

	OP-13-044 Material Identification and Control for LEVEL I/Subsafe Materials	Page 1 of 7 Revision: D
	Process Owner: Quality	Management:

1. Scope:

This document details the minimum quality assurance requirements for identification and control of materials designated as LEVEL I/Subsafe (L1/SS) as defined by NAVSEA 0948-LP-045-7010.

2. Requirements:

2.1. Purchase Order:

- 2.1.1. The purchase order shall specify that the material or component shall conform to LEVEL I traceability requirements.
- 2.1.2. The purchase order shall be clearly identified as LEVEL I with a stamp or a separate test line stating LEVEL I.
- 2.1.3. The purchase order shall specify that the material or component is to be free of mercury contamination.
- 2.1.4. The purchase order shall be reviewed by one of the persons identified on AL-13-004 to verify that the LEVEL I requirements are properly detailed on the purchase order. The reviewer shall countersign or stamp the purchase order to document acceptability.
- 2.1.5. The purchase order shall specify that the material or component supplied shall be in DFARS 252.225-7009, Preference for Domestic Specialty Metals.
- 2.1.6. For components, the purchase order shall include the requirement that any time processing will remove traceability identification, the supplier shall contact FCP for instructions as to how and where to remark the traceability identification.

2.2. Receiving Inspection:

- 2.2.1. All items shall be receipt inspected to verify the physical marking of traceability information.
- 2.2.2. Receipt inspection of the material or component shall be performed in accordance with OP-08-045 in addition to the requirements of this procedure. In the event of a conflict between this procedure and OP-08-045, the requirements of this document shall take precedence.
- 2.2.3. Material Certification shall be inspected to verify the following requirements.
 - 2.2.3.1. Test data shall be recorded on the testing company's letterhead. Transcribed data is not allowed.
 - 2.2.3.2. The heat number and/or lot number shall be marked on both the material and the certification. The heat and/or lot number marked on the material and the certification shall be complete and legible.
 - 2.2.3.3. Compliance with DFARS 252.225-7009, Preference for Domestic Specialty Metals, shall be described
 - 2.2.3.4. The country of origin of the material is identified on the certification
 - 2.2.3.5. The heat number and/or lot number shall be marked on both the material and the certification.
 - 2.2.3.6. The correct material specification and revision level shall be referenced



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- 2.2.3.7. Quantitative data of chemical composition and mechanical properties that relate to the specific heat and/or lot number shall be recorded and shall comply with the applicable specification and any applicable purchase order requirements.
- 2.2.3.8. The types and numbers of tests shall meet the requirements of the applicable specification and purchase order requirements. The locations of the test samples shall be recorded on the certifications.
- 2.2.3.9. The name, title, and signature of an authorized company representative must be included. The signature dates shall agree with the supplier processing sequence.
- 2.2.3.10. The quantity of material shall be consistent with the amount of material received.
- 2.2.3.11. Reports shall not show any evidence of unauthorized changes, obliterations, corrections, or evidence of falsification.
- 2.2.3.12. Heat treated material shall be uniquely re-identified.
- 2.2.4. Documentation of Inspection:
 - 2.2.4.1. The results of the certification verification shall be recorded on forms F-13-047 Material Receipt Inspection Checklist/All Materials and F-13-048 Material Receipt Inspection Checklist/LEVEL I.
 - 2.2.4.2. The reviewer shall initial or stamp each page of the certification package as the review of that page is complete and found to be acceptable.
- 2.2.5. Recertification Requirements:

A material that undergoes a metal working process, heat treatment, forming, etc, excluding marking and machining, that alters the material's original properties shall have the material's mechanical properties recertified by one of the following methods.

 - 2.2.5.1. Retest and re-certify the material for all mechanical properties only. The altered material shall be uniquely re-identified with a traceability number or code. The original mill certification shall be over stamped and/or annotated to contain the following information. Pertinent data on the mill certification shall not be obscured by the over stamp or annotation.

Traceability Number/Code _____ is fabricated from raw material
 Heat No./Heat-Treat No. _____
 Date _____
 Name and Signature of the Authorized Company Representative
 - 2.2.5.2. Retest and re-certify both the chemical and mechanical properties in accordance with paragraph 2.2.3.
- 2.2.6. Foreign Certificates:
 - 2.2.6.1. Foreign certificates shall be converted to English/US units of measurement either on the original certification or on an addendum.



