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**APPROVAL SIGNATURES**

Quality Assurance Manager: George Caraza 07/21/16  
Date  
George Caraza

Supply Chain Manager: Maya Berlin 07/21/16  
Date  
Maya Berlin


**Change Record**

Rev	Date	Description of Change	Initials
1	10/15/01	1.1.1 Revised.	S.D.B.
2	02/28/03	3.1.4, 3.1.5, 4.2, 10.4 Revised.	S.D.B.
3	05/12/04	1.1.3.3, 3.1.4, 4.1, 10.4 revised. 1.1.3.4 replaced 1.1.3.5.	H.P.A.
4	07/14/04	10.4 Revised	H.P.A.
5	02/17/05	1.1.1 General Requirements Revised.	H.P.A.
6	10/10/06	2.1.8, 2.1.8.1, 2.1.8.3 Revised	H.P.A.
7	03/16/07	10.2.1 Production Order Inspection at Buyers Facility Added	H.P.A.
8	07/16/09	3.1.4.1, 3.1.4.2, 3.1.5 Quality System Requirements & 5.3 Control of Fasteners Certification	T.T.B.
9	12/4/09	Added Section 11 – FOD prevention program, Revised Para 7.1 to flow down NADCAP requirements.	T.T.B.
10	1/26/12	Para. 1.1.1: New performance requirements for Key Suppliers.	T.G.M
11	7/08/12	Para. 1.1.1: Clarification on Key Suppliers, and how they are selected.	T.G.M.
12	1/03/13	Para. 4.2: Added right of entry to all applicable supplier facilities and supply chain levels.	T.G.M.
13	11/15/13	1.1: raised performance requirements for suppliers and added the use of a risk assessment to identify critical suppliers. Para 8. Added First Article Requirement, PCB & Machined Parts	S.M.
14	12/23/13	Added 12; Counterfeit Parts Program. Section 3.1.4 – changed reference to the ISO and AS 9100 to latest revision instead of referencing an actual revision. 2.1.6 changed record retention requirement to 15 y	S.M.

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<b>Rev</b>	<b>Date</b>	<b>Description of Change</b>	<b>Name</b>
15	5/2/14	1-12 revised, added 13: Conflict Minerals	K.L.
16	7/13/15	Revise para 1.1 Supplier On-time Delivery to 75%, para 1.1 Add Critical Risk Assessment Criteria, para 2.1.6 Added Supplier Survey Reference and add para 14, Supplier Exception Clause.	George Caraza
17	12/8/15	Revise para 1.1.1 to clarify Critical Suppliers On Time Delivery requirement	George Caraza
18	1/15/16	Added subsection 15, Transfer Plan	George Caraza
19	07/21/16	Added §2.1.11 Second Sourcing	George Caraza

**Distribution List: ALL DEPARTMENTS**

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## 1. PURPOSE

This work instruction establishes general and special product assurance requirements, which are part of the Terms and Conditions on the Purchase Order. It is intended to clearly define all requirements for the Seller to ensure that all products delivered by Seller on the Purchase Order conform to Buyer specified requirements for quality, reliability and integrity.

### 1.1 Applicability

#### 1.1.1 General Requirements

Unless expressly excluded on the Purchase Order, the general product assurance requirements apply to all orders, and Seller's compliance to these requirements is subject to verification by Hydra-Electric Company. Hydra-Electric Company monitors critical supplier's performance. Critical suppliers were identified through the use of a Cause and Effect Criticality Risk Assessment performed by the Purchasing Manager, Quality Engineer and Quality Manager. The Critical Risk Assessment criteria are Utilization Rate, Importance to Production Process and Effort to Qualify. See ASL for complete Criteria definition. Critical Suppliers must maintain a minimum rating of 95% based on quantity accepted versus quantity received. These Critical Suppliers must also maintain a minimum on-time delivery of 75% based on quantity received on-time versus quantity delivered. Hydra-Electric Company's goal for supplier performance is 100% quality acceptance and 100% on-time delivery. Critical Suppliers are advised of their performance on a quarterly basis. When a Critical Supplier's rating falls below the minimum standard for two consecutive quarters, formal corrective action is required. The Customer Approved Suppliers are exempt from this requirement.


