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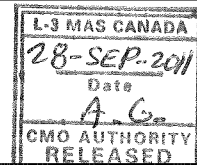
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Revision Record Approval Sheet

REVISION AND ISSUE DATE	CHANGE #	CHANGE REQUEST #	TOTAL # OF PAGES	REVISED PAGE(S)	ADDED PAGE(S)	DELETED PAGE(S)	DESCRIPTION
BASIC 07 January, 2005	---	---	10	---	i to iii; 1 to 7	---	Initial Issue
Rev. A 25 May 2007	BASIC	50000002644	10	6	---	---	Up date document
Rev. B 09 July 2010	A	500000012027	10	5, 7	---	---	MPI 157-027 removed, MPI 180-041 added
Rev. C 28 September, 2011	B	500000016639		5	---	---	MPI 157-030 removed, MPI 138-029 & MPI 138-030 added

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1 INTRODUCTION

The Engineering Process Control (EPC) defines L-3 MAS Canada (L-3 MAS) Materials and Processes Engineering (MPE) requirements and conditions imposed on a processor for obtaining approval to parts processed per Material and Process Instructions (MPI) requirements.

The following are definitions of some key terms used throughout this document:

a) Approval

Acceptance by L-3 MAS of a processing source as a result of satisfactory audit and/or qualification.

b) Processor/Processing Source

The facility providing the required processes.

c) Qualification

Procedure by which a processor submits representative specimens and/or data for process evaluation testing in order to verify his capability to perform to the requirements of the specification(s).

d) Audit

Evaluation of supplier's capability to fulfill L-3 MAS requirements.

2 APPLICABILITY

The requirements and conditions of this document apply to the processing and/or manufacturing of MAS parts to the MPI listed in Table 1.

MPI requirements shall apply to the extent and in the manner described in the applicable specification.

Applicability and interpretation of the conditions and requirements in this document and/or in any of the MPIs are at the discretion of L-3 MAS MPE.

3 APPROVAL

When required by the applicable specification(s), processors shall submit to an on-site evaluation of their facilities by a L-3 MAS representative to verify their capability and capacity to perform the required process, and shall provide test panels and/or data as requested to support verification by L-3 MAS of the process evaluation.

Processors shall maintain adequate records and shall be able to furnish, upon request, objective evidence of their compliance with the applicable specification(s) requirements and approved deviations.

Approval of processors is subject to the following conditions:

- (a) Satisfactory audit, if applicable.
- (b) Discrepancies, which need correction, are corrected.
- (c) Discrepancies, which need request for deviation are corrected with written approval from L-3 MAS MPE.
- (d) Qualification testing for each process is completed successfully, if applicable.

Once the above conditions are satisfied, L-3 MAS will provide written notification to Quality Assurance of the processor's Approved status for the applicable specification(s).

Approval for one or more processes is site specific and cannot be extended to other processing sites performing the same process(es).

All formal request concerning approved status shall be submitted to Quality Assurance.

It is the responsibility of the processor, once approved or while being considered for approval, to notify Quality Assurance in writing when one (or more) of the following conditions occur:

- a) Address change.
- b) Major equipment modification or relocation.
- c) Change of certified, qualified or key process personnel.
- d) Change of facility name and/or ownership.

3.1 FREQUENCY

The frequency of reassessment of subcontractors is at the discretion of L-3 MAS MPE.

4 PRODUCTION

Processor facilities shall be adequate for performing the applicable process(es).

Processors shall have documented procedures for performing the required process(es). Processors, upon request, shall make available these procedures and supply proof that such procedures produce results meeting the applicable requirements.

Processors must create and maintain a system within their facility that shall:

- (a) control specifications and procedures to assure the use of the latest change(s) and preclude the use of obsolete data;
- (b) establish a manufacturing plan or work order providing objective evidence of receiving, in-process and final inspection with regards to MPI requirements. This work order shall identify the manufacturing, processing and inspection status of the part(s) at any stage of manufacturing;
- (c) control testing, measuring and processing equipment;
- (d) establish methods to control training, testing and certification or qualification of personnel and facilities in accordance with the applicable specification(s).

5 DEVIATIONS

Processors wishing to deviate from specification requirements must submit a written request for deviation to L-3 MAS MPE. Any useful data or evidence to support the request for deviation shall be included. L-3 MAS MPE (the process owner) shall disposition the request.

No change to the requirements of the applicable specification(s) shall be implemented by the processor before receiving written approval of the request for deviation.

6 STATUS OF PROCESSING SOURCES

The special processes and specific process approvals with limitations are shown in the L-3 MAS Quality web page <http://www.mas.L-3com.com>

