

Configuration Management

1.0 Scope and Objectives

- 1.1 This procedure defines the activities required for establishing and maintaining a configuration management system specific to St. Vrain Manufacturing's responsibilities.
- 1.2 The objective of the configuration management procedure shall be to ensure that basic requirements are established and maintained as required by customer contract specific to St. Vrain Manufacturing's responsibility to provide control over the configuration item, provide objective evidence of product conformance to specification and continued effectiveness of the quality management system.
- 1.3 The result of the configuration management process shall be control of all configuration documentation, physical media, manufacturing processes and physical parts representing or comprising the product that are the direct responsibility of St. Vrain Manufacturing. Configuration control shall be used to improve customer product quality and improve the overall effectiveness of the quality management system.

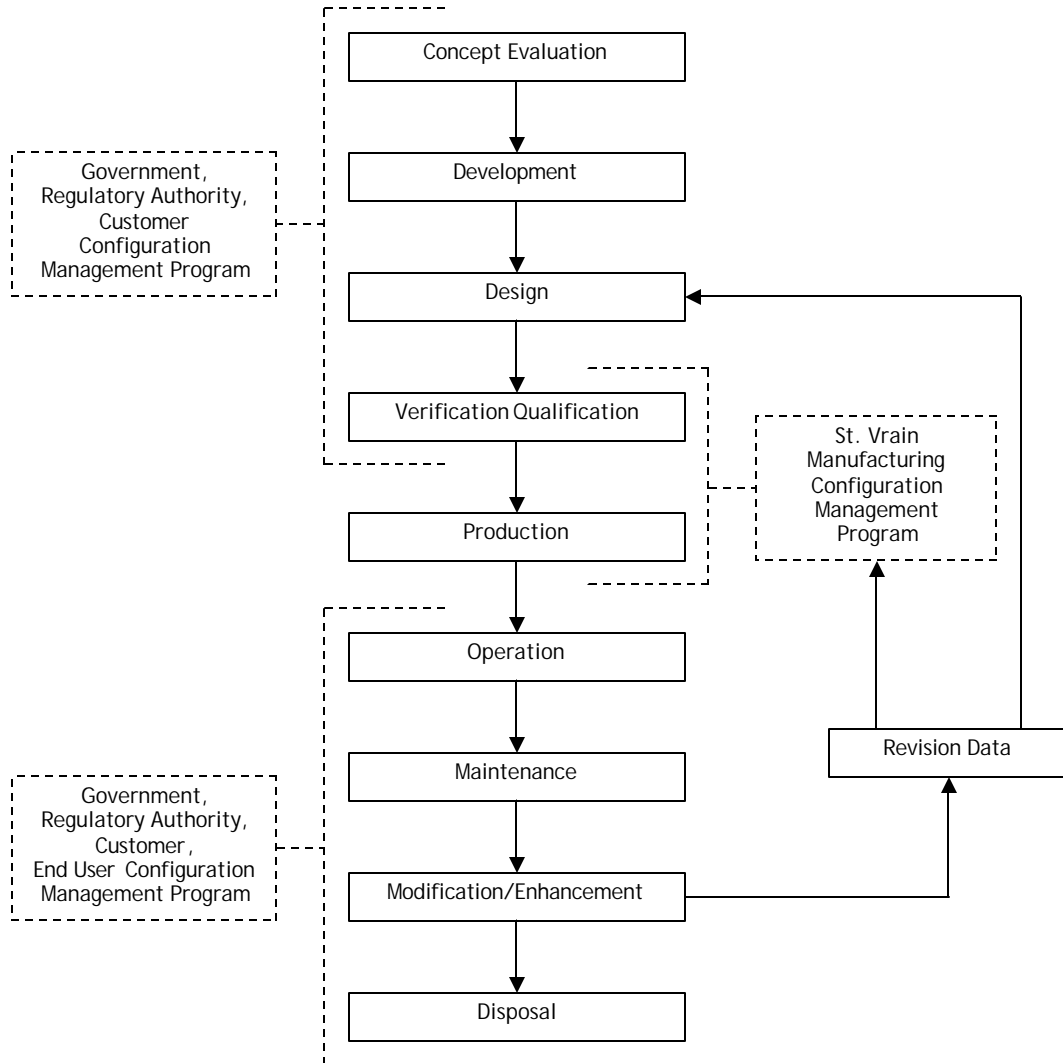
2.0 Applicability

- 2.1 The total configuration management system is a cooperative effort between:
 - 2.1.1 the customer
 - 2.1.2 St. Vrain Manufacturing
 - 2.1.3 suppliers
 - 2.1.4 government and regulatory authorities
- 2.2 St. Vrain Manufacturing is responsible for the portion of the configuration management system for which it has direct control as defined by:
 - 2.2.1 customer contract
 - 2.2.2 this procedure

