

INTRODUCTION

The purpose of this is to delineate Frontier Steel Co. Quality Management System for the control of quality during manufacturing inspection, and testing of steel plate, The Quality System complies with ISO 9001:2000 Quality Managements System – Requirements.

This manual outlines the Frontier policies, objectives, and commitment to quality. It references relevant documented procedures and responsibilities. All products and services, whether manufactured or performed by Frontier Steel Co. or furnished by outside sources, are controlled to assure conformance to the customer's contract and specification requirements.

Amendments to this manual will be made to reflect the changes within the business process.

The Quality Management System Manager will coordinate changes. Frontier Steel Co. is committed to ensuring that quality products and services manufactured in our facility meet or exceed our customers' expectations. This manual will be reviewed by the Quality Management System to ensure it continues to support our customers' requirements.

Distribution of this manual and revision is under the control of the Process Control Manager.

Revisions will be issued to holders of controlled Quality Manuals.

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Approved By: _____
John M. Matig
President

COMPANY SCOPE AND DESCRIPTION OF CERTIFICATION

Frontier Steel Company is a Pennsylvania based Steel Service Center. With Over 125,000 square feet of storage and processing, at our newly remodeled Neville Island facility located at 4990 Grand Avenue, Neville Island Pennsylvania 15225, Frontier Steel maintains an inventory of over 10,000 tons of plate and flat rolled products to meet the grade, and size requirements of our large customer base that includes, construction, manufacturing, shipbuilding, Power and Energy, job shop fabricators, and transportations industries

Our product include Carbon Plate: A36, A572-50/A709-50, A572-60 & 65, A 588/A709-50W, A516-70, C1020 Alloy Plate: AR400 & AR400F, A514-T1, Thicknesses- 20 gauges to 24", Widths 36" to 120" and length up to 700 inches. Designed for specialized, and difficult processing capabilities give us the flexibility to supply precision processed parts, burned, sheared and bent.

Our Products exhibit quality reliability and durability that make them suitable for the cleanest and most sterile to the harshest environment. Frontier has 5 CNC cutting machines, (1) 42 foot high Definition Plasma Table, (2) 45 Oxy Fuel Plasma, (1) 60 foot Oxy Fuel table and (1) 24 foot Oxy Table, and a state of the art, Servo-Driven 13 feet, 350 ton Press break, Beveling, CNC Machining, and Drilling Equipment.

The company has an excellent team of most capable staff with many years of experience in the Service Center business and Manufacturing. Frontier Steel Co. has developed computerized manufacturing systems that include: state-of-the art materials equipment planning, inventory control, a fully integrated accounting system, and sophisticated financial, reporting analysis, and planning systems. The company's cutting edge information technology and regulation approval from a major Standards organization are well ahead of our strongest competitor.

A key factor to Frontier Steel Co.'s success is the close working relationship with its customer and the commitment to quality standards. The company has received quality certification from all major customers. In an effort to be a global supplier, Frontier Steel Co, became ISO 9001:2000 registered in November 14, 2008.

All products manufactured by the company are designed to the individual customer's standards and/or specifications. Frontier Steel Co. has been successful in expanding its market share by emphasizing high quality and just in time delivery at competitive prices. A highly qualified management team is in place to handle sales, purchasing, accounting/financial, production control, and quality control functions.

Frontier Steel Co. has an extensive customer base world wide. The Company has regional sales offices located throughout the United States. Our US headquarters office is located Pittsburgh PA.

Quality Management System

Element 4.0

General Requirements 4.1

Frontier Steel Co. quality management is documented, implemented, maintained and continuously improved in its effectiveness as per the requirement defined within ISO 9001:2000 and our stated policies to ensure that products and services provided to customers conform to all contractual and quality requirements and meet or exceed their needs and expectations.

The Quality Management System provides various methods of control and verification to assure adequate quality. These are defined in detailed procedures, manuals, and departmental instructions, which are based upon:

- The importance of an item's malfunction or failure to safety or reliability.
- The design and fabrication complexity, or item uniqueness or the complexity of the work.
- The item's quality history and degree of standardization.
- The methods used and skills and training needed by personnel involved in carrying out the activity.
- The inspection or test can demonstrate the degree of functional compliance.

All product and services, whether manufactured or performed by Frontier or furnished by outside sources, are controlled to assure conformance to the customer's contract and specification requirements in accordance with Process Flow Chart AID001.

Documentation Requirements 4.2

General 4.2.1

The documentation structure of Frontier Steel Co. quality management system consist of Four levels of documents with each subsequent level designed to provide the reader with additional detail, as required, based on the complexity of the function or process

Frontier Steel Co. Quality System Procedures will direct the effective implementation of our Quality System and be known as level II document.

Procedures are written, implemented, and maintained to assure adherence to various customer requirements or to document critical or complicated processes.

The detail of procedures shall be dependent upon the complexity of the activity being described. Where significant activity is occurring in a localized area, an instruction may be generated to supplement the procedure and provide the greater detail, explanation, etc.

