FISHER CONTROLS INTERNATIONAL LLC MARSHALLTOWN OPERATIONS

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QUALITY MANAGEMENT SYSTEM MANUAL

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Approved By: Jacob Cles Date: 4/26/18 Manager Quality

EMERSON.

Fisher Controls International LLC
205 South Center Street
Marshalltown, Iowa 50158
USA

February 2, 2018

General Policy and Authority Statement

Fisher Controls is committed worldwide to continuous quality improvement. To achieve this objective, the policy of Fisher Controls international LLC is:

> "Our mission is to be the leading supplier of process management solutions that provides excellent products and services to increase our customer's competitiveness.
>
> Customer loyalty is our primary goal.
>
> We are committed to comply with the Quality Management System and regulatory requirements.
>
> We empower our employees to initiate actions to ensure both quality and continual improvement in all that we do.
>
> We behave as an ethical and responsible organization in all we do."

This Quality Manual shall serve as a working document at the Marshalltown, Iowa location. Management insists that it be followed so that all applicable design and customer requirements are met.

The scope of the Quality Program described in this manual is the manufacturing of standard and special sliding stem control valves, rotary shaft control valves, valve accessories, steam conditioning equipment, instruments, and regulators In accordance with ISO 9001:2015, and to insure compliance with the European Pressure Equipment Directive (2014/68/EC) and the European Explosive Atmosphere Directive (2014/34/EC). Customer related processes (Order Entry) and Design and Development activities are addressed in the Fisher Controls International LLC - Worldwide Quality Management System Manual and are therefore excluded from the scope of this program.

The Quality Department shall establish quality standards and shall, with the cooperation of Research, Engineering, and Manufacturing, assure conformance to industry standards, government regulations, company policy and contractual requirements.

The Manager, Quality - Marshalltown Operations is the Management Representative and is responsible for assuring that all phases of the Quality Program are implemented and maintained properly. He has the authority and organizational freedom to identify quality problems, initiate action that results in solutions, and to verify implementation of solutions to those problems. He may limit or control work when he deems necessary. The Manager, Quality - Marshalltown Operations cannot be overridden by other company divisions, departments, or managers.

In the event of an impasse between the Manager, Quality - Marshalltown Operations and other departments or managers, the signer of this policy statement, the Manager, Quality - Marshalltown Operations, and the Director, Quality Worldwide - Valve Division will be the arbitrators and their decision will be final and binding on all parties.

Rande Jones
Plant Manger, Marshalltown Operations

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1. SCOPE

1.1. General

This Quality Management System Manual specifies requirements for a quality management system where Fisher Controls International LLC:

- Needs to demonstrate its ability to consistently provide products *and services* that meet customer and applicable statutory and regulatory requirements.
- Aims to enhance customer satisfaction through the effective application of the quality management system described herein. These systems include processes for continual improvement and the assurance of conformity to customer and applicable statutory/regulatory requirements.

This manual establishes and documents the management system that is implemented by Fisher Controls' Marshalltown Operations. The management system is maintained through continual improvement of a series of processes that, when linked, enhance customer satisfaction by meeting customer requirements and applicable statutory and regulatory requirements. The Quality Management System has been designed to comply with the requirements of ISO 9001:20*15*. This manual is supplemented by Engineering Standards (ES), Fisher Manufacturing Procedures (FMP), and other procedures which describe in more detail the processes, activities, responsibilities and actions required by the manual.

The Fisher processes described within this manual are performed to demonstrate compliance with the ISO 9001:20*15* and other applicable standards such as the Pressure Equipment Directive *2014/68*/EC and Explosive Atmosphere Directive *2014/34*/EC.

1.2. Process Approach

The model of a process-based quality management system shown in Figure 1 illustrates the process linkages required by ISO 9001:20*15*. This illustration shows customers play a significant role in defining requirements as inputs. Monitoring of customer satisfaction requires the evaluation of information relating to customer perception as to whether the organization has met the customer requirements. The model shown in Figure 1 covers all the requirements of this International Standard, but does not show processes at a detailed level (processes within the organization).