3.0 Related Documents

- 3.1 QM-001, Quality Manual, Section 4.3, Configuration Management
- 3.2 QMS-004, Internal Audit
- 3.3 Customer Contract, Prints, Specifications
- 3.4 St. Vrain Manufacturing Quality Documents and Quality Records
- 3.5 Government and Regulatory Authority Documents and Specifications

4.0 Process Flow Chart for Configuration Management Program



5.0 Procedure

- 5.1 In accordance with AS9100, Section 4.3, St. Vrain Manufacturing recognizes the importance of configuration management and has implemented a system containing the elements required by customer contract, government and regulatory authorities.
- 5.2 A complete configuration management system includes the following elements:
 - 5.2.1 Concept Evaluation
 - 5.2.2 Development
 - 5.2.3 Design
 - 5.2.4 Verification Qualification
 - 5.2.5 Production
 - 5.2.6 Operation
 - 5.2.7 Maintenance
 - 5.2.8 Modification/Enhancement
 - 5.2.9 Disposal
- 5.3 In the above list (Section 5.2), St. Vrain Manufacturing claims exclusion to all items except:
 - 5.3.1 (5.2.4) Verification Qualification (in regard to the quoting process)
 - 5.3.2 (5.2.5) Production
 - 5.3.3 (5.2.8) Modification/Enhancement (in regard to item revisions flowed down to St. Vrain Manufacturing)
- 5.4 St. Vrain Manufacturing's configuration management system will meet the four basic requirements:
 - 5.4.1 **Configuration Identification:** identify and document the functional and physical characteristics of configuration items.
 - 5.4.2 **Configuration Control:** control changes to configuration items and their related documentation.
 - 5.4.3 **Configuration Status Accounting:** record and report information needed to manage configuration items effectively, including the status of proposed changes and implementation status of approved changes
 - 5.4.4 **Configuration Audits:** audit configuration items to verify conformance to specifications, drawings, interface control documents and other contract requirements.

- 5.5 When applying configuration management to a configuration item, St. Vrain Manufacturing will plan in accordance with:
 - 5.5.1 scope
 - 5.5.2 complexity
 - 5.5.3 contract requirements
- 5.6 The configuration management plan shall be consistent with continual process improvement and will include:
 - 5.6.1 objectives of program
 - 5.6.2 responsibilities and authorities
 - 5.6.3 coordination with all parties
 - 5.6.4 related procedures, forms, records, etc.
- 5.7 Data transfer will be transmitted:
 - 5.7.1 hard copy
 - 5.7.1.1 hand delivery
 - 5.7.1.2 courier
 - 5.7.1.3 mail and parcel services
 - 5.7.2 electronic
 - 5.7.2.1 e-mail
 - 5.7.2.2 facsimile
- 5.8 Under no circumstances will data be transmitted verbally without immediate electronic or hard copy confirmation with all parties involved in the verbal transmission.
- 5.9 St. Vrain Manufacturing's configuration management process shall pertain only to:
 - 5.9.1 configuration item review for quoting purposes
 - 5.9.2 production process activities that are directly performed or coordinated by St. Vrain Manufacturing
 - 5.9.3 documented activities by the customer, government or regulatory authority that implement revisions to the configuration item

- 5.10 Configuration identification shall be through typical job creation activities as defined by:
 - 5.10.1 QMS-008, Product Realization, Section 5.2, Request for Quote
 - 5.10.2 QMS-008, Product Realization, Section 5.14, Job Folder
 - 5.10.3 QMS-008, Product Realization, Section 5.16, Job Packet
 - 5.10.4 WI-004, Job Traveler
 - 5.10.5 WI-009, Job Card
 - 5.10.6 Customer Contract
 - 5.10.7 other requirements as defined by government and regulatory authorities

- 5.11 Configuration control, internally, shall be through the use of St. Vrain Manufacturing's documents:
 - 5.11.1 QMS-002, Document Control
 - 5.11.2 QMS-003, Record Control
 - 5.11.3 quality records, including, but not limited to:
 - 5.11.3.1 first article inspection report
 - 5.11.3.2 in-process inspection report
 - 5.11.3.3 final inspection reports
 - 5.11.3.4 raw material certifications
 - 5.11.3.5 special process certifications
 - 5.11.3.6 certificates of conformance