Table 1 PROCESSES REQUIRING SPECIAL CONTROLS

SPEC.	TITLE	AUDIT	QUALIF.
MPI 132-003	SWAGING OF TUBES		X
MPI 138-029	APPLICATION OF EPOXY PRIMER, EPOXY TOPCOAT AND POLYURETHANE TOPCOAT	X	
MPI 138-030	SPRAY APPLICATION OF INTEGRAL FUEL TANK COATING	X	
MPI 150-003	INSTALLATION OF SAFETYING DEVICES	X	
MPI 151-001	INSTALLATION OF CONVENTIONAL RIVETS		X (1)
MPI 151-040	INSTALLATION OF HIGH INTERFERENCE RIVETS (SLUG RIVETS)		X (1)
MPI 157-028	PRESSURE AND ENVIRONMENTAL SEALING	X	X (1)
MPI 160-006	PHOSPHATE TREATMENT	X	X
MPI 160-008	CADMIUM PLATING OF STEELS HEAT TREATED TO LESS THAN 220 KSI AND COPPER ALLOYS	X	X
MPI 160-009	CHROMIUM PLATING OF STEELS HEAT TREATED TO LESS THAN 220 KSI AND COPPER ALLOYS	X	X
MPI 160-010	CHROMIC ACID ANODIZING	X	X
MPI 160-016	HARD NICKEL PLATING	X	X
MPI 160-020	CHEMICAL CONVERSION TREATMENT FOR ALUMINUM ALLOYS	X	X
MPI 160-023	HARD ANODIZING OF ALUMINUM ALLOYS	X	X
MPI 160-026	ELECTROLESS NICKEL PLATING	X	X
MPI 160-027	CADMIUM PLATING OF CARBON AND LOW ALLOY STEELS HEAT TREATED TO 220 KSI AND ABOVE	X	X
MPI 160-028	CHROMIUM PLATING OF STEEL PARTS HEAT TREATED TO 220 KSI AND ABOVE	X	X
MPI 160-031	LOCALIZED BRUSH PLATING	X	
MPI 160-032	SULPHURIC ACID ANODIZING	X	X
MPI 160-039	TIN PLATING-ELECTRODEPOSITED	X	X
MPI 160-040	CONDUCTIVE CHEMICAL CONVERSION TREATMENT FOR ALUMINUM ALLOYS	X	X
MPI 160-042	ION VAPOR DEPOSITION OF ALUMINUM COATINGS ON ALUMINUM ALLOY SUBSTRATES	X	X
MPI 160-043	ION VAPOR DEPOSITION OF ALUMINUM ON STEELS, CORROSION RESISTANT STEELS AND TITANIUM ALLOYS	X	X
MPI 161-006	APPLICATION OF MIL-L-23398 AIR-DRYING SOLID FILM LUBRICANT	X	

Table 2 PROCESSES REQUIRING SPECIAL CONTROLS (CONT'D)

SPEC.	TITLE	AUDIT	QUALIF.
MPI 161-007	APPLICATION OF MIL-L-46010 SOLID FILM LUBRICANT	X	
MPI 161-008	APPLICATION OF MIL-L-81329 SOLID FILM LUBRICANT	X	
MPI 168-005	GAS NITRIDING OF STEEL	X	X
MPI 168-006	BAKING OF STEEL FOR RELIEF OF HYDROGEN EMBRITTLEMENT	X	
MPI 168-007	HEAT TREATMENT OF ALUMINUM AND ALUMINUM ALLOYS	X	X
MPI 168-013	HARDNESS AND ELECTRICAL CONDUCTIVITY TESTING OF METALS	X	
MPI 168-014	HEAT TREATMENT OF STEELS	X	X
MPI 168-015	STRESS RELIEF OF METALS	X	
MPI 168-030	HEAT TREATMENT OF CORROSION RESISTANT STEELS	X	X
MPI 168-034	HEAT TREATMENT OF 6Al-6V-2Sn TITANIUM ALLOYS	X	X
MPI 172-000	GENERAL QUALIFICATION OF FUSION WELDERS FOR AIRCRAFT AND MISSILE APPLICATIONS	X	X
MPI 172-006	SPOT WELDING - CLASS B	X	X
MPI 172-010	SEAM WELDING - CLASS B	X	X
MPI 172-011	SPOT WELDING - CLASS A FOR ALUMINUM ALLOYS	X	X
MPI 172-017	QUALIFICATION OF SPOT WELDING AND SEAM WELDING MACHINES		X
MPI 172-024	SPOT WELDING OF 4130 STEEL, HEAT TREATED TO 125-145 KSI	X	X
MPI 172-034	FUSION WELDING	X	
MPI 174-002	FABRICATION OF PLUMBING LINES	X	X
MPI 175-004	RETENTION OF BEARINGS BY PRESS SWAGING		X
MPI 175-005	INSTALLATION OF INTERFERENCE FIT BUSHING	X	
MPI 176-002	FLUORESCENT PENETRANT INSPECTION	X	
MPI 176-004	MAGNETIC PARTICLE INSPECTION	X	
MPI 176-007	ULTRASONIC INSPECTION OF WROUGHT METALS	X	
MPI 176-017	RADIOGRAPHIC INSPECTION	X	
MPI 180-001	ALKALINE CLEANING	X	X
MPI 180-015	PASSIVATION OF CORROSION RESISTANT STEEL	X	X
MPI 180-030	ALKALINE ETCHING OF ALUMINUM ALLOYS	X	X

Table 3 PROCESSES REQUIRING SPECIAL CONTROLS (CONT'D)

SPEC.	TITLE	AUDIT	QUALIF.
MPI 180-031	CLEANING AND DEOXIDIZING CORROSION AND HEAT RESISTANT ALLOYS AND TITANIUM ALLOYS	X	X
MPI 180-032	ACID CLEANING AND DEOXIDIZING ALUMINUM ALLOYS	X	X
MPI 180-041	METAL BOND ETCH	X	X
MPI 185-002	SHOT PEENING OF METAL PARTS	X	X
MPI 186-000	CHEMICAL MILLING OF ALUMINUM	X	X
MPI 188-002	COLD WORKING HOLES	X	X (1)

NOTE

(1) as required by L-3 MAS MPE