Top-level management has the responsibility for the development, revision, and approval of procedure applicable to their area of control. Company quality

Procedures are distributed by the Process Control Manager to the holders of official manual copies.

Quality Manual 4.2.2

Frontier Steel Co. has established and maintains a four-level documented quality system as a means to ensure that product conforms to specified requirements, which include:

- ◆ A documented quality system manual
- ◆ Quality assurance procedures
- ◆ Work instructions
- ◆ Associated forms

The Quality System documentation is reviewed to ensure compliance to ISO 9001:2000 requirements. A record of each review is maintained.

Quality System Manual:

This Quality Manual informs employees and customers of the management policies and objectives for the quality of its products and services. Sufficient detail describes the control system used to address the elements of the Quality System utilizing ISO 9001:2000 requirements.

Quality Assurance Procedures (QAP's):

Procedures describe in detail the control system used to address the processes. Their contents reference the associated documents and describe the what, where and who. Each procedure is identified with a unique number, issue and revision date, revision history and approval authority. The range and detail of the procedures depend upon the complexity of the work, the methods used and the skills and training needed by personnel involved in carrying out the activity. Procedures are controlled through the Document Control System.

Quality Assurance Instructions (QAI's):

Work Instructions will describe the "how to" of the processes which define in detail those activities controlling or impacting product quality. For those activities requiring temporary changes, a special work instruction is issued for a specific time frame. The range and detail of work instructions depend upon the complexity of the work, the methods used and the skills and training needed by personnel involved in carrying out the activity. These work instructions are controlled through the Document Control System.

Quality Assurance Forms(QAF):

Forms used to record quality system information are controlled through the Document Control System.

Control of Documents 4.2.3

Frontier Steel Co. has established and will maintain QAP016 procedures to control all documents and data related to the requirements of this Quality Manual System.

Documents can be in the form of hard copy media, in electronics form, or other electronic media. The Process Control Manager controls internal quality system documents, and the CAD Coordinators controls for all engineering/customers documents.

Frontier Steel Co. will review and approve all new documents and revisions including customer engineering standards, specifications, and changes that relate to the quality functions of this Quality System Manual.

Documents describing activities affecting quality shall be suitably identified and shall be:

- Reviewed and approved for accuracy by authorized personnel prior to issue.
- Issued to those participating in the activity or available at all locations where operations essential to the effective functioning of the quality system are performed.

Invalid or obsolete documents are promptly removed from all points of issue or use or otherwise secured against unintended use. Obsolete documents retained for legal and/or knowledge preservation purposes shall be suitably identified.

Distribution of documents describing activities affecting quality shall be controlled. The distributing authority shall maintain a master list or equivalent document control procedure identifying the current revision status of documents. These lists shall be readily available to preclude the use of invalid and/or obsolete documents.

All changes should be made to the "Master" document unless the change is a temporary change. Changes shall be reviewed and approved by the same organizations, which performed the original review and approval, unless another organization is specifically designated by procedure. Designated organizations shall have access to pertinent background information upon which to base their review and approval.

Control of Records 4.2.4

All required records are stored systematically for ease of retrieval in facilities that provide for their effective retention for a defined minimum period. Unless otherwise stated in the applicable procedure, all quality records are retained in accordance with Quality Records Procedure QAP015. Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the Quality Management System.

The individual records are defined in the applicable procedures, including their content, responsibilities, location of storage, authority, and method of destruction. When production and/or quality records are requested by the Customer and the Process Control Manager will be responsible for reviewing the request. If appropriate, arrangements will be made for the release of the relevant documents.

The document control procedure gives more details of the control of records. This procedure is found in Quality Control Document Procedure.

Management Responsibility 5.0**Management Commitment 5.1**

Top-level Management is ultimately responsible for the development and implementation of the quality management system. Their commitment to the quality management system and improving its continuing effectiveness can be evidenced by:

- ◆ Communicating the importance of fulfilling customer requirements through training, quality planning meetings, and employee meetings;
- ◆ Communicating the importance of complying with statutory and regulatory requirements through training, quality planning meetings, and employee meetings;
- ◆ Establishing and maintaining a comprehensive quality policy;
- ◆ Ensuring that quality objectives are established through the business planning process;
- ◆ Conducting annual management reviews;
- ◆ And, ensuring the availability of resources through proper business planning.

To reinforce this commitment, Frontier Steel Co. management shall ensure that:

- A. The importance of meeting customer, statutory and regulatory requirements, as defined under section 7.2 of this quality manual, is effectively and consistently communicated throughout the organization using any or all of the following means:
 - Company newsletter;
 - Internal and quality indoctrination training sessions;
 - Postings and bulletin boards; and
 - e- mail notification.
- B. The quality policy, defined under section 5.3 of this manual, continues to remain relevant and consistent with the overall organizational policies and provides a suitable framework for setting quality objectives.
- C. Quality objectives continue to be identified for the relevant functions and levels within Frontier Steel Co., as defined under section 5.4 of this manual and remain measurable

while consistent with the quality policy.

