
- D. NDT Facility must be certified to ISO 17025.

Q-32 CONTROL OF FORGINGS (R)

- A. The Seller shall furnish the Buyer a sample test forging from the first production run for destructive qualification testing that is representative of all processing used. This test forging is in addition to the production quantities required.
- B. With each shipment, the Seller shall submit two test samples from each heat of material used in the shipment. The samples shall be suitable to make specimens conforming to R-3 of Federal Test Standard No. 151 and be subjected to the same processing the production forgings receive including working and heat treatments.
- C. The forgings shall be made with a detachable tab. The tab shall not be removed until completion of all processing including heat treatment. The tabs shall be removed and shipped with the forgings to the Buyer. The tabs shall be identified to material heats and heat treat lots, and shall include serial numbers when serialization is required.

Q-33 ITT SOURCE INSPECTION (V)

Items to be delivered under this purchase order require inspection or tests or both by Buyer at Seller's plant sufficient advance notice shall be given Buyer to provide the necessary means for such inspection or test at the Seller's plant Seller shall notify Buyer's purchasing department when the product is ready for source inspection. Written evidence of inspection or test or both and any other evidence of quality which indicates that specification requirements of this purchase order have been met must be made available for review by the Buyer's representative. Seller agrees to provide, at no charge, facilities and equipment necessary to perform on-site inspection by Buyer's representative. Source inspection at the Seller's plant does not relieve the Seller of compliance with all the requirements of this purchase order. The Buyer reserves the right of final acceptance at its facility

Q-34 TOOL PROOFING

Moved to Mandatory Quality Requirement (Letter AI)

Q-35 DOCUMENTATION REQUIREMENTS

DELETED

Q-36 FIRST ARTICLE REQUIREMENT

DELETED – FAIR REQUIREMENT ON AB SECTION

Q-37 CERTIFIED SUPPLIER

Moved to Mandatory Quality Requirement (Letter AJ)

Q-38 SPECIAL RECORD RETENTION (V)

This product requires lifetime record retention. Supplier shall define the controls needed for the identification, storage, protection, retrieval, retention and disposition of records. Records shall remain legible, readily identifiable and retrievable upon request by ITT in compliance with AS9100 or ISO 9001

Q-39 IDENTIFICATION

Moved to Mandatory Quality Requirement (Letter AK)

Q-40 LIQUID PENETRATE EXAMINATION

The supplier shall certify Liquid Penetrate Examination to ASTM E-1417.

Q-41 DROP SHIPMENTS (V)

The material ordered hereunder is to be shipped to other than the Buyer's facilities. Copies of the Product Assurance data required by this order shall accompany the shipment; in addition, one copy of such data and a copy of the Shipping Document shall be mailed to the Buyer on the same day that shipment is made.

9.0 RECORDS

All records associated with this procedure will be in accordance with the record retention policy outlined in QDI-516-1 or the specific contract requirements if more stringent.

Form / Reference	Record Holder	Record Location
Quality requirements Test Reports, Certificates	Receiving Inspection	Certificate cabinets and/or electronic records database

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ATTACHMENT 1

N. EPA 17 LIST		DoD TOP 10 LIST	
1	BENZENE	1	ETHYLENE GLYCOL
2	CADMIUM & COMPOUNDS	2	HEXAChLOROChENZENE
3	CARBON TETRACHLORIDE	3	HYDROChLORIC ACID
4	ChROMIUM & COMPOUNDS	4	METHYLENE ChLORIDE
5	ChLOROFORM	5	METHYL ETHYL KETONE (MEK)
6	CYANIDE COMPOUNDS & HYDROGEN CYANIDE	6	PhENOL
7	NICKEL AND COMPOUNDS	7	TETRACHLOROETHYLENE
8	LEAD & COMPOUNDS	8	1,1,1- TRICHLOROETHANE
9	MERCURY & COMPOUNDS	9	TOLUENE
10	METHYLENE ChLORIDE	10	ZINC COMPOUNDS
11	METHYL ETHYL KETONE (MEK)	RoHS List	
12	METHYL ISOBUTYL KETONE	1	HEXAVALENT ChROMIUM (CrVI)
13	TETRACHLOROETHYLENE	2	MERCURY (Hg)
14	TOLUENE	3	LEAD (Pb)
15	1,1,1-TRICHLOROETHANE	4	CADMIUM (Cd)
16	TRICHLOROETHYLENE	5	POLYBROMATED BIPHENYLS (PBB)
17	XYLENES (ALL)	6	POLYBROMATED DIPHENYL ETHERS (PBDE)

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REVISION PAGE / PAGINA DE REVISIONES

