# IN-PROCESS INSPECTION

**Document Control Revision History**

| PAGE | REASON FOR CHANGE | REV. | REVIEWER / AUTHORISED BY: | RELEASE DATE: |
|---|---|---|---|---|
| ALL | | | | |
| ALL | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Revision Approval: J.BENTINK Signature: Date: 20/02/17

## 1.0 Scope and Objectives

1.1. This procedure defines the activities required for In Process Inspection on customer product being run on an approved process.

1.2. The objective of in process inspection is to verify and document that all applicable specifications and requirements pertaining to customer product are stable and continue to meet specifications and requirements throughout the production run. Approval to continue manufacturing parts with the process being monitored will be given when in process inspection indicates all contract requirements continue to be satisfied.

1.3. Additionally, the objective of the in-process inspection procedure shall be to ensure that basic requirements continue to be met and documented as required by the customer contract specific to AMS's responsibility to provide control over the process, provide objective evidence of product conformance to specification and continued effectiveness of the quality management system.

1.4. The result of the in-process inspection process shall be objective evidence the process is stable and capable of manufacturing conforming product as the manufacturing process continues and is monitored. In process inspection shall be used to improve customer product quality and improve the overall effectiveness of the quality management system.

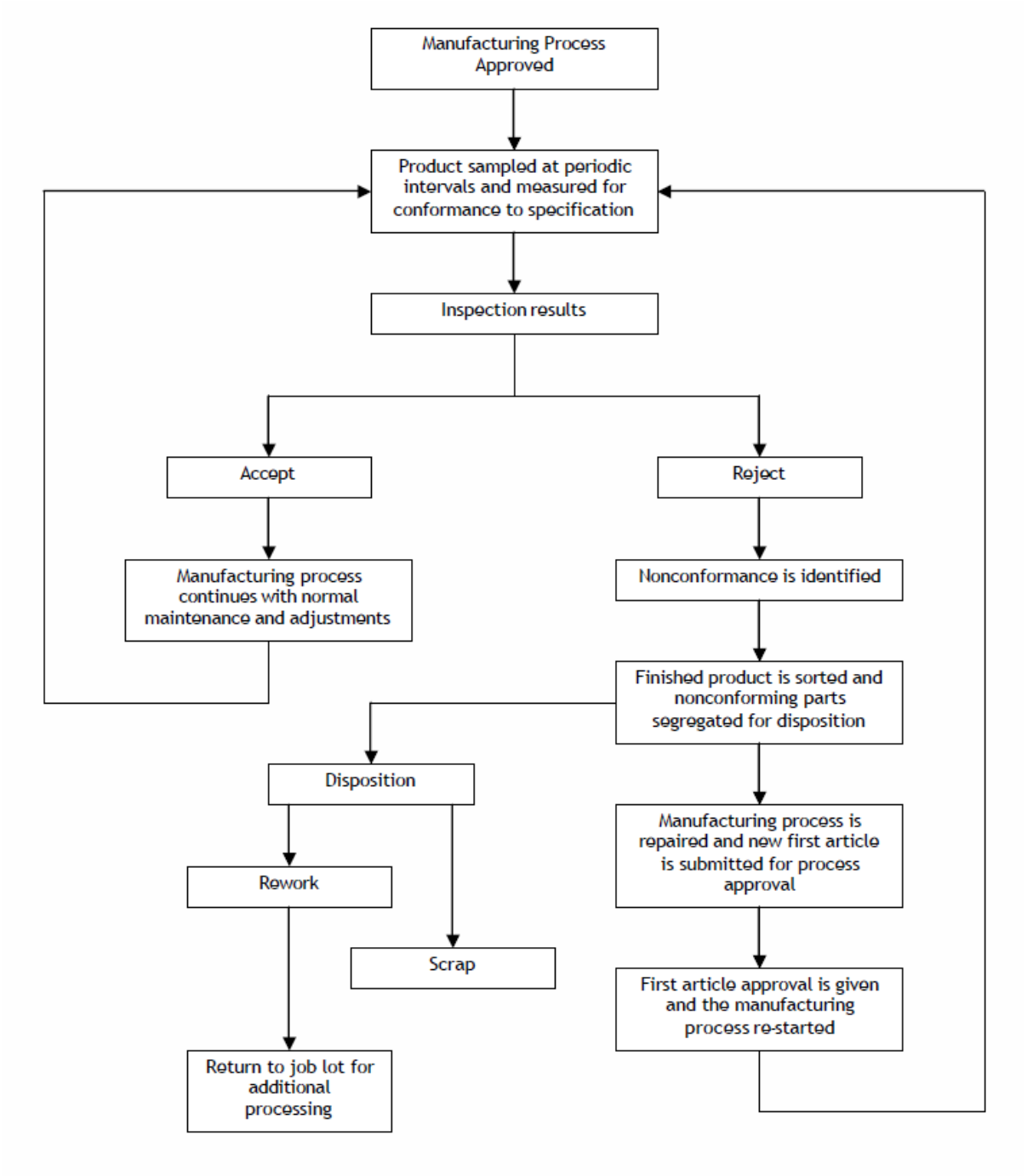
## 2.0 Applicability

2.1 In Process inspection with documentation applies to all marine products and services and products requiring in process inspection per customer contract.
2.2 production personnel.
2.3 quality personnel.
2.4 suppliers, as required.