When used within the management system, this approach emphasizes the importance of:
- Understanding and meeting requirements
- The need to consider processes in terms of added value
- Obtaining results of process performance and effectiveness, and
- Continual improvement of processes based on objective measurement.

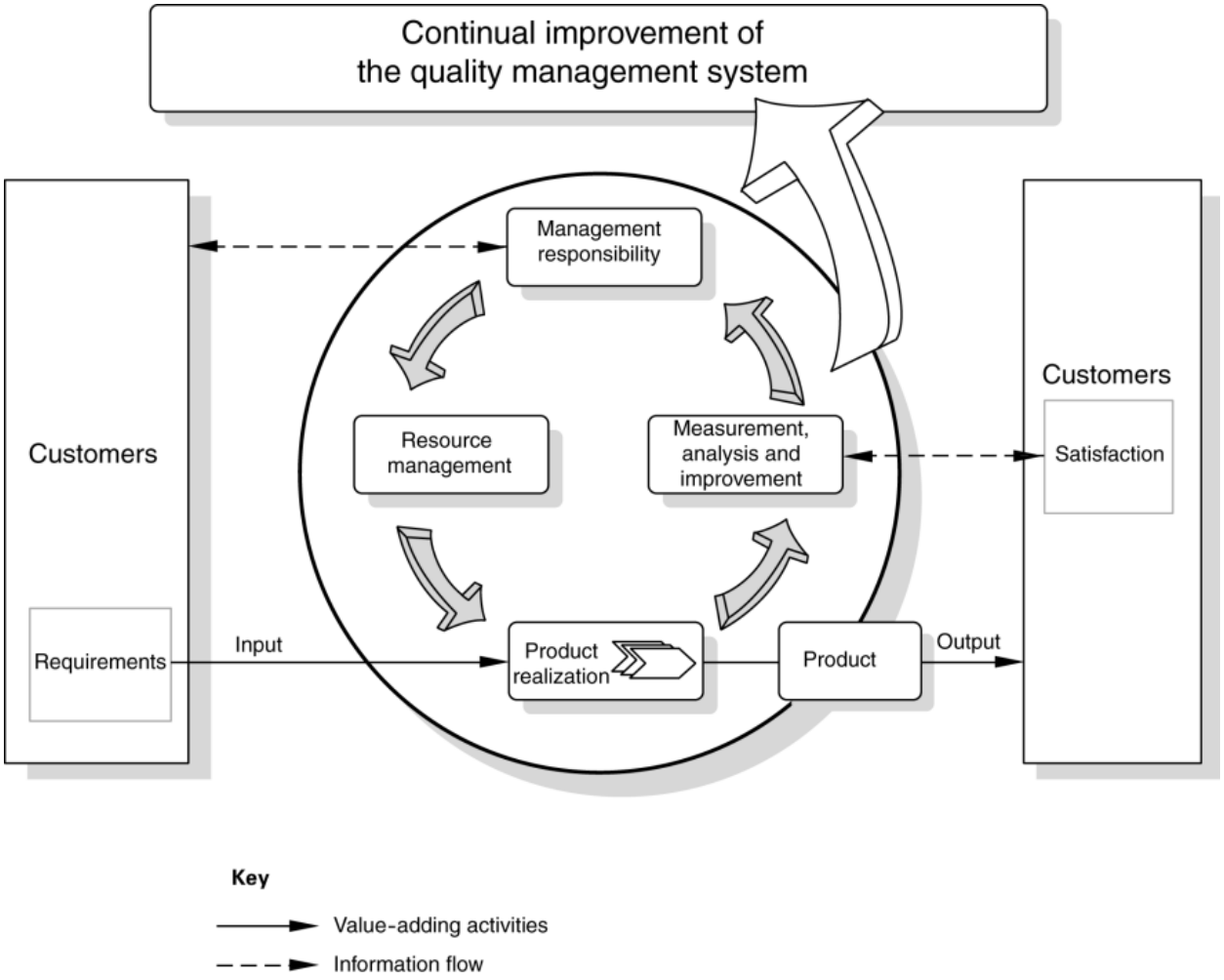


Figure 1: Model of a Process-Based Quality Management System.