Rev.	Date/ Fecha	Revision	Affected Personnel/ Personal Afectado
-	7/9/12	Written on QDI Standard format and structure under new number; added paragraphs 3. Reference Documents, 4. Inputs/outputs, 6. Responsibilities, 9. Records paragraphs. / Escrito en el formato estándar y estructura de QDI bajo Nuevo número, se agregaron los párrafos para documentos de referencia 3., entradas/salidas 4., responsabilidades 6., y Registros 9. (Previously QDI-510-3-6 and at revision A1) J. Raymundo	Receiving Insp. SQE's Buyers Suppliers
A	7/30/12	<ul style="list-style-type: none"> Added start dates to clause Q-19 and a note for ITT required fields / Se agrego fechas de inicio a cláusula Q-19 y una nota para campos requerido por ITT. Added "Date of Manufacture" to clauses Q-25 and Q-26 / Se agrego "Fecha de Fabricación" a cláusulas Q-25 y Q-26. T. Rodriguez	Receiving Insp SQE's Buyers Suppliers
B	8/15/12	<ul style="list-style-type: none"> Add paragraph M, Non-Conformance Escapement, to the general requirements / Se agrego párrafo M, Escape de Inconformidad, a los requisitos general T. Rodriguez	Receiving Insp. SQE's Buyers Suppliers
C	10/15/12	<ul style="list-style-type: none"> Updated company name and logo / Se actualizo el nombre de la compañía y el logotipo Added QDI-506-2 to section 3.0 / Se agrego QDI-506-2 a la sección 3.0 Added statement about non-metallic material to clause Q-9 / Se agrego una declaración sobre materiales no metálicos a la cláusula Q-19 T. Rodriguez	Receiving Insp. SQE's Buyers Suppliers
D	1/24/13	<ul style="list-style-type: none"> Changed the Word "this" to "all" in the General Requirements sentence / Se cambio la palabra "este" a "todo" en la frase de Requisitos Generales Changed ANSI/ASQ Z1.4 to Zero Acceptance Number Sampling Plans in paragraph F / Se cambio ANSI/ASQ Z1.4 a Planes de Muestreo de Cero Numero de Aceptación en párrafo F Revised Q-7 to read ...certified to ISO 9001:2008 or equivalent / Q-7 fue revisado para leer ...certificado a ISO 9001:2008 o equivalente T. Rodriguez	Receiving Insp. SQE's Buyers Suppliers

E	12/03/15	<ul style="list-style-type: none"> • Changed General requirements Section G CORRECTIVE ACTION REQUESTS establishing update SCAR's Cycletime expectations and penalties due to failure from Supplier / Cambiado los requerimientos Generales sección G REQUERIMIENTOS DE ACCION CORRECTIVA estableciendo actualización para SCAR's en cuanto Tiempo ciclo, expectativas de respuesta y penalizaciones al fallar por parte del proveedor. • Modified Q-9 CHEMICAL AND PHYSICAL TEST ANALYSIS / REPORTS Section elaborating on reports expectation and adding a table guide 1.0. / Modificación de la sección ANALISIS/REPORTES DE PRUEBAS QUIMICAS Y FISICAS elaborando en la expectativa en reportes y agregando tabla 1.0 en la misma sección. 	Receiving Insp. SQE's Buyers Suppliers
F	8/19/16	<p>Moved from Quality Codes to Mandatory Requirements</p> <p>Q-3 Inspection And Test Q-4 Gages, Measurement And Test Device Availability Q-5 Inspection And Test Plan Q-7 Seller's Quality Control System Q-8 Gauge And Measuring Device Control Q-9 Chemical And Physical Test Analysis / Reports Q-10 Lot Control And Material Traceability Q-11 Age Control And Material Traceability (Shelf Life Control) Q-12 Material Review (Mb) Authority Q-13 Product Preservation And Packaging Q-15 Sampling Inspection (Merged) Q-17 Material Supplied By ITT Q-19 First Article Inspection Q-20 Supplier Identification Q-25 Certification Of Conformance Q-28 Control Of Special Processes Q-29 Notification Of Product Change Q-30 Foundry Control of Cast Parts Q-34 Tool Proofing Q-37 Certified Supplier Q-39 Identification</p> <p>Deleted for duplicity or merged</p> <p>Q-6 Seller's Quality Control System Q-26 Special Certificate of Compliance Q-35 Documentation Requirements Q-36 First Article Requirement</p>	Receiving Insp. SQE's Buyers Suppliers

G	7/13/18 7/13/18 JL.	<p>Moved from Quality Codes to Special Requirements</p> <p>Q-5 Inspection And Test Plan Clause Deleted</p> <p>Note: Clauses with Symbol (R) for Clauses verifiable at Receiving Inspection Clauses with Symbol (V) for Clauses verifiable Vendor Qualification /Surveillance process</p> <p>Updated Table 1.0 Document compliance</p>	<p>Receiving Insp. SQE's Buyers Suppliers</p>
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