



Addendum B: Quality Text Clauses

"Buyer"= HFS "Seller"=Vendor, supplier, subcontractor, and/or agents/representatives

Buyer objects in advance to the inclusion of any additional or different terms proposed by *Seller* in acceptance or acknowledgment of purchase order. The inclusion of such terms by the *Seller* will be of no significance. Such terms will not be conditions or additional terms to the purchase order. Unless otherwise stated on the face of the purchase order, the following Quality Text Clauses shall apply. These Quality Text Clauses will vary and will be specifically called out in every purchase order issued to your company. Their specifically assigned QC clause numbers (i.e., QC1, QC2) will reflect them.

QC1 PHYSICAL AND CHEMICAL TEST REPORTS

Seller shall supply one copy of physical and/or chemical test reports for each lot, batch or heat, whichever is applicable. *Seller* shall supply the original Melt source certification including all other processors, transformers, converters, who have altered the material after the original melt source with each shipment of material specified on the purchase order. The report must show that material/parts delivered are acceptable and be shall be identifiable to the product being delivered. The heat number and material manufacturer(s) must appear on the certification. All metal alloys shall require traceability to the original melt source heat number and shall comply with the current material specification revision in effect when melted. The heat number and material manufacturer must appear on the certification. Material converters are responsible for maintaining heat lot traceability and are prohibited from welding, brazing, or otherwise joining coils. Personnel performing special processes must be qualified to perform such processes.

QC2 MATERIAL SAMPLE REQUIRED

Seller shall furnish *Buyer* a material sample cut or molded from the same material as the product supplied. *Buyer* or the material specification shall determine the size of the sample. Material samples supplied shall be cut per applicable instructions on purchase order. If the sample does not pass its material specification tests, the product supplied shall be considered unacceptable and will be returned to the *Seller*.

QC3 TOOL INSPECTION REPORT

A completed copy of a tool inspection report (*Seller* is to use their own if *Buyer's* applicable form is not called out on purchase order) must accompany each item specified on the purchase order.

QC4 QUALITY SYSTEM REQUIREMENTS

Seller shall maintain a documented quality system that complies with the requirements of government and/or industry quality system standards and as a minimum, a quality system compatible with the requirements of ISO 9001. *Seller's* quality system is subject to verification and approval at all times by *Buyer's* Quality Assurance Department.

QC5 ORIGINAL EQUIPMENT MANUFACTURER'S STANDARDS

Seller agrees to comply with the quality requirements stated under the current revision of Original Equipment Manufacturer's special quality clauses as noted on purchase order.

QC6 CONTROL OF CHANGES AND WORK TRANSFERS

Seller shall not make any changes to the design, manufacturing processes or materials specified under the purchase order. *Seller* shall notify *Buyer* in writing prior to any changes to design, materials, fabrication methods, or processes, that may affect fit, form or function, interchangeability or reliability of hardware delivered to *Buyer*. *Supplier* must promptly notify *Buyer* of any changes to facility location, ownership, quality management and/or key personnel. Work Transfer is prohibited. Work shall not be sub-con-

tracted to sub-tier supplier(s) unless a documented request is submitted and approved in writing by *Buyer's* Engineering and Quality Assurance.

QC7 DFAR 252.225-7009 (SPECIALTY METALS)

Seller agrees to supply material in compliance with DFAR 252.225-7009 "Restriction on Acquisition of Certain Articles Containing Specialty Metals" as applicable. The origin of the material shall be from a qualifying country in accordance with DFAR 225.003(9). Note: 6AL-4V Titanium material only is excluded from DFAR 252.225-7009. All other applicable materials must comply with QC7.

QC8 ITAR

This purchase order may contain, and/or reference documents containing information subject to the International Traffic in Arms Regulations (ITAR). *Seller* shall not export, release, or disclose this information to foreign nationals without first complying with the export license requirements of the ITAR.

QC9 STATISTICAL PROCESS CONTROL AND SPC DATA

Outside supplier shall perform SPC when required by the Howmet site. SPC requirements (key characteristics) will be flowed down to the outside supplier on the purchase order. The outside supplier shall create an SPC procedures approved by the Howmet site. At a minimum, the procedure shall identify the type of control chart used, subgroup sample size, frequency, reaction to out-of-control points, and how process capability studies will be performed. Evidence of SPC activity shall be supplied by the Outside supplier with each job, as agreed on by the Howmet site.

QC10 BUYER'S SOURCE INSPECTION

Buyer's source inspection is required. Inspection shall be conducted at the *Seller's* facility and shall be requested and accomplished prior to shipment. When the items on the Purchase Order are ready for inspection, notify the *Buyer's* purchasing representative so that coverage can be arranged. Drawings, specifications and/or other pertinent data, as required by Purchase Order, shall be made available to the *Buyer's* Quality Representative, at the time of material presentation.

QC11 FAA/BUYER'S/CUSTOMER'S RIGHT OF ENTRY

Seller agrees that its facility, fabrication inspection system, methods and procedures are subject to the Federal Aviation Administration (FAA) (*Buyer's*) surveillance and investigation. All other *Buyer's* Customers and regulatory agencies reserve the right of entry into the plant including all sub-tiers suppliers to verify the quality of work and materials at any / all production stages, as well as compliance to procedures and specifications.