#### 1.1.2 Special Requirements and Flow-down Requirements

To ensure conformance to all Purchase Order requirements, Seller flows down applicable requirements to Seller's sub-tier sources, when Seller uses such sources for procurement of products and/or services scheduled for delivery to Hydra-Electric Company.

#### 1.1.3 Reference Documents

##### 1.1.3.1 Applicability

All documents, including drawings and specifications, whether Hydra-Electric Company, Industry or Government, are considered part of the Purchase Order requirements when specified directly on the Purchase Order or in documents referenced by the Purchase Order.

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### 1.1.3.2 Document Revision Status

Unless otherwise specified on the Purchase Order, or referenced documents, the revision status of all applicable documents in effect on the date of issue of the Purchase Order, apply to the order.

### 1.1.3.3 Document Sources

Hydra-Electric Company shall furnish copies of Hydra-Electric Company proprietary documents, and any special documents not generally available from commercial sources, required by Seller to comply with Purchase Order. Seller is responsible for obtaining Industry/Government documents. Any problems experienced by Seller in obtaining required documents should be brought to the attention of the Purchasing Agent at Hydra-Electric Company.

### 1.1.3.4 Special Forms Applicable to Subcontractors

Special form(s) applicable to sub-contractors are described in this instruction.

## 2. SUPPLIER CLAUSES

### 2.1 General Practice

The Seller is responsible for meeting all requirements of Paragraphs 2.1.1 through

#### 2.1.1 Prohibited Practices

The following acts and practices are prohibited, and any violation not approved by Hydra-Electric Company in writing may result in disqualification of the Seller.

##### a. Unauthorized Facility Changes


During performance on the Purchase Order, Seller gives Hydra-Electric Company written notice before relocating any production, inspection or processing facilities or transferring the work between different facilities, or making any other changes that may affect product quality.

##### b. Unauthorized Product Changes or Substitutions

Seller makes no changes or substitutions to any product(s) or service required by the applicable drawing, specification or document without prior written authorization by Hydra-Electric Company. Authorization may be contingent on Hydra-Electric Company representative's review of proposed changes at the facilities of Seller or Seller's sub-tier sources.

#### 2.1.2 Responsibility for Product Conformance

Neither audit, surveillance, inspection and/or tests made by Hydra-Electric Company relieve the Seller of the responsibility to furnish product(s)/service(s) that conform to all of the requirements of the Purchase Order.

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### 2.1.3 Seller Designed Products

When the Purchase Order is for Hydra-Electric Company approved product(s) under Seller's engineering design control, Seller notifies Hydra-Electric Company in writing, of any changes in the approved product description. Hydra-Electric Company reserves the right to disapprove any and all changes.

#### 2.1.3.1 Class I Changes

Any change in design, fabrication, methods, or processes that result in a Class I change (as defined in Mil-Std-973) must be submitted to Hydra-Electric Company for written approval prior to affecting such change.

#### 2.1.3.2 Class II Changes

Seller may incorporate Class II changes without prior approval. Seller maintains a copy of the revised product description on file for "on site" review, or subsequent request by Hydra-Electric Company.

### 2.1.4 Buyer Initiated Changes


#### 2.1.4.1 Effectivity

Seller incorporates on product(s) at the specified Effectivity points, all changes to drawings, specifications, tests, inspections and fabricating methods, or any other change initiated by Hydra-Electric Company through a formal Purchase Order change and/or amendment. Seller's system includes appropriate controls and records, including records at Seller's sub-tier sources, showing the date, lot, serial number, revision letter or other positive identification that provides objective evidence of incorporation of all changes. Such records are subject to verification by Hydra-Electric Company.

### 2.1.5 Certification Requirements

#### 2.1.5.1 Certifications

Seller furnishes all certifications, issued by Seller or Seller's sub-tier source, required by the Purchase Order or the clauses herein, with the initial delivery of the product(s) on the Purchase Order. On subsequent deliveries of the product(s) from **the same lot**, Seller may, in lieu of providing additional copies of certifications, reference on their shipping documents, the date and Purchase Order on which the certifications were initially supplied. Seller is responsible for verifying certifications furnished by Seller's sub-tier sources for their adequacy and compliance to the Purchase Order and requirements therein. To ensure the adequacy and authenticity of all certifications furnished by the Seller, the certifications must include the name of the issuing organization and be signed by an official of the issuing organization.

