

NORTHWEST INDUSTRIES INC

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Quality Control Manual

**Northwest Industries Inc.**

Administrative  
Quality Control  
Manual

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## **Company Profile**

Since the incorporation of Northwest Industries Inc, it has been our philosophy to produce superior service and give prompt delivery at competitive prices. As a result of this commitment, we have experienced steady growth.

Northwest Industries Inc is a conformance-to-requirements organization. We have, therefore, established a climate favorable to quality so those conditions that could adversely affect our quality are prevented or receive early detection. Non-conformances are corrected to prevent re-occurrence. We continue to build a culture of continuous improvement, customer satisfaction, and people involvement.

Our operation can support customer source inspection visits, audits, and surveys.

This quality control manual is applicable to all departments within Northwest Industries Inc. Due to the diverse nature of products and services provided within a given area or among several areas, specific procedures and work instructions are developed to facilitate implementation and control of quality and compliance with the quality control manual. These procedures are reviewed by our Management Representatives and approved by Executive Management. All procedures and work instructions are controlled documents.

When conflict arises between a customer's contractual requirements and the specifications in this document, the former takes precedence provided, in the opinion of the President of Northwest Industries Inc, they do not lessen the controls established herein.



## Compliance

This Quality Control Manual summarizes the responsibilities and describes the quality activities for effective control of product quality and reliability.

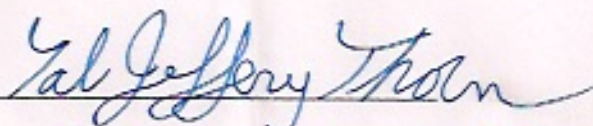
It is intended for use by Northwest Industries Inc, and its support areas and is available for customer reference.

Specific procedures used to implement this program are available within each department, but are proprietary to Northwest Industries Inc.

The quality and reliability assurance systems contained in this manual are based upon and comply with the requirements of licensing and business bureaus.

By the signature below, Northwest Industries Inc, affirms its commitment to the quality system that is encompassed by the Quality Control Manual.

Approved



President: Northwest Industries Inc.

On this date:

Oct 24, 1996



### **Management Responsibility**

Northwest Industries Inc. management is committed to the policies and procedures described and referenced within this manual, to the ongoing development and continual improvement of the quality management system implemented.

To reinforce this commitment, Northwest Industries Inc, management shall ensure that:

A.) The importance of meeting customer, statutory, and regulatory requirements are effectively and consistently communicated throughout the organization using any of the following means:

- Company Memo
- Internal and quality training sessions
- Posting and bulletin boards
- Email notification
- Meetings

B.) The quality policy must continue to remain relevant and consistent with overall organizational policies and provide a suitable framework for setting quality objectives.

C.) The quality policy must continue to be identified for the relevant functions and levels within Northwest Industries Inc. and are measurable while consistent with the quality policy.

D.) Quality management reviews continue to be conducted to ensure the continuing suitability, effectiveness and efficiency of the Northwest Industries Inc. Quality Management System.

E.) All necessary resources to implement and improve the processes for the quality management system and to address customer satisfaction must continue to be made available.

## **Quality Policy**

The Quality Policy established by the management of Northwest Industries Inc. is as follows:

To meet or exceed our customers' requirements and specifications through continuous improvement.

This quality policy is supported by: Training and documented procedures

The foundation for achieving this Quality Policy is based upon:

- Recognizing and understanding the requirements of our internal and external customers.
- Creating quality objectives with measurable quality goals.
- Training, quality procedures and work instructions
- Developing and implementing processes for construction and administration that support customer satisfaction by preventing nonconformity at all stages.

Top management reviews the Quality Policy for continuing suitability and to ensure the policy:

- Is appropriate to the purpose of the organization.
- Includes the commitment to comply with requirements and continually improve the effectiveness of the quality system.
- Provides the framework for establishing and reviewing quality objectives.
- Is communicated and understood within the organization.

Northwest Industries Inc. will decide for which functions and levels within the organization quality objectives should be established. Quality objectives must be measurable and consistent with the quality policy.

### **Direction and Leadership**

Management review meetings are held at least twice a year to evaluate the effectiveness of the quality system by reviewing the quality policy, quality objectives, internal audit results, customer complaints, training, and other issues that may arise, to formulate corrective actions and review corrective actions for continuous improvement.

### **Management Representative**

The management representative is appointed by top management. The management representative is the liaison with external parties on matters relating to the Northwest Industries Inc. quality system. The management representative has the responsibility and authority to:

- A.) Ensure the establishment, implementation, and maintenance of the processes needed for the quality management system.
- B.) Report to top management on the performance of the quality system including the needs for improvement
- C.) Ensure the promotion of awareness of customer requirements throughout the organization.