**QC12 FIRST ARTICLE INSPECTION / PPAP**

Aerospace: A detailed first article inspection report package in accordance with AS/EN/SJC 9102, or customer equivalent, is required. A FAI should be performed when: new part introduction, new supplier or new location of manufacture, lapse in production for more than 2 years, or when requested by the *Buyer*. A partial FAI is required when: minor design change, significant change in the method of manufacture (tooling, processes, machine, location, numerical control programs, sequence of manufacture, when part of the *Buyer's* requirements, nonconformance shall be recorded). The first article package shall include complete F/A inspection report with drawing tolerance and actual inspection data, material certifications, special process certifications, bubbled drawing, test data, and other applicable documents as a minimum. The F/A report must show *Buyer's* part number, revision and purchase order number. *Buyer* must be notified in advance when the first article inspection is scheduled and reserves the right to witness the actual inspection or to require spot checks to verify the data. This first article will consist of one piece. This piece must be identified and packaged separately along with the report when shipped with the production parts.

Industrial/Commercial/Automotive: A Production Part Approval Process (PPAP) in accordance to AIAG PPAP manual is required for any new part/process being supplied for the first time, or when any change to the design or process is performed. The package shall include a Part Submission Warrant (PSW), a complete dimensional inspection report with drawing tolerance and actual data, material certifications, special process certifications as applicable, bubbled drawing, any applicable test data. Process Flow Maps, Process FMEA's, Control Plans and Gage R&R Studies may be required with each PPAP submission. The PSW must show the *Buyer's* part number, revision and purchase order number. The PPAP will consist of three pieces minimum, unless otherwise specified. The buying facility will outline the PPAP Level and required documentation for PPAP submission.

QC13 GOVERNMENT SOURCE INSPECTION REQUIRED

Government inspection is required prior to shipment of this material from your facility. *Seller* is responsible for providing the Government Inspector with verifiable evidence that supplies meet the requirements of the subcontract or purchase order. Upon receipt of this order, promptly notify the Government Representative who normally services your facility so that appropriate planning for Government Inspection can be accomplished. Provide a copy of this order to the Government Representative who normally services your plant or, if none, to the nearest Army, Navy, Air Force, or Defense Supply Agency inspection office. In the event the representative or office cannot be located, notify our Purchasing Department immediately.

**QC14 RELATED REGULATORY REQUIREMENTS
OBSOLETE****QC15 SPECIAL PROCESS REQUIREMENTS**

Each special process, including, but not limited to: soldering, cleaning / etching or passivation, welding, brazing, plating / coating, heat treating, magnaforming / swaging, electro polishing, acid pickling, impregnating, bonding, glass sealing, shot peening, silk-screening, magnetic particle / penetrant or X-Ray or N-Ray inspections, when required by either a Government, ASTM, or other process specifications shall be Nadcap accredited for the process performed where applicable by *Buyer's* approved suppliers only. Personnel performing special processes must be qualified to perform such processes. A list of approved special processors will be provided when required and upon request by the *Seller*.

QC16 CERTIFICATE OF CONFORMANCE

Seller shall submit with each shipment a Certificate of Conformance stating that the items furnished to the *Buyer* are in conformance to the Purchase Order/Drawing requirements applicable to the items delivered. Conformance to applicable aerospace, military and/or industry standard, when imposed by the drawing, specification or Purchase Order must be specifically stated and form a part of the certification. *Seller* shall maintain on file, and retain for at least 10 years, unless otherwise specified, all final dimensional inspection records, Shop Routers / Travelers, SPC records, all material, chemical and physical test reports and C of C's for processes performed by themselves and their sub-tier suppliers and shall make these documentations available for review by the *Buyer's* Representative upon request. As a minimum, each supplier and/or sub-tier certification must contain the following information: (a) Purchase Order Number (b) Lot Number (c) Quantity Shipped (d) Part Number (e) Name and address of the company issuing the certification (f) The date of issue, and (g) Signature and title of the *Seller's* authorized representative.

QC17 SHELF LIFE ITEMS

Materials or articles having characteristics subject to degradation with age shall be marked in a manner to indicate the date of manufacture and expiration date (must exhibit 90% of the remaining shelf life prior to shipment) in addition to standard identification requirements. Batch numbers, packaging to protect degradation and special storage or handling conditions shall be included when applicable. Safety Data Sheets (S.D.S.) must also be provided where there is a danger to health from material being purchased and when applicable.

QC18 PACKING/PACKAGING

Seller must ensure that all items shipped under this Purchase Order are adequately packed and/or packaged to prevent damage, Foreign Object Debris, Foreign Object Damage contamination and/or deterioration. Unless otherwise specified on the Purchase Order, *Seller* must use best commercial practices in packaging to prevent damage, contamination and/or deterioration to all items during transit.