- D. Quality management reviews continue to be conducted, as defined under section 5.6 of this manual, to ensure the continuing suitability, effectiveness and efficiency of the Frontier Steel Co. quality management system.
- E. All necessary resources to implement and improve the processes for the quality management system and to address customer satisfaction continue to be made available, as defined under section 6.1 of this quality manual.

Customer Focus 5.2

Frontier Steel Co. management shall ensure that all customers' needs and requirements are determined, properly identified, and converted into product, service and/or quality system requirements defined under section 7.2 of this manual.

The aim regarding these actions shall be to fulfill all of the requirements, which apply including statutory and regulatory requirements, and to achieve or enhance customer satisfaction as outlined under section 8.2 of this manual.

Quality Policy 5.3

It is the policy of Frontier Steel Inc. to be a world – class supplier of carbon steel products, and to be a recognized leader in Quality, and Customer Service. To:

- Perform precision work for our customers and associates.
- Utilize suppliers committed to world-class quality
- Fully understand the requirement of our jobs and the requirement of ISO 9001:2000.
- Conform to those requirements at all times.

In support of this policy, we are committed to continually improving the effectiveness of our quality management system and to ensure an adequate framework for the establishment and review of the quality objectives as defined under section 5.4 is provided.

All services and products provided by Frontier Steel Co. conform to relevant national standards, including ISO 9001:2000, ASTM Standards, ANSI and any other standards and codes of practice.

Implementation of this policy is the responsibility of every member of the organization, starting with the President, Vice President, and Chief Operating Officer which enable the corrective action to be implemented throughout the company. Upper Management and/or the Quality Representative are responsible for maintaining the implementation of the Quality Policy, which will be evidenced in the Quality objectives.

It is mandatory that every member of staff must be familiar with this Quality Policy and must adhere to the procedures, which are applicable to the area of work within the Company.

Frontier Steel Co. utilizes a process for continual improvement. The staffs are encouraged to review their working practices and suggest methods for improvement, where appropriate. In addition, all relevant processes are reviewed and improvements determined where practical.

A copy of this Quality Policy is issued and explained to all employees when hired to work for Frontier Steel Co. A copy is also displayed in the lobby or in the main office. All staff is trained regarding the meaning and implications of this Quality Policy.

The ongoing suitability of this Quality policy is reviewed during the Quality Management Review Meetings.

Planning 5.4

Frontier Steel has a documented process for reviewing key quality and productivity indicators. Trends in data are compared with progress toward overall business objectives and translated into actionable information to support:

- ◆ Development of priorities for prompt solutions to customer-related problems.
- ◆ Determination of key customer-related trends and correlation to support status review, decision-making and long-term planning.

Quality Objectives 5.4.1

- ◆ Senior Management will evaluate the information within their areas of expertise, and establish key priorities for future growth and improvement including priorities for improving customer satisfaction. This will be evidenced in the Management Review Procedure QAP009.
- ◆ Goals for each of these priorities are established for a one-year period and documented in the QAP009 Procedure. Continuous improvement projects or corrective/preventive action plans for the next fiscal year are established, and responsibility is assigned.
- ◆ Facilities Planning - new equipment, equipment upgrades, plant layouts and continuous improvement projects..
- ◆ Customer Satisfaction – plan to correct or improve feedback results.
- ◆ Health, Safety & Environmental – plans to maintain OSHA compliance.
- ◆ Human Resource Development – staffing, training and development.
- ◆ Contingency Plan – plans to minimize disruption of customer supply.
- ◆ Financial and Cost Objectives - sales, costs, profit levels, and capital needs.

The methodology to be used and the personnel responsible for establishing and auditing Frontier Steel Co. quality objectives shall be as defined within procedure QAP004.

Quality Management System Planning 5.4.2

Top-level management will ensure that the objectives and requirements set forth in the previous section are met through the use of effective quality planning. Quality planning is a strategic issue and will be conducted as part of the annual review process. Procedures QAP001 are in place to maintain the integrity of the quality management Planning system when changes are planned and implemented. All changes to the quality management system are to be approved and implemented as indicated in documented procedures QAP009.

The product Quality Planning involves the use of the following disciplines and reviews:

- Review design and specification requirements
- Review material requirements
- Review machine/tooling requirements
- Selection of significant parts/process specifications
- Review personnel/training requirements
- Initiate initial prototypes

If the customer requirements cannot be met or changes to the design are to be recommended, the Sales and Marketing Department has the responsibility for ensuring that the deviations from the stated requirements are effectively requested from the customer.

The Quality Plan is developed per customer requirements for all product-handling processes, which affect product quality, identified in the distribution center. Quality plans ensure the customer receives the correct part number and quantity. Quality plans are reviewed and updated as needed.

Responsibility and Authority and Communication 5.5

Responsibility and Authority 5.5.1

Responsibilities and authority for executing the clauses of this Quality System manual reside with Top-level managers, who may further delegate implementation of this quality function within their area of responsibility.