### **Resources**

#### **Personnel**

**Responsibility and Authority-** The responsibility, authority, interrelationship, and qualification of individuals and areas within the facility is defined by the organizational chart, job descriptions, procedures, work instructions, and training requirements. All employees are responsible for the quality of the products and services of the assigned activities of their job function.

#### **President**

- Chairing the management review meetings.
- Ensures that the company operates and maintains the quality system.



- Provides adequate resources and a suitable environment for the company's employees to achieve and maintain the company's quality policy.

#### **Vice President**

- Assumes the duties of the President in his absence.
- Initiates a quality plan.
- Is responsible for production and shipments of manufactured goods.

### **Documentation Requirements**

#### **Internal Communication**

Communication between, and input from, the functions that are involved with the decision making process during production stages, is ensured to guarantee the requirements of the customer are properly satisfied.

#### **Documentation Requirements**

This Quality Control Manual, in conjunction with documented procedures, work instructions, forms, records, and references, form the Northwest Industries Inc. Quality System.

The Quality System is defined in the following levels:

**Level 1:** The Quality Control Manual provides an overview of Northwest Industries Inc's Quality System and references associated procedures.

**Level 2:** Procedures referenced in the Quality Control Manual are written to assure conformance with the intent of the statements made within the Quality Control Manual and requirements of business standards. Procedures and/or a quality plan reference appropriate work instructions, specifications or drawings, and forms associated with a contract.

**Level 3:** Work instructions and/or a quality plan direct employees in accomplishing the work to meet the requirements of the contracts.

**Level 4:** Forms, tags, and quality records document that the Quality System is working.

Development of the Quality System is focused on satisfying the needs of our customers, creating greater company-wide quality awareness and reinforcing the company's quality commitment as a top priority.

**List of Periodical Procedures:**

These procedures are preformed on a periodic basis, as needed.

- Management Review
- Development of quality plan
- Review of quality records
- Training
- Internal quality audits

**Northwest Industries Inc. List of Procedures for Projects**

1. Quotation
2. Contract Review
3. Purchasing
4. Construction of Project
5. Painting of Project, if applicable
6. Inspection and Testing

**Contract and Project Specification Review and Communication**

All contracts are reviewed by the President, or if necessary, the group of contributing persons. The following is reviewed:

- A.) Requirements are adequately defined and documented.
- B.) Differences over any requirements are addressed and resolved.
- C.) The company has the capability to fulfill contractual requirements.
- D.) All customer requirements of the contract, along with any customer specific requirements, are capable of being satisfied.

E.) Orders received by Northwest Industries Inc. conform to what was quoted by Northwest Industries Inc.

Changes to contracts can only be made by agreement between the President or Project Manager and the customer. The Project Manager recognizes changes impacting other Northwest Industries Inc. departments must be reviewed and approved. Contracts are amended in accordance and agreed in writing. Relevant documents are then amended and relevant personnel are made aware of any changes.

Contract review records are maintained.

### **Detailing**

Project manager will establish project schedule, determine internal and external detailing groups, oversee production of drawings, distribute and define customer specifications, codes, and submittals, obtain approval and release of project drawings for construction.

Drafting Supervisor will check in house created pre-approved project drawings, establish and maintain detailing standards and train detailers.

### **Document and Data Control**

#### **Review and Approval**

All controlled documents, prior to issue, are reviewed and approved by authorized personnel as defined in the appropriate procedures, and relevant versions are available at points of use. Documents will be legible and readily identifiable.

#### **Customer Requirements**

Customer drawings and specifications are promptly reviewed and distributed in the job file. Implementation, and any necessary updating of associated documents, is accomplished by the Project Manager.

#### **Revision Control**

Changes to documents and data are reviewed by the same functions/organizations that performed the original review and approval, unless otherwise designated. All pertinent information is available for such reviews. Specifications and documents referenced in the technical library are reviewed annually by the Management Representative.

#### **Access**



All current Quality System documentation is available to all personnel of Northwest Industries Inc. and can be obtained from their supervisor.

#### Obsolescence and Transmittal

Obsolete documents are promptly removed from all points of issuance and use. Copies of the void drawings are kept for record retention in the job file. The Project Manager is responsible for the transmittals to customers, subcontractors, and suppliers.

#### **Control of Quality Records**

The quality records applicable to the Quality System are identified along with the retention time of each document. The requirements of the Quality System are recorded and maintained by the appropriate department. The quality records procedure, defines the controls needed for maintaining records for the Quality System.

All records and files are legible, clearly identified, and stored to avoid deterioration and to facilitate ease of retrieval.

#### **Purchasing**

##### Purchasing Data

Purchase orders and other related purchasing material documentation are to clearly identify, define, and reference the associated requirements and specifications regarding the material being supplied and are checked for completeness before being sent to suppliers. Purchase orders and other documentation will also describe any requirements for qualification of personnel and any Quality System requirements. Purchasing records, including subcontractor and supplier qualification and evaluation, are maintained per the quality records procedures.