## 3.0 Related Documents

3.1 QM-01, Quality Manual, Section 8.2.3, Monitoring and Measurement of Processes.
3.2 QM-01, Quality Manual, Section 8.2.4, Monitoring and Measurement of Product.
3.3 RPR-007, Product Realization, Section 5.56, Process Verification, and Section 5.62, In Process Inspection.
3.4 In Process Inspection Report, AMS-0041.
3.5 Customer prints, specifications and contract requirements.
3.6 Government and Regulatory Authority Documents and Specifications.

## 4.0 Process Flow Chart



## 5.0 Procedure

5.1 In accordance with ISO9001:2008, Section 8.2.3, Monitoring and Measurement of processes, AMS recognizes the importance of in process inspection and has implemented an in-process inspection process containing the elements required by customer contract, government and regulatory authorities.

**Requirements**

5.2 In process inspection is performed as specified by customer contract requirements.

**Process**

5.3 Based on the results of the first article inspection the manufacturing process is given approval to run in the production mode.

5.3.1 first article inspection determines all product specifications and requirements have been met by the manufacturing process.

5.4 Product from the manufacturing process is sampled periodically for the purpose of in process inspection.

5.4.1 frequency of sample is determined by:

5.4.1.1 number of parts in order.

5.4.1.2 contract requirements.

5.4.1.3 process stability.

5.5 Process sample is inspected and documented for conformance to all specifications and requirements related to the current process and any features from previous operations that may be affected by the current process.

5.5.1 in process inspection identifies one or more features that fail to meet product specifications and requirements. Go to Section 5.6.

5.5.2 in process inspection determines all features meet specifications and requirements. Go to Section 5.4.

**Nonconforming Product**

5.6 Manufacturing process is stopped.

5.7 Product is sorted to remove all nonconforming products and the identified nonconforming product is segregated from acceptable product.

5.8 Root cause of the non-conformance is identified.

5.9 Process is modified to eliminate the problem identified as the root cause.

5.10 Manufacturing process produces a new first article piece.

5.11 First article inspection is performed.

5.11.1 first article piece is identified as being nonconforming. Go to Section5.6.

5.11.2 first article piece is identified as meeting all product specifications and requirements. Go to Section 5.4.

5.12 Segregated nonconforming product is dispositioned.

5.12.1 Scrap

5.12.2 Rework

5.12.2.1 product is reworked to meet product specifications and requirements.

5.12.2.2 reworked product returned to the production lot for continued processing.

5.13 In process inspection documentation is maintained in the job traveller until the manufacturing process is completed.

5.14 In process inspection documentation is filed with the job folder for future retrieval and review.

## 6.0 Responsibilities.

6.1 Customer, Government and Regulatory Authority
- 6.1.1 provide complete documentation through:
  - 6.1.1.1 contract
  - 6.1.1.2 prints
  - 6.1.1.3 specifications
  - 6.1.1.4 work orders
  - 6.1.1.5 change orders
  - 6.1.1.6 customer, government and regulatory authority process specifications

6.2 AMS manufacturing personnel
- 6.2.1 measure parts in process as required by manufacturing plan

6.3 AMS Inspection Personnel assist manufacturing personnel
- 6.3.1 measure parts in process as required by manufacturing plan

6.4 AMS Quality Manager
- 6.4.1 maintain document control system
- 6.4.2 issue and control documents
- 6.4.3 ensure documents are regularly reviewed and updated
- 6.4.4 ensure that regular internal audits, that address the continued applicability of this document, are scheduled

## 7.0 Record Retention.

7.1 Standard retention period will be three years' minimum, all documents. Customers may stipulate longer retention times.

7.2 This controlled QMS procedure shall be maintained on the server indefinitely.

7.3 Any hardcopy of this controlled document shall be valid for one day after printing.
- 7.3.1 after one day has elapsed the document shall be used only as a reference document
- 7.3.2 reference documents must be verified for revision level prior to use

7.4 Obsolete documents shall be removed from area of use and disposed of as appropriate.

7.5 As appropriate, all quality records associated with this document are available for customer or regulatory agency review

## 8.0 Document Authorities.

8.1 Custodian: Quality Manager

8.2 Review Activity
Quality Manager
Managing Director
Operations Manager

8.3 Approval Authority:
Quality Manager
Managing Director
Operations Manager