In addition, the methodology known as "Plan-Do-Check-Act" (PDCA) can be applied to all processes. PDCA can be briefly described as follows:

Plan: Establish the objectives and processes necessary to deliver results in accordance with customer requirements and the organization's policies.

Do: Implement the processes.

Check: Monitor and measure processes and product against policies, objectives and requirements for the product and report the results.

Act: Take actions to continually improve process performance.

Manufacturing Process

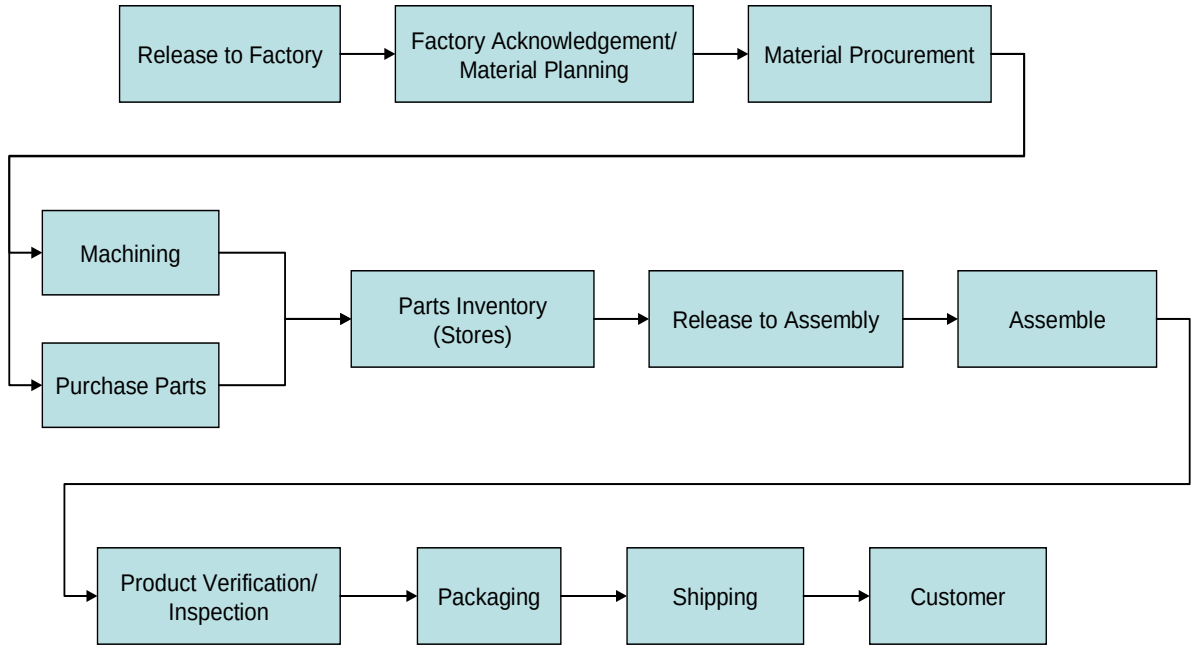


Figure 2: General Manufacturing process in place at Fisher Controls International LLC.

2. NORMATIVE REFERENCE

The referenced document(s) contains provisions, which, through reference in this Manual, constitute provisions of this Quality Management System Manual. The latest revision of these documents applies, unless otherwise stated by edition, issue, revision, or date.

3. TERMS AND DEFINITIONS

Listed below are definitions of abbreviations found in this Manual.

- ANSI American National Standards Institute
- APR Assembly Processing Requirements
- ASME American Society of Mechanical Engineers
- ASNT American Society of Nondestructive Testing
- ATEX European ATEX (Atmosphere Explosive) Directive
- CAR Corrective Action Report
- CMTR Certified Material Test Report
- CSP Configurable Supplementary Processing
- DS Drafting Standard
- EDOCS Electronic Documents System
- EM Engineering Master
- EP Engineering Practice
- ES Engineering Standard
- FFS Fisher Finishing Specification
- FGS Fisher General Specification
- FLEx Fisher LBP Exchange
- FMP Fisher Manufacturing Procedure
- FMS Fisher Material Specification
- FTEP Fisher Test and Evaluation Procedure
- FWPS Fisher Weld Procedure Specification
- LBP Local Business Partner
- MPR Manufacturing Processing Requirements
- NDE Nondestructive Examination
- OPS Order Processing System
- PE Pressure Equipment
- PED European Pressure Equipment Directive
- PPR Procurement Processing Requirements
- PQR Procedure Qualification Record
- TPM Total Preventive Maintenance
- WMP World Manufacturing Procedure
- WPS Weld Procedure Specification
- *WWQSL World Wide Qualified Suppliers List*

Listed below are definitions and terms found in this Manual.