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### **2.1.5.2 Acceptance Signatures**

Only actual signatures tendered in ink by the signing official, a facsimile with an actual signature such as a rubber stamp, or a machine or computer graphics generated facsimile signature are acceptable. Seller may use a quality or inspection stamp in lieu of a signature providing that such stamp(s) identify the Seller, and the Seller's authorized individual to who the stamp is assigned.

### **2.1.6 Seller's Records**

Unless otherwise specified on the Purchase Order, Seller retains all required records as objective evidence of conformance to Purchase Order requirements, including Seller's records and certifications of inspections and tests performed in the course of procurement, manufacturing, testing, processing, preserving, packaging and shipping products(s) on the Purchase Order, for a minimum of fifteen (15) years after completion of the order, as state in Supplier Survey QA-005, unless otherwise provided by Purchase Order or regulatory requirement. Records shall remain legible, readily identifiable and retrievable. Such records are made available to Hydra-Electric Company and Hydra-Electric Company's customer for review upon request.

### **2.1.7 Control Of Non-Conforming Products and Material Review**

#### **2.1.7.1 Submittal of Non-Conforming Material**


Seller notifies Hydra-Electric Company's Purchasing Agent of any products(s) found to be non-conforming to Hydra-Electric Company's drawings, specifications, Purchase Order or other applicable documents prior to shipment. Seller must submit written documentation of the observed non-conformity to Hydra-Electric Company's Purchasing Agent, for disposition by Hydra-Electric Company's Material Review Board (MRB). Submission may be on Seller's formats if discovered at Seller's facility.

#### **2.1.7.2 Re-submittal of Rejected Products**

Products rejected by Hydra-Electric Company and resubmitted by Seller are clearly identified as resubmitted product(s). Seller's shipping documents must contain a statement that product(s) delivered are either "replacement" or "reworked" product(s), and include reference to Hydra-Electric Company's rejection document number.

### **2.1.8 Corrective Action**

When a quality (system or product) non-conformance is identified, Hydra-Electric Company may request a formal corrective action response from the Seller. Such requests require a timely and documented response (within 20 working days) by Seller and shall include the following information:

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**2.1.8.1** Seller's analysis of the root cause of the non-conformance, including a statement explaining why Seller's inspection/quality system failed to detect the non-conformance.

**2.1.8.2** When applicable, a statement that Seller's stock or inventory has been re-inspected and that the non-conforming product(s) have been removed.

**2.1.8.3** Description of the corrective action taken by Seller to preclude recurrence.

**2.1.8.4** The effectivity (date, serial number, lot etc.) of the corrective action implemented by the Seller.

**2.1.9 Hydra-Electric Company's Furnished Property**

Seller is responsible for maintaining the accuracy and stability of Hydra-Electric Company's furnished equipment used for product acceptance. Hydra-Electric Company's furnished equipment requires periodic re-inspection and calibration as indicated on the calibration stickers on the furnished property. It is the Seller's responsibility to ensure continued accuracy while in the Seller's possession.

**2.1.10 Product Identification**

All products are identified in accordance with drawing, specification, and/or Purchase Order requirements. Unless permitted by drawing, steel stamping and vibro-engraving, identification methods are prohibited, except on attached metal tags.

**2.1.11 Second Sourcing**

Where possible, suppliers will identify and secure a second source for all materials and components identified in the bill of materials, which are used to fulfill purchase orders.

**3. SPECIAL PRODUCT ASSURANCE**

**3.1 Seller's Quality Program Requirements**


**3.1.1 Basic Inspection System Requirements for Manufacturers**

Seller establishes and maintains a documented inspection system that includes provisions for the following:

**a. Control Of Sub-tier Sources**

All products scheduled for delivery to Hydra-Electric Company and procured by Seller from Seller's sub-tier sources at every tier must comply with all applicable provisions of drawings, specifications and other requirements of Hydra-Electric Company's Purchase Order. When sub-tier source approval is required by Hydra-Electric Company, only sub-tier



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sources currently approved by Hydra-Electric Company or its customer may be used to procure product(s) or services.

