

Supplier Material Processing Procedure (SMPP) Development Guide

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SMPP Scope

This document defines Aerojet Rocketdyne (AR) requirements for implementation of manufacturing and material process controls at supplier through the implementation of a supplier SMPP.

Requirements

The Supplier Material Processing Procedures (SMPPs) are written by the supplier to detail the step-by-step operations and controls that are specifically applied to ensure that the processed product meets all the engineering and quality requirements defined in the associated AR process specification. Each SMPP must be reviewed and formally approved by AR prior to the processing of any parts by the supplier.

The SMPP shall document, in a step-by-step manner, the nature and sequence of all of the following:

- Manufacturing operations
- Inspections
- In-process controls required to ensure compliance with all specification applicable requirements.

NOTE: The SMPP shall not be a copy or a restatement of the specification requirements. The operator performing the operation shall be able to properly complete the describe process by referring to the SMPP.

The SMPP shall have a title page that includes (as a minimum) the information outlined in the SMPP format guide below. The SMPP should be a stand alone document when suitable to the process/supplier. Reference to other supplier internal procedures within the SMPP should be kept to a minimum.

The supplier shall assign the SMPP a unique identification number and revision letter relating the SMPP to the associated specification number and revision. The SMPP revision letter shall remain the same letter through out the review and approval cycle. The supplier's SMPP documentation control number and structure of the document should be similar to the supplier's internal procedures.

The SMPP shall be submitted to the AR Buyer of record. The Buyer shall submit to Supplier Quality Assurance (group mailbox). Once the SMPP has been approved by AR Engineering Materials & Processes and Quality Process Engineering organization representatives, any changes made to the SMPP or any change by the supplier in their process parameters as stated in the approved SMPP shall require a re-submittal of the SMPP for AR approval prior to processing hardware.

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Proprietary Information

If the supplier identifies their SMPP as being proprietary, and it is written on the document, then the SMPP shall not go through the review cycle until all necessary issues pertaining to the proprietary requirements have been resolved.

Approved SMPP Changes

Any change in the supplier process that is a deviation from the approved SMPP requires a re-submittal of the updated SMPP for approval. AR specification revision may require the supplier to update their SMPP depending on the significance of the change. *AR Engineering M&P will provide the Supplier Quality Assurance group with documentation pertaining to technical or non-technical specification changes.*

SMPP Format

The following outline is a check list and guide for the preparation of an SMPP:

A. Title page

- Supplier name
- Supplier Address, City and State
- SMPP title
- SMPP identification number and revision letter
- Issue date
- AR specification number and revision letter.

B. Revision record page to document the specific changes to each SMPP revision.

C. Scope – Brief description of the applicability and intended use of the procedures established within the SMPP.

D. Applicable documents and materials – these documents may include weld parameters, heat treat parameters, chemical analysis procedures, specific materials, other specifications, etc. These documents must be called out within the body of the SMPP.

E. General notes — Information background, safety requirements, etc.

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F. Procedures

- a) Sequential presentation of processing steps described in sufficient detail to ensure repeatability.
- b) In-process inspection control points description (exp. Verify heat treat program specified in the approved heat treat parameter sheet is properly loaded into heat treat furnace)
- c) Applicable data recording requirements are specified
- d) Applicable test specimen processing described.
- e) In process/part qualification procedures (If required)

G. Equipment and Tooling – Applicable equipment, special tooling, and measurement instruments listed. (If applicable per specification)

H. Quality Assurance

- a) Each inspection, test, and processing control is adequately described.
- b) Describe the following controls (If applicable per specification)
 - Environmental and contamination
 - Instrument calibration
 - Equipment maintenance
 - Equipment limitations
 - Chemical solution controls including composition, temperature, and impurity control.
 - Personnel certification/qualification
 - Laboratory analysis
 - Thermal survey
 - Parameters

Package and Handling

Describe controls to preclude damage, contamination or corrosion during processing, handling, and shipping.