The organizational chart provided on page 9 of this manual shows the relationship and structure of the Top-level personnel, who manage and verify the work affecting quality at Frontier Steel Co.

All employees of Frontier Steel Co. are responsible for the quality of all products, services, and processes impacted by their actions.

Heads of functional departments and their designees have the organizational freedom and authority to:

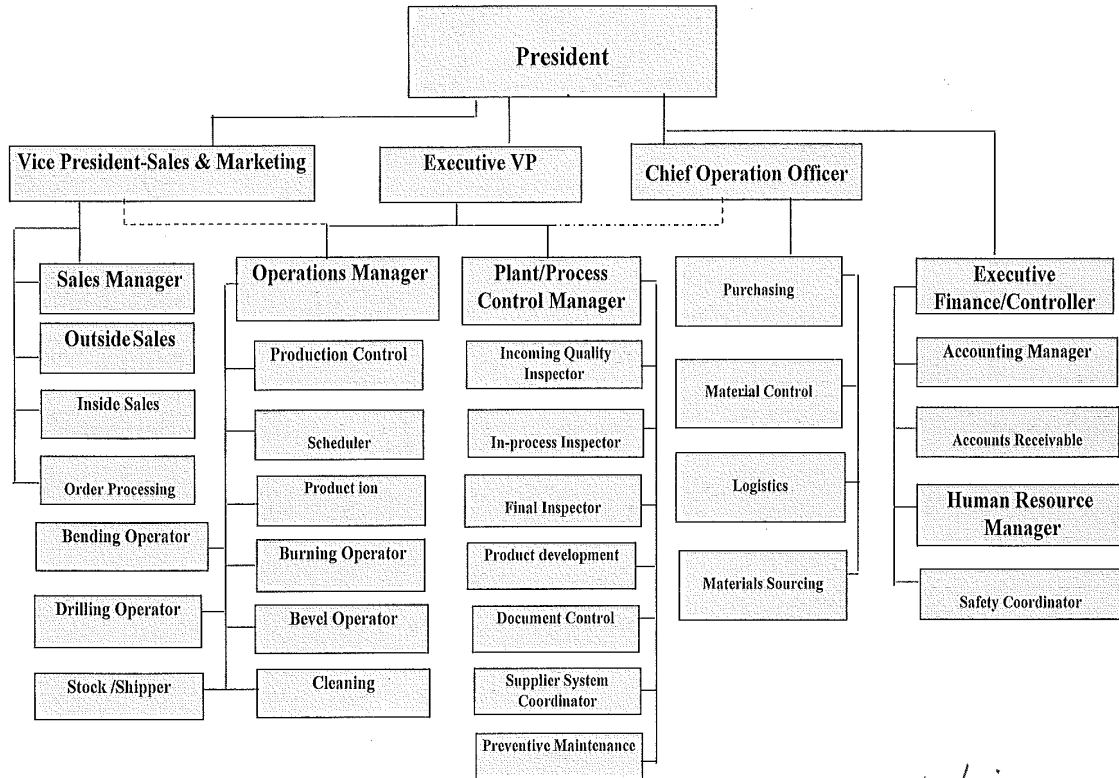
- A Initiate action to prevent the occurrence of any nonconformities relating to product, process, and the quality system,
- B Identify and record any problem relating to the product, process, and quality system,
- C Verify the implementation of a solution,
- D Initiate recommendations or provide solutions through designated channels, and
- E Control the further processing or shipment of nonconforming product until the deficiency or unsatisfactory condition is corrected, as established by Nonconforming Product Procedure QAP010.

Management Representative 5.5.2

As part of Frontier Steel Co. goal to continuously enhance the effectiveness and efficiency of the quality management system, Frontier Steel Co. management has appointed the Quality Assurance Manager to monitor, coordinate, manage, and evaluate the quality management system processes including responsibility and authority to:

- ensure the establishment, implementation and maintenance of the processes needed for the quality management system;
- report to Top-level management on the performance of the quality management system including needs for improvement; and
- ensure the promotion of awareness of customer requirements throughout the organization.

FRONTIER STEEL COMPANY
ORGANIZATIONAL CHART



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Internal Communication 5.5.3

To ensure that the Frontier Steel Co. quality policy, quality management system requirements and quality objectives are adequately understood, implemented, and maintained at all levels in the organization:

- A copy of the quality policy and quality manual shall be issued to each Frontier Steel Co. department as well as lunchrooms and the main office area; and
- The quality policy, requirements of the quality management system, and established quality objectives shall be reviewed with each employee during quality indoctrination training sessions as defined within procedure QAP012.

As part of the feedback loop, the Quality Representative Manager shall ensure that the effectiveness of the quality management system processes and accomplishment towards company quality objectives are properly communicated to the various levels and functions within the organization through:

- Team briefings and departmental meetings;
- Postings on bulletin boards; and
- Quality training sessions and presentations.

Management Review 5.6

General 5.6.1

Top-level management shall review the Quality Management System quarterly to ensure its continuing suitability, adequacy and effectiveness in accordance with QAP009.