**b. Receiving Inspection**

Product(s) purchased by Seller for use in Hydra-Electric Company’s Purchase Orders, are inspected by Seller upon receipt to the extent required to ensure conformance to all applicable requirements. Hydra-Electric Company’s furnished materials are inspected to the extent necessary to ensure that damage was not incurred during transit and are identified and segregated for use ONLY in Hydra-Electric Company’s Purchase Orders, or as prescribed by Hydra-Electric Company’s Purchasing Agent.

**c. Manufacturing Controls**

Seller employs a system for controlling, documenting and maintaining required product quality levels throughout the manufacturing process whether performed by Seller or Seller's sub-tier sources. Manufacturing plans, outlines, shop routing or traveler, or other suitable methods, which define the step-by-step sequence of manufacturing operations and inspection points and provide objective evidence that resultant product(s) conform to specified requirements. Such plans are subject to verification by Hydra-Electric Company’s representatives.

**d. Control Of Measuring Equipment**

Seller maintains suitable tools, gages and Materials & Test Equipment (“M&TE”) of required accuracy for use during the manufacturing and inspection operations to verify product conformance to specified requirements. Such tools, gages and M&TE are calibrated at scheduled intervals, against certified standards that have known valid relationship to National or International Standards.


**e. Preparation for Shipment**

Seller ensures that product(s) are complete to Purchase Order requirements and that all manufacturing and product inspection and acceptance requirements have been satisfied prior to shipment. Seller ensures that product(s) are packaged in accordance with applicable requirements and are accompanied by the required inspection and technical documents.

**3.1.2 Inspection System Requirements for Distributor/Warehouse**

Seller establishes and maintains a documented system to control product quality and integrity. Seller's system includes provisions for:



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**a. Control of Purchases and Sub-Tier Sources**

Seller's purchasing or ordering documents contain data clearly describing the product(s) ordered, including, when applicable, the type, class, grade and size or (other precise identification) and the title (or other positive identification) and applicable issue of specification(s), drawing(s), or other relevant technical data. When applicable purchase of products are made only from sources specified by Hydra-Electric Company, or sources that are listed as qualified and/or approved manufacturers or distributors of the product on the applicable Qualified Products List (“QPL”) or Preferred Parts List (“PPL”). Procurement from such sources however, does not relieve Seller of the responsibility to furnish product(s) that meet all requirements specified by the Purchase Order.

**b. Inspection**

Seller employs receiving, in-process and final inspection and testing to the extent necessary to verify product conformity.

**c. Stock Control and Traceability**

Seller's system provides for handling and storage of product(s) in a manner to protect product quality by preventing damage, loss, deterioration, contamination, corrosion, degradation or substitution. Stock control is such that it precludes unauthorized withdrawal of product(s). Products from different manufacturing sources are stored in a manner so that product(s) do not become intermixed and that the manufacturing source and the identity and traceability of the individual lot or batch, heat number, etc. are maintained from time of receipt to Seller, from Seller's sub-tier sources, to delivery to Hydra-Electric Company.

**3.1.3 Continuous Process Improvement Program Requirements**


When specified on the Purchase Order, the Seller establishes and maintains a Statistical Process Control (“SPC”) program. The minimum Cpk for process control is 1.33 Cpk. When required by Purchase Order, the Seller furnishes such Statistical Process Control reports to validate product Cpk.

**3.1.4 Quality System Requirements**

**3.1.4.1 Manufacture**

Seller's quality system at a minimum shall comply with the latest revision of ISO 9001 or AS 9100 requirements for a quality management system. Seller's system is subject to an on-site audit under one of the following conditions:

- a. New Vendor
- b. Change in status – vendor location, vendor performance rating, or change in quality system.

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Seller's quality system is not subject to an on-site audit if their quality system is currently certified by a third-party registrar to the latest revision of the ISO 9001 and or AS 9100 and is currently on file with Hydra Electric Company.

#### **3.1.4.2 Service**

Seller's quality system at a minimum shall comply with the latest revision of the ISO 9001 or AS 9100 requirements for a quality management system. Seller's quality system is subject to an on-site audit under one of the following conditions:

- a. New Vendor
- b. Change in status – vendor location, vendor performance rating, or change in quality system.

