



LEVEL 1 MATERIAL QUALITY REQUIREMENTS

NOTE: Reference the applicable revision of EB SPEC 2678, Appendix A, as invoked on the Purchase Order.

1. GENERAL

- 1.1 The requirements for Level 1 Material when identified in the Purchase Order or on Drawings, shall meet the requirements of the invoked revision of EB SPEC 2678, Appendix A, in conjunction with the requirements of MIL-I-45209, MIL-Q-9858, or one of the ISO Quality Systems Modules, as specified by the applicable contract or purchase order. When more stringent material Quality Assurance requirements are provided in the Purchaser's purchase order or component specification, they shall take precedence.
- 1.2 Objective Quality Evidence (OQE) will be required for the material identified as "Level 1" in the list of materials in the basic design document or purchase order.
- 1.3 The manner in which required OQE is developed by the Supplier shall be controlled by clear, complete and current procedure(s). The OQE for the actual item being shipped shall be representative of the individual heat, batch, or lot as defined in the applicable specification and shall be in compliance with the invoked acceptance criteria. However, for continuous melt or continuous pour processes, the OQE shall be representative of the time period (as determined by the invoked specifications) during which the material was poured.

2. QUALITY SYSTEM FLOWDOWN REQUIREMENTS

- 2.1 Suppliers of Level I material are required to have an effective QMS which assures their Sub- Tier Suppliers maintain effective systems for controlling Level I material, including traceability to OQE in accordance with the requirements of this document. Any special quality provisions, along with the applicable specifications and/or drawing requirements, shall be included in the purchase order to the Sub-Tier Supplier if the Primary Supplier invokes Level I requirements on their Sub-tier.

3. MATERIAL CONTROL

- 3.1 LHF suppliers of Level 1 material shall not subcontract Level 1 material.

4. LEVEL 1 MATERIAL AUDITS

- 4.1 Suppliers of Level 1 Material shall be audited by LHF Quality Assurance personnel, triennially at a minimum, to ensure compliance to the Level 1 Material Quality Assurance Requirements of the purchase orders applicable revision(s) of EB2678, Appendix A.
 - 4.1.1 LHF audits are not required of EB and/or HII-NNS Approved Suppliers of Level 1 Material.
 - 4.1.2 EB and HII-NNS Approved Suppliers of Level 1 Material can be verified at the below websites:
 - a. EB: https://www.gdeb.com/suppliers/quality/approved_suppliers
 - b. HII-NNS: <https://supplier.huntingtoningalls.com/sourcing/supplier-quality/>

5. PURCHASE ORDER REVIEW

- 5.1 The supplier's quality representative shall review Level I material purchase orders to ensure that the applicable EB2678, Appendix A, revision requirements have been identified and internally flowed down to all applicable departments of the supplier's organization. The purchase documents which include Level I material shall contain readily recognizable Level I identification.

- 5.2 The supplier's quality representative shall sign the purchase order as objective evidence of acknowledgement.

6. RECEIVING INSPECTION

- 6.1 The Supplier shall maintain a Receipt Inspection Program which documents the results of Level I material inspection from LHF, Processors, or Inspection Organizations to assure conformance to purchase order requirements.
- 6.1.1 Material undergoing receipt inspection shall be segregated from accepted material to prevent comingling and unauthorized use.
- 6.1.2 Material markings shall be legible with unambiguous reference in test reports.

7. CERTIFICATIONS

- 7.1 The Supplier shall provide a certification of quality conformance for all Level I material in addition to the required test reports.
- 7.2 The Supplier certification of quality conformance shall state that the Level 1 Material meets the purchase order invoked applicable revision of the EB2678, Appendix A, specification requirements.
- 7.3 Each test report and/or inspection report provided by the Supplier shall be reviewed by the Supplier's quality personnel prior to releasing the material for return shipment to LHF. The following minimum requirements shall be verified during the review:
- a. Test reports are legible.
 - b. The country of origin is readily identified or has been annotated by the Supplier.
 - c. Test results are compared with and comply with the specification and purchase order requirements.
 - d. The type of tests and number of tests meet specification and purchase order requirements.
 - e. Reports are identified with a unique traceability code that agrees with the material marking.
 - f. Test Reports provide the location of the test specimens, when applicable.
 - g. Reports are duly authorized/signed by the testing facility Representative and that the data is recorded on an official copy with the testing facilities' letterhead.
 - h. Reports are reviewed to ensure no unauthorized changes, obliterations, corrections, and evidence of falsification.
 - i. The quantity given on the reports is consistent with the quantity of material actually received.
 - j. Dates of reports and signatures thereon agree with the sequence of processing by the Supplier.

8. MATERIAL HANDLING/STORAGE

- 8.1 Material handling and storage procedures shall provide methods for controlling Level I material from receipt through issue, i.e. storage of raw stock, fabrication, inspection, installation, storage of finished product, shipping, etc.
- 8.2 Level I material that is awaiting or undergoing inspection or is in storage shall be physically segregated from non-Level I material as soon as possible to prevent comingling and unauthorized use. The method of segregation shall ensure that similar appearing material of different alloys and/or material conditions, grades or condition be segregated through physical separation unless readily differentiated by attributes such as size, or physical appearance.
- 8.3 Segregation may be accomplished by use of roped off areas. Areas for Level I material shall be distinctly identified and marked. When physical segregation cannot be accomplished, the Supplier's procedures shall define an alternate system of positive control.
- 8.4 Material control tags and/or travelers shall be marked "Level I".

- 8.5 Staging of Level I material with other material is acceptable for a specific job or fabrication process, provided the Level I material is clearly marked as required and the material for the specific job or fabrication process is grouped together, identified by the job or process number, and segregated from material grouped for other processes or jobs.
- 8.6 Level I Nonconforming material must be marked as “Level I” and be segregated from non-Level I nonconforming material.

9. MATERIAL TRACEABILITY

- 9.1 The Supplier shall establish a Level I material traceability system that provides positive identity of the item throughout the manufacturing process. Each piece shall be physically marked or identified with the traceability code. The method of marking used shall be at the discretion of the Supplier, provided it does not violate the requirements of MIL-STD-792. The marking shall be legible throughout the manufacturing process.
- 9.2 Material Traceability Marking
 - 9.2.1 The traceability marking shall consist of the raw material heat number or LHF Job Number that provides, through documentation, traceability back to the raw material heat number. The Supplier shall be able to provide all Objective Quality Evidence associated with the processing of that item.
 - 9.2.2 When the marking on a part or piece of material will be removed by the manufacturing process, the marking shall be transferred to another location on the piece. If marking cannot be transferred to another location, it shall be restored after the completion of the operation.
 - 9.2.3 In all cases, the accompanying paperwork (route sheet, traveler, etc.) shall indicate the proper traceability code and shall be identified “Level I” in letters that are legible and of sufficient size to be easily recognized. This paperwork shall also provide accountability throughout the manufacturing process (i.e., number of pieces cut, rejected, scrapped, tested, etc.).
- 9.3 Loss of Traceability
 - 9.3.1 Items where the traceability marking is lost shall be considered Nonconforming material and shall be placed “ON HOLD”. LHF shall be notified immediately.

10. RECORDS

- 10.1 Permanent records shall be maintained that provide a clear and concise documentation trail from the starting material to the finished product and all intermediate process operations.
- 10.2 Each record shall identify the traceability code for the specific item to which it applies. The records shall include or refer to permanent records, which contain the actual processing parameters the product received during manufacturing or inspection.

11. HEAT TREATMENT

- 11.1 Heat Treatment is NOT permitted.

12. WELDING

- 12.1 Welding is NOT permitted.