A Management Review will be held to ensure that the documented Quality Management System remains effective and is revised where necessary to reflect changes in the Organization's operations, and that the Quality policy and related objectives are being achieved. Top-level management is empowered to take action as it deems appropriate. Records will be kept by the Process Control Managers.

Review Input 5.6.2

Inputs to quality management reviews shall include the following sources of information regarding the performance of the quality management system as well as improvement opportunities:

- audit reports (internal, customer, and third-party)
- feedback from customers
- process performance and product conformance
- performance of suppliers
- status of preventive and corrective actions;
- status of action items from previous quality management reviews
- changes that could affect the quality management system; and
- employee suggestions for improvement.

Review Output 5.6.3

Outputs from the quality management system reviews shall be documented in management review minutes and shall include decisions made and actions taken related to:

- the improvement of the effectiveness of the quality management system and its processes;
- the improvement of product related to customer requirements; and
- resource needs.

The Management Representative shall maintain records of such reviews. Action items assigned will be approved and supported by the President of the company.

Resource and Management 6.0

Provision of Resources 6.1

It is the responsibility of management to identify resource requirements in accordance with established priorities and provide adequate resources including the assignment of trained personnel for management, performance of work, and verification activities as well as internal quality audits.

When determining these resources, consideration shall be given to:

- Current business opportunities and constraints;
- Mechanisms that will encourage innovative continual improvement;
- Methods to enhance existing competency; and
- Future resource requirements.

Human Resources 6.2

General 6.2.1

The Top-level Management ensures that all employees are adequately trained and/or educated and/or experienced to enable them to proficiently perform their duties, and that their training needs are considered. All job functions directly affecting quality of goods and/or services supplied to the customer are identified within the relevant procedures and their training needs defined as appropriate.

Records are maintained of previous relevant qualifications, experience, and all training provided to staff while employed by our organization.

The Departmental Heads will review the training records of all members of staff and consider the effectiveness of training provided, and determine future training needs as appropriate. Records of the training are maintained in accordance with QAP012.

Competence, Awareness and Training 6.2.2

Training for all levels of personnel at Frontier Steel Co. is provided and supported by all levels of management.

Frontier Steel Co. has established and maintains documented procedures for identifying the training needs and provides for the training of all personnel performing activities affecting quality. Personnel performing specific assigned tasks are qualified to do so, on the basis of appropriate training and/or experience as required.

The responsibility for training is jointly performed by Manufacturing, and Process Control Departments.

Appropriate training records are maintained to identify the subject of the training skill, the employee being trained, the date of the training, and the duration of the training. The level of competence, experience, and training necessary to ensure the capability of personnel is stated in the employee job description and training records.

Infrastructure 6.3

Manufacturing and the associated processes are performed under controlled conditions. Planning of new production operation and processes is described in Frontier Steel Co. Quality Procedure.

The Manufacturing and Process control Departments are responsible for the approval of new products. The manufacturing is initiated through the release of a Traveler Instruction Sheet.

Frontier Steel Co. Product Development Planning identifies and plans the production processes, which directly affect quality, and ensures these processes are carried out under controlled conditions.

Process and /or work instruction shall be developed in conformance with established Frontier Steel Co. policies and, where applicable, in compliance with contractual requirements. These

are generated by Manufacturing CAD coordinator to supplement Drawing documentation, where required.

Process and/or work instruction shall be maintained, reviewed, and updated as needed to ensure accuracy, completeness, and relevancy to contractual commitments and enhancements in Frontier Steel Co. Procedures and Standards.

Work Environment 6.4

The Process Control Managers are responsible for ensuring compliance with all safety and environmental requirements. Waste is analyzed to demonstrate a non-hazardous condition, and is regularly disposed through an authorized agent.

A Safety Program is also maintained which complies with OSHA requirements. Housekeeping requirements are defined in accordance with in QAP013. MSDS sheets are available and maintained by either the Safety Coordinator or Human Resources Coordinator. Safety information is communicated in various forms such as bulletins, safety meetings, new employee orientation or other appropriate means.

Production equipment is used in a clean and safe working environment. All personnel are responsible for keeping the work area orderly. Safety and housekeeping audits ensure the cleanliness of the work area.

Product Realization 7.0

Planning of Product Realization 7.1

Product Realization (Please Note: Sections 7.3 through 7.3.7 - Not applicable as this location does not perform design and development functions.

Frontier Steel Co. shall plan and develop the processes and sub-processes essential to ensure product conformance throughout the manufacturing, installation, and servicing cycles.

These processes shall be identified and documented within Quality Plans which, as a minimum, shall identify:

- a) the quality objectives and requirements to be achieved for the product, project or contract involved;
- b) where additional processes or documentation need to be established;
- c) the resources and facilities needed to produce the product or service involved;
- d) each verification, validation, monitoring, inspection and test activities specific to the product and the criteria for product acceptance; and mandatory hold and witness points established by the customer which requires their verification of selected characteristics of an item or process and beyond, which work shall not progress until verification has been completed.
- e) Records needed to provide evidence of process and product conformity to requirements.