##### Selection of Subcontractors and Suppliers

Suppliers are selected based on their ability to meet requirements based on the quality of products or services supplied and delivery schedules. Customer designated suppliers are used when required by the customer's contract.

Purchasing is responsible for establishing and maintaining an approved supplier's list for the purchase of products and services necessary to meet the customer's order requirements. Suppliers are evaluated prior to being placed on the approved suppliers list. Amendments to the approved suppliers list are made by purchasing after due consideration and in accordance with the evaluation and/or audit reports. All key suppliers must be re-evaluated periodically.

Potential suppliers are evaluated on their quality arrangements and may be visited for the purpose of a quality audit.

#### Verification of Purchased Product, Material, and Services

Verification of supplied products is accomplished through the use of receiving inspection, requirements of supplier submission of material certification, or verification of material at the supplier's plant.

Should the company decide to verify purchased products at the supplier's location, there will be specified verification arrangements which are stipulated on purchasing documentation.

#### Customer Verification of Constructed Product

Customer representatives may verify conformance to requirements when specified in the contract or agreed with Northwest Industries Inc.

This verification does not relieve the supplier of supplying quality parts and material or services to Northwest Industries Inc.

#### Control of Customer-Supplied Material

Customer supplied materials, components, tooling, and shipping containers are received and identified to their respective job. Verification will be limited to issues as they relate to the specified contracted scope of work. If non-conformance is identified they will be discussed with the customer before proceeding.

Storage, handling, and preservation follow the same procedures that apply generally to any purchased or produced products. In the event of loss, damage, deterioration, or unsuitability, the customer is notified.

#### Material Identification

Northwest Industries Inc. is responsible for maintaining the identification system that assures product identification and traceability throughout the process, and where appropriate or required, on through delivery to customer.

Maintenance consists of properly adhering to the identification and traceability procedure, in the performance of quality activities concerning the product. These systems are monitored to assure they are in accordance with the requirements of procedures governing the identification and documentation system.

Supplier's source identification is retained on original packaging where possible to identify individual product or batches where traceability is required by customer contract. Records are maintained to insure that products supplied can be identified.



### Construction Process Control

Construction process control activities are carried out in accordance with Northwest Industries Inc.'s quality procedures and any project specific procedures needed to comply with the original contract. Project Manager and Purchasing plans the procurement of material, equipment, and labor. Equipment is maintained to produce quality products through our preventative maintenance procedure.

### **Inspection and Testing**

#### Assignment of Inspections and Monitoring

Monitoring and inspection activities for Northwest Industries Inc. are carried out per our inspection and testing procedures. Specific project requirements are established within a job specific quality plan that is developed by the Quality Manager or Project Manager. The quality plan may contain work instructions, drawings, specifications, etc. as needed to satisfy project requirements.

#### *Inspection Procedure*

#### Material Receipt Inspection

All incoming items received for usage within deliverable products shall not be allowed to progress into production, inventory, or storage until the required verifications and tests have been completed or the necessary test reports have been received and verified as acceptable.

Only valid, calibrated monitoring and measuring devices shall be used while performing verification or testing.

Submitted objective evidence of the supplier's verification of product quality may also be reviewed and evaluated to determine if quality and contract requirements have been met.

Any product observed as nonconforming shall be identified and placed on hold.

#### In-Process Inspection

In-process verifications shall be accomplished at hold points identified within quality plans and in accordance with documented procedures and/or work instructions.

Work in-process shall be monitored by the quality control department to ensure good workmanship standards and specification compliance is being maintained.



Products shall not be allowed to progress to the next operation until the required verifications and tests have been completed.

Any items observed as nonconforming shall be identified and placed on hold.

#### Final Inspection

All completed products shall be subject to final verification and/or testing prior to submission to the customer for evaluation and acceptance.

All contracted work operations and nonconformance corrections shall be verified for completeness and acceptability.

Unless otherwise approved by the customer, only items that fully meet contract requirements shall be shipped or offered to the customer for evaluation and acceptance.

#### Inspection Records

No completed product shall be shipped until all required records resulting from verification and test points identified have been reviewed and confirmed as acceptable.

All quality records are to identify the personnel responsible for authorizing product release and shall be filed and maintained within the job file.

### **Calibration of Inspection, Measuring, and Test Equipment**

Equipment and software used to validate conformance to specified requirements are selected, calibrated, and maintained.

Measuring and testing equipment is maintained in proper condition, calibrated at prescribed intervals in accordance with our procedures and appropriate work instruction. Equipment is identified with a unique number to allow for control and tracking purposes.