Seller's quality system is not subject to an on-site audit if their quality system is currently certified by a third-party registrar to the latest revision of the ISO 9001, AS 9100, both, or is NADCAP Accredited, and performing a Weld, Solder, or Metallurgical Service.

##### **3.1.4.2.1 Notification of Change in Accreditation**

The Supplier/Seller shall notify Hydra-Electric Company of any change(s) in accreditation that might affect Seller's qualification status.

#### **3.1.5 Calibration System Requirements**


Seller's quality assurance calibration system at a minimum shall comply with the latest revision of ISO 10012-1 and/or ANSI Z540 requirements for measuring equipment.

##### **3.1.5.1 Calibration Lab**

Seller's calibration system at a minimum shall comply with ISO/IEC Guide 25/ISO 17025. Seller's quality assurance calibration system shall not be subject to an on-site audit if seller maintains Accreditation to ISO/IEC Guide 25/ISO 17025.

#### **3.1.6 Seller's Material Review Authority**

Seller's material review authority is limited to disposition of "rework" or "scrap". Seller's Material Review Board ("MRB") may not render a disposition of "use as is" and/or "repair" on any products found to be non-conforming. The Seller may propose a "use as is" and/or "repair" disposition including appropriate justification to the Hydra-Electric Company's Purchasing Agent, however such final decision is that of Hydra-Electric Company.

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**4. SOURCE INSPECTION REQUIREMENT**

**4.1 Hydra-Electric Company Source Inspection**

During performance of this Purchase Order, all work may be subject to source inspection and/or test by a Hydra-Electric Company representative. When this requirement is specified on the Purchase Order, the Seller ensures that the Hydra-Electric Company representative is notified immediately upon receipt of the Purchase Order, a minimum of 48 hours in advance of any verification or test.

**4.2 Hydra-Electric Company And Customer Right Of Entry**

During the term of this Purchase Order, Hydra-Electric Company representatives, Regulatory Authorities, and Hydra-Electric Company customers shall have the "right of entry" to the Seller's premises and to *applicable areas of all facilities, at any level of the supply chain, involved in the order and to all applicable records*, for the sole purpose of validating performance of the Purchase Order requirements. The Seller is notified in advance when such conditions apply.

**5. STATEMENTS OF QUALITY**

**5.1 Certificate Of Conformance (“COC”)**


Seller provides, on the packing list/shipper or on a separate document, a written statement that all supplies and/or services comply with all requirements of the Purchase Order.

**5.2 Mercury Free**

Seller takes all precautions to ensure that all products provided have not come in contact with or have been exposed to mercury bearing instruments or equipment, or mercury in any other form.

**5.3 Control of Fasteners Certification**

Hydra-Electric Company’s purchase order terms and conditions require that with each shipment of fasteners, the Seller furnishes documentation that identifies the fastener manufacturer and the manufacturer's production lot or batch. In addition, the Seller certifies that the manufacturer or other source of the fasteners is not currently listed as a "debarred, suspended, or ineligible contractor" on the current issue of the "lists of parties" published by the U.S. Government, General Services Administration (“GSA”).

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## 6. RAW MATERIAL TEST REPORT

### 6.1 Raw Material Test Reports

For each lot or heat of material supplied on this Purchase Order, Seller furnishes a certified material test report listing the material description, including as applicable, the material name or designation, alloy type, class, grade or condition, producer's (mill) name, the lot or heat number, and the material specification and revision to which the material complies. In addition, for:

#### a. Ferrous Materials (Except Carbon Steel)

Furnish a listing of the actual values of chemical composition and physical properties, obtained from the lot or heat versus values required by the applicable material specification.

#### b. Carbon Steel and Nonferrous Materials

Furnish a list of the typical range of values (unless actual values are required by the applicable material specification or the Purchase Order) of the chemical composition and physical properties of the material, and a statement that the material supplied conforms to the requirements of the applicable material specification.


#### c. Nonmetallic Materials

Furnish a certification issued by the manufacturer of the material listing the material designation and nomenclature, the material size, the specification and revision to which the material conforms, the lot number or designation (if applicable), the date manufactured, the manufacturer's identity, and other deliverable technical data (test results, composition, chemical or physical properties, etc.) required by the applicable specification of the Purchase Order.