- 5.12 Configuration control, externally, shall be through the use of customer, government and regulatory authority documents including, but not limited to:
 - 5.12.1 customer contracts
 - 5.12.2 customer configuration item revisions
 - 5.12.3 all applicable specifications

- 5.13 Configuration status shall be verified using appropriate quality records, including, but not limited to:
 - 5.13.1 customer contract
 - 5.13.2 job folder
 - 5.13.3 job card
 - 5.13.4 job traveler
 - 5.13.5 inspection documentation
 - 5.13.6 special process supplier quality records
 - 5.13.7 other quality records as defined by government and regulatory authorities
- 5.14 Configuration documentation will be:
 - 5.14.1 existing St. Vrain Manufacturing forms
 - 5.14.2 customer supplied forms
 - 5.14.3 government and regulatory authority forms
- 5.15 Configuration identifiers (serial numbers) will be defined by the customer and all serial numbers within the configuration will be unique.
- 5.16 Configuration control is the responsibility of the customer and any changes to the product's configuration will be:
 - 5.16.1 the responsibility of the customer to revise and document
 - 5.16.2 flowed down to St. Vrain Manufacturing using appropriate forms of communication
 - 5.16.3 implemented and documented at St. Vrain Manufacturing using existing procedures as defined in the quality management system
- 5.17 Request for deviation to product configuration will be documented on:
 - 5.17.1 St. Vrain Manufacturing Nonconforming Material Report
 - 5.17.2 customer, government or regulatory authority required form

- 5.18 Configuration verification documentation includes:
 - 5.18.1 first article inspection documentation
 - 5.18.2 in process inspection documentation
 - 5.18.3 final inspection documentation
 - 5.18.4 raw material certification
 - 5.18.5 special process certification
 - 5.18.6 certification of conformance
 - 5.18.6.1 St. Vrain Manufacturing format
 - 5.18.6.2 customer format
 - 5.18.6.3 government or regulatory authority format
- 5.19 Configuration audit, following practices documented in QMS-004, Internal Audits, will be performed as required:
 - 5.19.1 scheduled by the quality management system
 - 5.19.2 required by the customer, government or regulatory authority
 - 5.19.3 using existing St. Vrain Manufacturing procedures and forms
- 5.20 Configuration audit activity will include review of, but not be limited to:
 - 5.20.1 documentation
 - 5.20.1.1 customer contract and specifications
 - 5.20.1.2 government and regulatory authority requirements
 - 5.20.1.3 St. Vrain Manufacturing quality documentation
 - 5.20.2 raw material
 - 5.20.2.1 procurement
 - 5.20.2.2 certification
 - 5.20.2.3 identification
 - 5.20.2.4 storage
 - 5.20.2.5 distribution
 - 5.20.2.6 traceability

5.20.3 machined product

5.20.3.1 processes

5.20.3.2 procedures

5.20.3.3 in process dimensional verification

5.20.4 special processes

5.20.4.1 procedures

5.20.4.2 process control

5.20.4.3 process documentation

5.20.4.4 process certification

5.20.4.5 document control

5.20.4.6 record control

5.20.5 product qualification

5.20.5.1 first article inspection

5.20.5.2 in process inspection

5.20.5.3 final inspection

5.20.5.4 certification documentation

6.0 Responsibilities

6.1 Customer, Government and Regulatory Authority documentation for

6.1.1 configuration control

6.1.1.1 contract

6.1.1.2 specifications

6.1.1.3 requirements

6.1.2 configuration revision

6.1.2.1 contract

6.1.2.2 specifications

6.1.2.3 requirements

- 6.2 St. Vrain Manufacturing Personnel
 - 6.2.1 document control
 - 6.2.2 record control
 - 6.2.3 process control
 - 6.2.3.1 internal processes
 - 6.2.3.2 external special processes
 - 6.3 Quality manager
 - 6.3.1 maintain document control system
 - 6.3.2 issue and control documents
 - 6.3.3 ensure documents are regularly reviewed and updated
 - 6.3.4 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.
 - 7.1 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 Control

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| 8.1 | Custodian: | Quality Manager |
| 8.2 | Review Activity | Quality Manager
President
Operations Manager |
| 8.3 | Approval Authority: | Quality Manager
President
Operations Manager |