Frontier Steel Quality Plans shall reference procedures and instructions to be followed while performing each activity, as applicable.

Upon completion, Quality Plans shall be subject to review and approval by the Process Control Manager, Sales, and Operations Manager to ensure that all resources and facilities required will be provided.

Revisions to Quality Plans shall be reviewed and approved in the same manner as originals.

When contractually required, Quality Plans and their revisions shall be submitted for customer acceptance.

Work shall not proceed beyond verification, hold or witness point established by the customer as a contractual requirement without the activity being performed and accepted by the customer. An exception to this, however, would be a signed release or waiver issued or granted by the customer.

The methodology to be used and the personnel responsible for the planning of product realization shall be as defined within procedure QAP001 and QAP005

Customer-Related Process 7.2

Determination of Requirements Related to the Product 7.2.1

Procedures exist to ensure that the Customer's requirements are fully understood and that they are capable of being achieved by the Organization. Requirements to be determined include but are not limited to: specific requirements determined by the customer, requirements not specifically identified by the customer but are deemed necessary by Frontier Steel, determination of any statutory and regulatory requirements by specific product definition or class and any other requirements determined by Frontier Steel. This can include delivery and post delivery activities. These requirements must be shared with all Frontier Steel employees and be included on all order documentation and included within acceptance criteria where applicable.

Customer complaints shall be handled in accordance with documented procedures.

Review of Requirements Related to the Product 7.2.2

Upon receipt of a customer's request for quotation or query, Frontier Steel Co. shall determine the customer's requirements including:

- A. customer-specific product requirements;
- B. requirements for delivery and post-delivery activities;
- C. product requirements not specified by the customer but, considered essential for intended or specified use, where known
- D. Obligations related to product, including statutory and regulatory requirements; and any additional requirement determined relevant by Frontier Steel Co.

All requests for quotation, customer requirements, and requirements perceived by Frontier Steel Co. to be relevant to the product, project, or contract, shall be reviewed before accepting the quotation.

Customer Communication 7.2.3

Frontier Steel Co. shall identify and implement effective arrangements for communication with customers relating to:

- a) product information;
- b) enquiries, contracts, or order handling, including amendments; and,
- c) customer feedback, including customer complaints.

The methodology to be used and the personnel responsible for conducting and documenting the evaluation of requests for quotation and the review of contracts or orders, their amendments and customer communications shall be as defined within procedure QAP007.

Design and Development 7.3

Design and Development: Sections 7.3 through 7.3.7 will not be in this manual as they are not applicable to this location of Frontier Steel Co.

Purchasing 7.4

Purchasing, which is a function of the Purchasing Department, has the responsibility to ensure continuity of supply and conformance to requirements. These requirements must satisfy established quality and service standards at a competitive price.

All Frontier Steel Co. materials used in part manufacture must satisfy the current government and safety constraints on restricted, toxic, and hazardous materials. Environmental and electrical considerations will be included in this material purchase.

Purchasing Process 7.4.1

Subcontractors are selected by the Purchasing Department on their ability to meet Frontier Steel requirements, including the quality, which is evaluated as applicable under the direction of the Process Control Department.

Orders are only placed with suppliers who meet the assessment criteria or who have previously demonstrated an ability to meet our requirements. Suppliers are required to allow, if requested, an on-site review of products to verify that the product conforms to the requirements in accordance with QAP008 and QAP021 procedure.

Orders placed with un-assessed suppliers are only on a contingent basis, pending successful assessment of their system. A list of such suppliers is maintained by the Purchasing Department and is continually updated to reflect actual performance.

Purchasing Information 7.4.2

Each purchase order, when buying from a specification or drawing, shall include the latest revision of the document and/or other positive identifiers to ensure, the correct product or service is received. The purchase order shall clearly describe the product ordered.

Requisitions for materials are transmitted to purchasing by a computerized system, or hard copy that assures uniformity and accuracy of material definition.

Each purchase order is reviewed and approved by the Purchasing Manager or the Purchasing Agent for completeness prior to release.

Inadequate purchase orders are revised by Purchasing and a purchase order revision is issued. Purchase order revisions are processed in the same manner as purchase orders.

Verification of Purchased Product 7.4.3

All received materials are inspected prior to acceptance. Any defective items are rejected to the vendor for replacement/credit. These non conformances are recorded and the appropriate action is taken.

The Organization may conduct verification either at the supplier's premises or by utilizing e-mail and/or a mail-in assessment. The methods of checking are defined in the relevant work instructions and referenced by the relevant purchase order or associated documents. Where Customer verification is conducted, this does not replace the normal tests and inspections conducted by the Company. Where the Customer detects non conformances, they are recorded and addressed as described in the applicable procedure and/or work instruction.