### 6.2 Buyer Furnished Raw Material

Seller maintains strict accountability of material furnished by Hydra-Electric Company. In the event that more than one heat of material is furnished by Seller in a lot of material, Seller maintains individual material lot integrity and provides positive traceability of material lot/heat numbers to specific product(s) delivered. Seller provides, on the packing list/shipper or on a separate document, a statement that:

- a. All product(s) delivered on this Purchase Order were manufactured:
  1. From material furnished by Buyer.
  2. From material lot or heat number(s) identified on the material and/or Buyer's shipper to Seller.
- b. Seller made no material substitution.

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**6.3 Seller Furnished Raw Material**

The Seller maintains certifications, and test reports of all material utilized in compliance with the Purchase Order. The Seller is responsible to provide such documentation when requested by Hydra-Electric Company. The Seller ensures that such documents are maintained for a period not less than 10 years from date of delivery of the product(s) to Hydra-Electric Company.

**7. CONTROL OF SPECIAL PROCESSES**

**7.1 Qualified Sources and Process Certifications**

**a.** Unless otherwise specified by the Purchase Order, all chemical, metallurgical, nondestructive or any other special manufacturing or inspection process of product(s) controlled by Military, Government, Industry or Hydra-Electric Company specifications is performed only by NADCAP approved sources. **This clause is imposed only when flow down requirements of Hydra-Electric Company's customer are imposed. Seller contacts the Purchasing Agent at Hydra-Electric Company prior to use of proposed source to ensure that such special process source is currently approved for NADCAP.**

**b. Process Certifications**

For all special processes by Seller or Seller's sub-tier source, the Seller furnishes the certification/test report issued by Seller or Seller's sub-tier source that actually performed the process. The certification meets the requirements of Section 2.6 herein.

**7.2 Control Of Stripping and Re-plating**

Stripping and re-plating of product(s) requires prior approval by Hydra-Electric Company, when any or more of the following conditions exist:


- a.** Parts having a hardness requirement of 220 KSI or less have been previously stripped and re-plated and/or,
- b.** Parts have a hardness requirement greater than 220 KSI.

**7.3 Heat Teat Certifications / Furnace Charts**

With each shipment of product(s), Seller furnishes a time/temperature certification that contains, as a minimum, time in and time out, duration, and temperature range, or when directed by the Purchase Order, provide original or legible copy of the actual furnace temperature charts.

**7.4 Non-Destructive Test (NDT) Reports**

With each shipment of product(s), Seller furnishes the certified test report of all Non-Destructive Testing (NDT) (e.g., penetrant, magnetic particle, radiographic, ultrasonic) performed. The actual NDT includes a complete description of the test, test name, specification, revision, type, method and acceptance criteria

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document number and revision. When products are serialized or identified with a lot or batch number, such identification appears on the NDT reports and if radiographic inspection, identified on the exposed radiographic film.

**7.5 Report Of Certified NDT Employees**

When the Purchase Order requires non-destructive testing be performed by the Seller, the Seller provides on receipt of the Purchase Order, a list of all personnel qualified to perform NDT, including special stamp or identification required, unless such current information has already been provided to Hydra-Electric Company. It is the Seller’s responsibility to ensure that all personnel requiring qualification are properly certified and are scheduled for recurrent certification as required by the specification.

**8. CONTROL OF CASTINGS, CUSTOM MOLDED PARTS, PRINTED CIRCUIT BOARDS (“PCB”) AND MACHINED PARTS**

**8.1 Control Requirements**

Prior to making the first production run of any new product or product for which new tooling (patterns or molds) have been made, or when a change in gates, risers, chills or as-cast shape, or when a pattern or mold is transferred to a different facility or supplier submission to the Buyer for review and approval, the following:

**a. First Article**

Sample from the first production run, representative of practices and be used on production parts, with findings submitted on AS9102 forms.

**b. Mechanical Properties**


The laboratory test report or certified statement of the test bar mechanical properties from the foundry control First Article casting(s). The test bar(s) are from the same melting and heat treat as the foundry control casting(s). On molded elastomers the shore hardness is provided on the First Article Report.