Measuring equipment is calibrated against national and international recognized standards. Where no standards exist, the basis used for calibration or verification shall be recorded. Equipment requiring recalibration is withdrawn from use until that equipment has been correctly calibrated and deemed acceptable for use. Measuring and test equipment that is sent out for calibration is required to be returned with a certificate confirming it was calibrated with equipment traceable to the same recognized standards.

Properly functioning equipment and an environment satisfactory for testing and storing is in place, along with safeguard inspection measures to prevent adjustments that would invalidate calibration settings. Measuring equipment will be identified to

easily determine the calibration status, and may be adjusted or re-adjusted as necessary to ensure valid results.

When equipment is found out of calibration, Northwest Industries Inc. will assess and record the validity of any previous results of equipment and will take action on the equipment and any product affected.

If computer software is used to monitor and/or measure product, the ability of the program shall be confirmed prior to initial use and reconfirmed as needed.

Records of equipment, designated by number, which reference equipment inventory, calibration intervals and activity, are maintained according to procedures regarding measurement system documentation and quality records.

### **Control of Non-conformances**

Northwest Industries Inc. works diligently in preventing inadvertent use of nonconforming or suspect product. Materials or product that does not conform to requirements shall be identified as a nonconformance and shall be controlled to prevent any unintended use or delivery.

Disposition of nonconforming material or product may be compromised of the following:

- Use as is
- Rework
- Repair
- Scrap
- Return/Credit

Nonconforming material occurrences are recorded and documented. In addition, nonconforming material or product is tracked, and reviewed at management review meetings.

### **Corrective Action**

The need for corrective action may arise from customer complaints, quality auditing, repetitive nonconformance, cost or severity of a nonconformance, nonconformance with the Quality Management System, or other means of discovery. The corrective action system provides for the establishment of controls to ensure non-conformances are analyzed and that effective corrective and preventative actions are taken.



Northwest Industries Inc. takes action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective actions are appropriate to the effects of the nonconformities encountered.

The preventative and corrective action procedures are as follows:

- A.) Reviewing nonconformities (including customer complaints)
- B.) Determining the causes of nonconformities
- C.) Evaluating the need for action to ensure that nonconformities do not recur
- D.) Determining and implementing action needed
- E.) Recording the results of any actions taken
- F.) Reviewing corrective actions taken

#### **Handling, Storage, and Delivery of Products and Materials**

Means of handling are provided to prevent damage and deterioration of material, supplies, product in-process, and finished product.

Adequate storage areas and conditions are provided for material in the various stages of production to prevent damage or deterioration. Areas such as receiving, storage, production, and inspection have procedures in effect to ensure proper acceptances handling, storage, and release of product. All storage is accomplished so that dimensions, performance, and finish are preserved.

Material or product flow follows the first-in, first-out inventory method for storage, use, and delivery, unless special circumstances dictate otherwise.

Packaging, preservation, and labeling processes are developed, monitored and controlled, in accordance with customer requirements and determined by input from the customer and engineering.

Operations will ensure that care is taken in the handling and delivery of all products to ensure damage limitation. Northwest Industries Inc. monitors the delivery performance of suppliers.

#### **Training**

All Activities that affect quality should be performed by competent personnel that are qualified, trained, experienced, knowledgeable, and/or skilled, and who can be relied on to make sound judgments.



Training is viewed as a strategic issue. Employees are made aware of how to support the company quality policy and objectives by following procedures and work instructions pertinent to their function and role in the quality system.

Qualifications, training needs, and means of meeting training requirements are determined for all employees' affecting quality per our procedures.

Shop Supervisors are responsible for the establishment of the job requirements and responsibilities for employees that are under their authority, as needed. Such requirements may consist of outlining the minimum levels of appropriate education, training, and experience that are necessary to qualify for the positions. The managers are also responsible for identifying the training needs of their personnel, and providing the necessary training in order to assure personnel are prepared and qualified to satisfactorily perform their job functions.

All employees are identified to become Internal Auditors receive appropriate training and certification.

### **Internal Audit**

To ensure the continuing effectiveness of Northwest Industries and the quality system, internal processes are performed by trained personnel that will not audit their own work. The Management Representative is responsible for keeping and maintaining an audit schedule. This schedule defines the various aspects of the audit requirement intervals within each year as considered appropriate and also includes the audit criteria and scope.

One complete audit cycle of all quality system elements is carried out through internal process audits, at minimum, once within a twelve month period. However, certain elements and processes may require more frequent auditing based on importance and past history.

Internal audits are reviewed by management and brought to the attention of employees having responsibility in the process audited, with subsequent corrective actions formulated and implemented in response to non-conformances. Review and follow up auditing activities are undertaken to verify the effectiveness of the corrective actions enacted.

The Management Representative or Quality Manager is responsible for ensuring that follow up corrective action measures are completed within agreed time frame.

Internal audits form part of the management review meetings and are used in verifying the effectiveness of the quality system.

# **Northwest Industries Inc**

## **Organizational Chart**