Production and Service Provision 7.5

Control of Production and Service Provision 7.5.1

Frontier Steel Co. shall plan and carry out production and service operations under Controlled conditions shall include the following, as applicable:

- a) All information pertaining to product characteristics, including the criteria for acceptance shall be identified or referenced within the Shop Traveler issued for each job.
- b) Where their absence could adversely affect quality, work instructions shall be developed, referenced within the Shop Traveler and made available.
- c) To ensure continuous quality output, only suitable process equipment shall be used. All process equipment shall be routinely maintained as defined within procedure, QAP003.
- d) Work in progress shall be monitored to ensure good workmanship standards and specification compliance is being maintained.
- e) All resulting products shall be subject to inspection and/or testing as defined within procedure QAP005 including completed products prior to release.
- f) Product delivery and post-delivery activities shall be performed and monitored in accordance with procedure QAP020

Validation of Processes for Production and Service Provision 7.5.2

This section is intended for the use of validation of product and/or processes where resulting output cannot be verified by subsequent monitoring or measurement. This also includes any processes where deficiencies become apparent after the product is in use or the service has been delivered. These additional requirements will be identified where appropriate:

- a) Checks to ensure that valid product is supplied using only certified materials
- b) Checks or tests of all equipment and/ or personnel used in the process will be performed
- c) Detailed manufacturing instructions for review and approval of all pertinent processes
- d) A first piece inspection
- e) Required records

The validation of all processes involved in the production and servicing of products and/or services during the manufacturing/production phase when an initial production run is conducted, after which the product is tested against. The ongoing suitability of the processes is ensured by regular reviews of reject rates and/or analysis of data relating to production tolerances.

Identification and Traceability 7.5.3

The procedures ensure that identification is maintained during the production and servicing process by means of documentation and where appropriate, suitable labelling which is affixed to the product or its packaging, or else identified on the associated documentation.

Procedures exist which ensure that all product is individually traceable to the Customer's Order from purchase orders placed upon suppliers and to all involved.

All items found to be nonconforming shall be identified by attaching a nonconformance tag to the item or item container and generating a nonconformance report as described within procedure QAP010.

Unless otherwise defined by contract, within Frontier Steel co. product identification and traceability shall be performed, controlled and documented.

Where the traceability required by a customer exceeds Frontier Steel Co. existing methods and scope, the extent of control and technique for recording unique product identification shall be established with the customer during the review of product requirements in accordance with procedure QAP007

Customer Property 7.5.4

Where applicable, Customer Supplied Materials that be handled with care and will become a function of Frontier Steel operations. Such material will be controlled utilizing the same process that Frontier Steel utilizes to verify and monitor maintenance parts or equipment. Any problems regarding customer-supplied property will be documented and reported immediately to the customer. Records will be kept with the appropriate customer correspondent.

Preservation of Product 7.5.5

Frontier Steel Co. shall preserve the conformity of product during internal processing and delivery to the intended destination in accordance with procedure QAP020 including identification, handling, packaging, storage, and protection. Preservation shall also apply to both completed assemblies and components parts.

Control of Monitoring and Measuring Devices 7.6

All items (calipers, gages, fixtures, etc.) that are used to measure the conformance of a process or part are entered into a system that ensures that their calibration status is always up-to-date. The frequency of calibration is determined by the stability, purpose, and degree of use. The calibration status is traceable to the appropriate national standard.

The Process Control Department will coordinate the recall of the product if a qualifying fixture or gage is found to be out of calibration.

The frequency of calibration depends on the nature and use of the tool. All master gauges used for calibration are traceable to National Standard Bureau (NBS) or National Institute Standards (NIST). These gauges are sent to an outside laboratory to be certified and recalibrated at three-year intervals.

*If software is be used for measuring or monitoring of product, it must be validated prior to use and reconfirmed if necessary in accordance with QAP003 procedure.

Measurement, analysis and improvement 8.0

Frontier Steel Co. planned and implemented activities to assure product and system conformity and continually improve the effectiveness of the quality management system are defined within sections 8.2, 8.3, 8.4 and 8.5 of this manual, including the methods and statistical techniques to be employed.

All methods and statistical techniques employed including the extent of their use shall be routinely evaluated during Quality Management Reviews as described within procedure QAP009 to ensure that information collected remains useful, relevant, and supportive of continual improvement.

Customer Satisfaction 8.2.1

Top-level Management ensures that customer satisfaction is verified through the use of one or several of the following: Each division tracks their quality and delivery rating on a monthly basis via the Customer Survey. Customer survey Reports are also developed for the outside sales group. The sales force is required to present and discuss the information with the customer. The customer then signs the Customer Survey Report and makes comments regarding quality and delivery. A customer survey may also be utilized where required.

Internal Audit 8.2.2

The Top-level management ensures that the Quality Management System continues to meet the company quality objectives. Implementation, relevance and compliance of the documented Quality Management System are verified by regular and systematic independent internal audits conducted by qualified auditors.

All processes will be audited at once a year.

A summary of the results of the Quality Audits are prepared and retained. These results are brought to the attention of the personnel having responsibility for the activity audited. Where corrective action is needed, it will be emphasised to the manager of the area or function and re-audited as appropriate. This re-audit will also be recorded in accordance with QAP004 Procedure.