**c. Chemical Composition**

The Laboratory test report or certified statement of chemical analysis of the material (melt) used in the First Article product showing the actual percentage of each element contained in the specimen.

**d. Radiographic Film (x-ray)**

The shooting sketch and exposed film of the foundry control First Article casting(s).

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**8.2 Production Castings and Custom Molded Parts**

With the delivery of each heat lot or melt of production articles, Seller furnishes to Hydra-Electric Company, the certifications/test reports required by Section 8 of this instruction.

**8.3 Printed Circuit Boards (“PCB”)**

Prior to making the first production run of any new product or product for which new tooling (patterns or molds) have been made, or when a change in revision or when transferring manufacturing to a different facility the supplier shall submit to the Buyer for review and approval, the following:

**a. First Article**

Sample from the first production run, representative of practices and be used on production parts, with findings submitted on AS9102 forms.

**8.4 Machine Parts**

Prior to making the first production run of any new product or product for which new tooling (patterns or molds) have been made that effect form fit or function or when transferring manufacturing to a different facility the supplier shall submit to the Buyer for review and approval, the following: (note – revisions that do not effect form fit or function changes do not require first article)

**a. First Article**

Sample from the first production run, representative of practices and be used on production parts, with findings submitted on AS9102 forms.

**9. CONTROL OF AGE SENSITIVE ITEMS**


**9.1 Elastomers (Rubber Goods)**

Unless otherwise specified on the Purchase Order or referenced documents, age control of elastomers and elastomer material (O-rings, seals, gaskets and other rubber goods) conform to the requirements of Mil-Std-1523. Seller has an effective system of age control of elastomeric components for which acceptability is limited by the age of the elastomer. The product(s) are identified as to cure date (quarter and year).

**9.2 Limited Shelf Life Material(s)**

On each container of and on the certification for product(s) having a limited or specified shelf life, Seller shows the cure date or manufacture date, expiration date or shelf life, lot or batch number and when applicable, any special storage or handling conditions.



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**10. INSPECTION AND TEST REPORTS**

**10.1 First Article at Seller's Facility**

Buyer inspection and acceptance of First Article product(s) when specified on the Purchase Order is required prior to delivery to Hydra-Electric Company. Each first article product is completely processed per Purchase Order and clearly identified as a First Article. Seller notifies Hydra-Electric Company sufficiently in advance so that inspection of the First Article, with documentation, can be scheduled at Seller's facility prior to the Purchase Order specified delivery due date.

**10.2 First Article Inspection at Buyers Facility**

Hydra-Electric Company inspection and acceptance of First Article product(s) may be required prior to Seller's delivering the production order, when specified on the Purchase Order. Each First Article product is completely processed per Purchase Order and clearly identified as First Article sample and submitted to Hydra-Electric Company's Receiving Inspector for inspection and/or test.

**10.2.1 Production Order Inspection at Buyers Facility**


Prior to inspection of production order, Hydra-Electric Company's receiving inspector will check First Article electronic data base to confirm that a First Article has been submitted by supplier and has been approved. If no First Article has been submitted, the supplier will be notified immediately for a First Article submittal prior to inspection and acceptance of production order.

**10.3 100% Inspection Requirement**

When 100% inspection is directed by the Purchase Order, all characteristics of the supplied product(s) are required prior to delivery to Hydra-Electric Company. SPC charts based on 100% examination of all characteristics on the entire order are acceptable as evidence of conformity.

**10.4 Sampling Inspection**

Unless otherwise directed, the use of sampling inspection is authorized, provided that such sampling inspection is based on valid Acceptance levels of ANSI/ASQC 1.4 normal inspection level II. The sampling plan shall preclude the acceptance of lots with known nonconformities.

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**11. FOREIGN OBJECT DEBRIS/DAMAGE (“FOD”) SUPPLIER PREVENTION PROGRAM**


**11.1** Where required, the supplier shall maintain a FOD prevention program. The FOD prevention program shall include the review of design and manufacturing processes to identify and eliminate foreign object entrapment areas and paths through which foreign objects can migrate. The supplier shall ensure work is accomplished in a manner preventing foreign objects or material in deliverable Items. Supplier shall maintain work areas and control tools, parts and materials in a manner sufficient to preclude the risk of FOD incidents. Supplier shall document and investigate each FOD incident and ensure elimination of the root cause of each such incident.