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2.2.6.2. The conversion shall identify the name, title, and signature of the authorized representative providing the translation.

2.2.7. Storage:

2.2.7.1. Incoming LEVEL I materials shall be segregated from previously accepted materials to prevent co-mingling and unauthorized use.

2.2.7.2. Accepted LEVEL I materials and components shall be physically segregated by cages, racks, bins, shelves, roped off areas, or by other attributes such as size or physical appearance so as to prevent mixing with similar appearing material or components.

2.2.7.3. Raw materials shall be stored in such a way as to prevent commingling of alloys and material conditions as specified in OP-10-065.

2.2.7.4. Staging of LEVEL I and non-LEVEL I material for a specific assembly or fabrication process is acceptable so long as the materials are grouped together and identified by the job number.

2.2.7.5. Weld Wire:

2.2.7.5.1. Weld wire shall be stored in a locked cabinet or room. The cabinet or room shall be solid on all sides or the weld wire shall be positioned in a location within the room so as not to be within reach from a cage wire side. The cabinet or room shall be clearly labeled 'LEVEL I'.

2.2.7.5.2. Each container of weld wire shall be marked 'LEVEL I'. Only LEVEL I weld material shall be stored in a LEVEL I cabinet or room.

2.2.7.5.3. Welders shall not have access to the key to access the LEVEL I weld wire storage area. Weld wire shall be issued to welders by Stockroom personnel.

2.2.7.5.4. Usable LEVEL I weld wire shall be returned to the locked area at the end of the shift. LEVEL I weld wire shall not be kept in the welding area when not in use.

2.2.7.5.5. Stubs of weld wire shall be disposed by depositing into an enclosed can type container for later disposition. The container lid shall be designed to prevent easy removal.

2.3. In-process Control of Component Parts:

2.3.1. Heat Number Traceability shall be maintained at all times through all processes for all in-process materials and components .

2.3.2. Recertification of mechanical properties of a material or component is required if the material is subjected to an operation that would alter the original properties of the material. Recertification shall be performed in accordance with Paragraph 2.2.5.

2.4. Marking Requirements:

2.4.1. Raw materials, castings, components:

2.4.1.1. Unless otherwise specified by the applicable contract, marking shall be a permanent method specified in MIL-STD-792.



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- 2.4.1.2. Items too small to be permanently marked shall have the heat number and/or lot number identified using one of the following methods:
 - 2.4.1.2.1. Bundled and identified with a tag or card;
 - 2.4.1.2.2. Confined as a group in a tote box identified with the heat and/or lot number;
 - 2.4.1.2.3. Individually identified with self-adhesive labels; or
 - 2.4.1.2.4. Individually identified with a card or tag affixed to the component.
- 2.4.1.3. If the portion of the raw material containing the heat and/or lot number is removed from the stock, the raw stock shall be marked with the heat and/or lot number.
- 2.4.1.4. Material control tags, travelers, material requisitions, and all other processing and material handling documentation shall clearly identify the marked 'LEVEL I'.
- 2.4.2. Fasteners (nuts, bolts, studs, screws):
 - 2.4.2.1. Fasteners manufactured in accordance with MIL-S-1222 shall be marked in accordance with the standard.
 - 2.4.2.2. For fasteners manufactured in accordance with other standards, the fasteners shall be marked with a trace code that provides traceability to the raw materials and all subsequent processes.
 - 2.4.2.3. Fasteners may be marked with the manufacturer's identification symbol. Reference the applicable revision of MIL-HDBK-57 for identification of markings/symbols.
 - 2.4.2.4. Manufacturer's marking shall not be removed or otherwise obliterated.
- 2.4.3. In-process Materials:
 - 2.4.3.1. If the raw material is partitioned in to small segments during processing, each segment shall be re-identified with the heat and/or lot number in accordance with Paragraph 2.4.1.
 - 2.4.3.2. If processing results in the heat and/or lot number being removed from a material or component, the identification shall be re-marked in accordance with paragraph 2.4.1.
- 2.5. Documentation:

All documentation such as travelers accompanying LEVEL I materials shall include the material traceability code and shall be stamped 'LEVEL I'.
- 2.6. Final Assembly Requirements:
 - 2.6.1. Marking:
 - 2.6.1.1. All parts shall be 100% inspected to verify the legibility of all markings.
 - 2.6.2. Material Certifications:
 - 2.6.2.1. Existence of certifications for each heat and/or lot number shall be verified.
 - 2.6.2.2. All certifications shall be 100% inspected for legibility.