The internal audits, follow-up to the audits including corrective and preventive actions are also reviewed at the Management Review Meetings.

Monitoring and Measurement Processes 8.2.3

Process monitoring requirements are described in Various Quality assurance Instructions and may be managed differently at each site. Where applicable, results are recorded to show compliance. The process monitoring requirements may include process capability analysis for significant product characteristics. This may be reviewed in the management review meetings. This evaluation will occur for specifically identified processes. If the planned results are not achieved, corrective action (see 8.5.2) will take place to address the issue.

Monitoring and Measurement of Product 8.2.4

Material will be inspected during the normal processing in accordance with the relevant procedures to ensure compliance with the customer's requirements specified on the order.

Operation personnel or someone from Quality can authorize the release and application to the order. Material that is tagged for shipment is considered to be conforming and released for shipment. Evidence of employee authorizing shipment will be found on inspection paperwork and / or tag and / or processing paperwork.

Conformance to the customer's requirements will be documented as specified in the applicable QAI's. All necessary inspections and tests will be completed in accordance with written procedures prior to the release of material to the customer. Product release and service delivery will not proceed until all the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and, where applicable, by the customer.

Frontier Steel has established and maintains records, which provide evidence that product has been inspected and/or tested. Records will clearly show whether the product has passed or failed the inspection and/or test, including final inspection, according to defined test acceptance criteria. Where the product fails to pass any inspection and/or test, the Frontier Steel Procedure for Nonconforming Product will apply.

Reference documents

QAP005

QAP006

QAP015

Control of Nonconforming Product 8.3

The relevant procedures and work instructions ensure that all instances of product non-conformance are identified, investigated and recorded. Non-conforming product is prevented from use and segregated. If necessary, action is taken to prevent a recurrence.

The procedures define the method and responsibilities for the disposition, reworking or reclassification of product found to be nonconforming. All reworked items are re-inspected in accordance with the relevant procedures QAP010 and/or work instructions.

Where product is found to be non-conforming after delivery or after use, the items will be recalled, the Customer notified and appropriate actions will be taken. Where appropriate, supplier and customer claims will be issued. Management will ensure the appropriate action occurs to eliminate the repetitive problems through the corrective / preventive action process.

Analysis of Data 8.4

Frontier Steel shall collect and analyze appropriate data to determine the suitability and effectiveness of the quality management system and to evaluate where continual improvements can be made. This may include:

- results from customer surveys;
- results from employee surveys;
- customer, supplier and employee feedback;
- results from internal audits;
- results from process monitoring and measurements;
- results from product monitoring and measurements;
- nonconformance reports

Improvement 8.5

Continual Improvement 8.5.1

The Organization's shall continually improve the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and quality management reviews.

The methods to be used and the personnel responsible for planning, implementing and reviewing the results of continual improvement activities shall be as defined within procedure QAP009.

The Management Review process will include a review of audit results and necessary changes to the Quality policy. Frontier Steel Co. maintains close communications with customers to identify and improve processes that are most important to respective customers.

The Operations Manager also analyzes product and process related information to identify improvement opportunities and to plan improvement pertaining to any of the following:

- ◆ Excessive variation
- ◆ Operations and maintenance
- ◆ Unscheduled machine downtime
- ◆ Machine set-up and changeover
- ◆ Excessive cycle time
- ◆ Scrap and repair
- ◆ Operations and Materials
- ◆ Non-value added use of floor space
- ◆ Waste of labor and materials
- ◆ Excessive cost of non-quality

◆ Excessive handling and storage

Any employee can identify improvement opportunities by initiating Corrective and Preventive Action according to the requirements of Section 8.5.2 & 8.5.3, Corrective and Preventive Action with Management Approval.

Corrective Action 8.5.2

Corrective or preventive action is taken to eliminate the causes of actual or potential nonconformities. Such action is appropriate to the magnitude of problems, and is implemented under documented procedures. Any changes to documented procedures resulting from corrective actions are implemented and recorded.

Frontier Steel shall promptly correct non conformances and conditions adverse to quality when discovered.

To prevent re-occurrence, these non-conformances shall be investigated in order to:

- determine the causes of the nonconformity;
- evaluate the need for actions to prevent recurrence;
- determine and implement required corrective action;
- record results of action taken; and
- review the results of corrective action taken to ensure its adequacy to resolve the problem.

Preventive Action 8.5.3

The Company maintains a system of determining potential causes of non-conformance and for implementing the necessary actions.

Where appropriate, potential problems are considered and action is taken to prevent them, subject to consideration of costs, likelihood and consequences of the potential problem.

This consideration includes information compiled from claim reports, quality records, audit reports and customer complaints as well as suggestions for improvement made by members of staff during the Quality Meetings and Management Review Meetings.

Effective preventive action is then taken to prevent the causes of non-conformances. The effectiveness of such changes is reviewed periodically at Quality Meetings.