QC19 MERCURY AND RADIOACTIVE FREE CERTIFICATION AND OZONE DEPLETING SUBSTANCES REQUIREMENTS

Each shipment is to be accompanied by one legible and reproducible certification of mercury and if necessary radioactive free material. The report must contain the signature and title of the authorized representative of the certifying facility and must conform to any material and procurement specification requirements that were flowed down on the purchase order. This certification could be furnished as part of the Certificate of Conformance specified in clause QC16 herein or in any other form preferable to the supplier. An example of a statement is as follows: To the best of our knowledge all products and/or services provided have not come in contact with or have been exposed to mercury bearing instruments or equipment, mercury in any other form or radioactive material. Ozone-depleting substance as designated by the EPA in 40 CFR Part 82 as-- (1) Class I, and (2) Class II. Seller shall label products which contain or are manufactured with ozone-depleting substances to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as applicable. *Buyer* requires that the provisions/requirements set forth above be included in Seller's direct supply contracts as well as the obligation that they be flowed to the sub-tier supply chain.

QC20 NONCONFORMING MATERIAL CONTROL & LATENT DEFECT NOTIFICATION

If nonconformance's are detected during manufacturing or inspection, the supplier quality assurance personnel shall **submit for *Buyer's* preliminary review**: Dispositions outside the above will require *Buyer's* preliminary review action. The supplier shall segregate and control the nonconforming material to assure no further work is accomplished on the discrepant item(s) until *Buyer's* preliminary review disposition is obtained. The supplier shall request the *Buyer's* preliminary review action. The material must be held at the supplier facility pending direction from the *Buyer*. When the *Buyer's* preliminary review action is completed, the disposition will be provided to the supplier immediately. **Internal nonconformances in the supplier's daily operations shall be evaluated or their potential to exist in previously produced or delivered hardware. If a potential latent defect is determined, a written notice to the *Buyer* is required within 24 hours of discovery. Any resulting Supplier Corrective Action Requests shall be responded to within 30 days.**

QC21 SCREW THREAD GAUGING SYSTEM REQUIREMENTS

Seller, providing thread forming processes or threaded product, shall comply to requirements specified in the applicable specification. Unless otherwise specified, all threads must comply to system 22 requirements per ASME B 1.3 and reference AS8879, Mil-Std -7742, or FED-STD-H28 guidelines as applicable.

QC22 CERTIFIED SUPPLIER PROGRAM

Buyer Certified Supplier Delegated Program allows the supplier to inspect and ship acceptable material directly to the *Buyer* in accordance with the PO and contractual requirements imposed by *Buyer's* certified supplier program letter of agreement. The supplier agrees that only approved delegates will be permitted to apply the delegate stamp, as required to material only in compliance

to instruction furnished by the *Buyer*. Further, the supplier shall notify *Buyer* of any employment status changes and allow *Buyer* to audit the supplier facility as deemed necessary.

QC23 THERMAL PROCESSING/BAKING OF PRODUCTS

Material or articles having characteristics subject to Thermal Processing performed on *Buyer's* products shall require the furnaces or ovens to be in compliance with AMS2750 latest revision. Records of such compliance shall be retained for review by the *Buyer* as needed. Record retention time in accordance with *Buyer's* QC16.

QC24 FOREIGN OBJECT DAMAGE/DEBRIS (FOD) PREVENTION PROGRAM

Seller shall maintain a FOD prevention program in accordance with National Aerospace Standard NAS-412, Foreign Object Damage/Foreign Object Debris (FOD) Prevention. It 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. Seller shall ensure work is accomplished in a manner preventing foreign objects or material in deliverable Items. Seller shall maintain work areas and control tools, parts and materials in a manner sufficient to preclude the risk of FOD incidents. Seller shall document and investigate each FOD incident and ensure elimination of the root cause of each such incident. Seller shall ensure that these Quality Clause requirements are flowed down to Seller's subcontractors.

QC25 PREVENTION AND CONTROL OF COUNTERFEIT PARTS PROGRAM

Seller shall maintain an effective Prevention and Control of Counterfeit Parts program using AS6174, AS6081, AS5553, and other applicable prevention and control of counterfeit parts program standards/specifications as information and guidelines. If potential latent counterfeit parts are determined a written notice to *Buyer's* Quality Management and Procurement is required within 24 hours of discovery.

QC26 IDENTIFICATION & TRACEABILITY

Seller shall maintain single lot, batch or heat traceability on raw material/processing within the Purchase Order quantity. If multiple heat lots/batches are required to fulfill the Purchase Order quantity, then the products from each heat lot/batch must be kept separated and assigned a unique identifier. Each container must be identified with this identifier to provide traceability back to the single heat lot/batch. No mixed heat lots/batches are allowed. The *Buyer* discourages use of multiple heat lots/batches within a single PO quantity. Additional traceability requirements may be required by an individual Howmet site. These additional requirements will be provided and communicated via the responsible Howmet site.

QC27 SELLER AWARENESS

Seller shall ensure that all employees and external providers supporting the Seller are aware of:

- a) Their contribution to product or service conformity;
- b) Their contribution to product safety; and
- c) The importance of ethical behavior