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2.6.3. Inspection Documentation:

2.6.3.1. Verify that documentation of certification inspection is performed in accordance with Paragraph 2.2.4.

2.7. Maintenance of Records:

2.7.1. Unless otherwise specified, all records shall be maintained in accordance with FCP procedures detailing control of records.

2.7.2. At least one original copy of material certifications shall be maintained on file.

2.7.3. Records provided to customers may be photocopies of the original.

2.8. Lost Traceability/Certification:

2.8.1. In the event that traceability is lost due to a failure to maintain heat and/or lot number identification: the material is unacceptable for use in the L1/SS program. The material is considered non-conforming until appropriate tests have been performed that can absolutely identify the heat from which the item was produced.

2.8.1.1. This requirement is not applicable to items that are uniquely identifiable by their size and configuration.

2.8.1.2. The method of re-establishing traceability shall be approved by the customer for each incident where traceability is lost.

2.8.2. In the event of a lost certification, a replacement may be obtained from the original vendor or testing facility.

3. Control of LEVEL I Suppliers:

3.1. FCP shall maintain a list of LEVEL I suppliers and the scope of their approval.

3.2. LEVEL I suppliers shall be audited and approved by FCP. This audit shall be conducted on site unless one or more of the following apply.

3.2.1. The supplier is listed as an approved LEVEL I supplier included on the purchaser's (Electric Boat or Newport News Shipbuilding) approved supplier list.

3.2.2. One sample per heat/lot of starting material is tested at receipt inspection for chemistry and mechanical properties by an independent test laboratory and the test results meet the requirements of the applicable material specification.

3.2.3. The process requires that the finished product be tested for chemistry and mechanical properties as a result of post receipt operations. This testing shall be performed by an independent test laboratory and the test results meet the requirements of the applicable material specification.

3.2.4. Material or product that is in inventory and was purchased prior to March 29, 2010 is sample tested an independent test laboratory and the test results meet the requirements of the applicable material specification. Sampling shall be on test per heat/lot of material.

3.3. LEVEL I suppliers approved by the Purchaser (Electric Boat or Newport News Shipbuilding) do not require additional control by FCP.

3.4. All other LEVEL I suppliers shall be audited and approved by FCP.



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- 3.5. Audits shall be performed and documented as follows.
 - 3.5.1. Audits shall be performed using a pre-planned checklist that contains all requirements needed to determine if the supplier is capable of satisfactorily meeting all requirements.
 - 3.5.2. A final audit report shall be prepared following the audit documenting the results of the audit and clearly stating if the supplier is approved or dis-approved. Non-conformances shall be clearly documented in the report.
 - 3.5.3. Non-conformances and the supplier's corrective action shall be documented and follow up actions shall be clearly defined and the results reported.
 - 3.5.4. FCP shall maintain records of all LEVEL I audits performed on suppliers.

Applicable Documents		
MIL-I-45208	DI-MISC-80705	MIL-STD-792
EB2678	OP-13-035	OP-10-065

Applicable AS9100/ISO 9001 Clauses		
NA		

Previous Documents		
QAP-13.1		

Record Requirements					
Record I.D.	Document Name	Active Storage Location	In-Active Storage Location	Retention Time (Minimum)	Disposal Method
F-13-047	Material Receipt Inspection Checklist; All Materials			Indefinite	Delete
F-13-048	Material Receipt Inspection Checklist; LEVEL I Materials			Indefinite	Delete
-	Material Certification			Indefinite	Delete



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Training Required?	Rev	Pages or sections affected			Date
		Revised	Added	Removed	
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	-		Initial release		10/02/17
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	A	<ul style="list-style-type: none"> • Para 1 Added 'NAVSEA' to specification number • Para 2.2.2: Corrected form number • Para 2.2.7.2: Updated reference procedure • Para 2.4.2.1: Corrected specification number • Para 2.4.2.4: Corrected typographical error 	NA	NA	05/14/19
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	B	<ul style="list-style-type: none"> • Updated applicable documents • Updated form numbers in record requirements 	NA	NA	08/06/19
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	C	Section 2.4.2.3	Use of MIL-HDBK-57	N.A.	06/20/2022
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	D	NA	<ul style="list-style-type: none"> • Para 2.2.7.3 • Para 2.2.7.4 • Para 2.4.1.4 • Para 2.5 	NA	10/07/2022