1. Whenever and/or wherever FOD entrapment or foreign objects can migrate, supplier’s FOD prevention program shall include supplier’s periodic self-assessment of its internal FOD prevention practices, including each respective subcontractor’s FOD prevention program at every tier to measure effectiveness of program compliance to requirements.
2. Supplier’s FOD prevention program shall provide initial and periodic FOD training to supplier’s employees.
3. Supplier shall provide records of such self-assessment and/or training to Hydra-Electric Company, upon request.

**11.2** Supplier’s FOD prevention program shall, at a minimum, contain the following elements:

1. Design & Manufacturing Process Review,
2. Performance Measurement,
3. Training,
4. Material Handling and Parts Protection,
5. Housekeeping,
6. Tool Accountability,
7. Hardware Accountability,
8. Lost Items Search and Documentation Process,
9. Physical Entry Control into FOD Critical Areas, and
10. FOD Focal Point(s)

**11.3** Whenever and/or wherever FOD entrapment or foreign objects can migrate, supplier shall ensure that FOD requirements are flowed down to supplier’s subcontractors at every tier.

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**11.4** Prior to closing inaccessible or obscured areas and compartments during assembly, the supplier shall inspect for foreign objects/materials. Seller shall ensure that tooling, jigs, fixtures, and test or handling equipment are maintained in a state of cleanliness and repair sufficient to prevent FOD. By delivering items to Hydra-Electric Company, the supplier shall be deemed to have certified to Hydra-Electric Company that such Items are free from any foreign materials that could result in FOD.

**12. COUNTERFEIT PARTS PROGRAM**

**12.1** Supplier shall maintain a counterfeit parts program as well as flowing this requirement down to its sub-tiers to avoid the introduction of suspect counterfeit parts into the supply chain. Seller shall provide evidence to Hydra-Electric Company that the program has been implemented.


**12.2** The supplier's process shall ensure the detection of counterfeit material prior to formal acceptance and shipment to Hydra-Electric Company and that Hydra-Electric Company will be notified of all instances of counterfeit parts discovered by the supplier.

**12.3** If applicable, the supplier shall perform detailed inspection of documentation and packaging to ensure against counterfeit parts including the necessary visual inspection to IDEA-STD-1010 acceptability of electronic components distributed in the open market along with the required inspection for evidence of remarking or resurfacing if applicable.

**12.4** In addition, if applicable the supplier shall perform the required X-Ray inspection/florescence, destructive physical analysis and or any other test if required to detect against counterfeit parts.

**13. CONFLICT MINERALS**

**13.1** Supplier shall perform a due diligence effort and ensure that all material supplied to Hydra-Electric Company are free of “Conflict Minerals”. Pursuant to the U.S. Securities and Exchange Commission (“SEC”), Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, “Conflict Minerals” are defined as Tin, Tantalum, Tungsten, or Gold from the Democratic Republic of Congo, Angola, Burundi, Central African Republic, Rwanda, Tanzania, South Sudan, Uganda and Zambia.

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**14. SUPPLIER EXCEPTION**

**14.1** With written notification the Supplier may take exception to any given requirement of QWI-800. Quality Manager or designee must notify supplier of exception approval or dis-approval in writing on QA-050 Supplier Exception Form.

**15. TRANSFER PLAN**

**15.1**

- a) This transfer plan for the control of work transfers controls and verifies the conformity to specified requirements during the temporary or permanent transfer of work. This plan consist of the following:
  - Formal notification to all stakeholders and customers before any change commences
  - Risk assessment and mitigation
  - Transfer plan
  - Demonstration of capacity at the in-loading area to protect customer delivery
  - Demonstration that generation of buffer stocks are built into load and capacity plans to protect customer delivery
- b) Proceed with the work transfer when a response from our customers and stakeholders has been received and comply with the requirements specified in the response
- c) Ensure that work transfer documentation and information is communicated through the purchase order flow-down.
- d) Ensure delivery performance is protected prior to any work transfer
- e) Maintain records of work transfers