- **APPROVE** - An evaluation and positive endorsement of a document or activity. This is indicated by a signature, initials, or stamp on the document or on a record traceable to the document or activity. Electronic documents will be safeguarded so only authorized personnel may revise the document. Approval is, therefore, inherent. See **REVIEW**.

- **ASNT SNT-TC-1A** - (The American Society of Nondestructive Testing Recommended Practice) - A specification outlining recommendations for training and qualification of nondestructive testing personnel.

- **ASSEMBLY DATA SHEET –** This form is used to document data at assembly and transfer data from the assembly area to the Quality Assurance Department.

- **ASSEMBLY PROCESSING REQUIREMENT** (APR) - A specification which is written for a particular project/order which lists specific assembly requirements to meet the contractual requirements. When compliance to a specific procedure(s) is required, it shall be identified on the APR.

- **ASSEMBLY WORK ORDER** – The document which accompanies the product and gives instruction for the assembly and testing of product. (See Exhibit 3.)

- **ASSEMBLY WORK ORDER PACK** - The document pack which accompanies the product through the assembly, test, packaging and shipment process. It includes the Assembly Work Order and Pick-List. When required, Engineering drawings and CSP Processing Documents are included.

- **AUDIT** - A planned and documented activity performed to determine by investigation, examination, or evaluation of objective evidence the adequacy of and compliance with established procedures, instructions, drawings, other applicable documents, and the effectiveness of implementation. (An audit should not be confused with surveillance or inspection activities performed for the sole purpose of process control or product acceptance.)

- **CERTIFICATE OF CONFORMANCE** (C of C) - A written statement attesting the material or services are in accordance with specified requirements.

- **CERTIFIED MATERIAL TEST REPORT** (CMTR) - A document reporting the actual results of all required chemical analysis, mechanical tests, heat treatments, examinations and attesting the material is in accordance with specified requirements.

- **COMPANY** - Fisher Controls International LLC Marshalltown, Iowa.

- ***COMPETENCE*** *– Ability to apply knowledge and skills to achieve intended results.*

- **CONSTRUCTION** - An all-inclusive term including materials, design, fabrication, examination, testing, inspection and certification required in the manufacture and installation of items.

- **CONTROLLED PART** - A part requiring processing through the special processing system.

- **CORRECTIVE ACTION** – A measure taken to eliminate the cause or causes of a nonconformity which will prevent recurrence.

- **CSP PROCESSING DOCUMENTS –** Supplemental requirements applied to an order. These may include purchasing, manufacturing, assembly, or customer imposed requirements. (See Exhibit 6.)

- **CUSTOMER** - The entity placing an order with the Company.

- **CUSTOMER ORDER** - An order for a non-stock item which is to be used to satisfy a customer's requirement.

- **DATA -** Any table, chart, or other collection of information which may exist in paper or electronic form.

- **DESIGNEE** - When the Manual places responsibility for an activity on an individual, he/she may designate a qualified individual to perform this activity, but he/she retains the responsibility.

- **DESIGN SPECIFICATION** - A document which provides a complete basis for construction.

- **DISPOSITION REPORT** - A document which describes the nonconformance of an item and identifies the required activity and authorization for rework or authorization for use-as-is dispositions. (See Exhibit 7.)

- **EDOCS** - An acronym for Electronic Documents System, a WEB based application for management and presentation of documents and other information to the workplace. EDOCS is a multi-department application and is the primary storage and maintenance location for many document types. It is accessed through the Fishweb home page.

- **ENGINEER** - A Design Engineer, Product Engineer, or other qualified person designated as having primary engineering responsibility for existing products, or primary project responsibility for new designs.

- **ENGINEERING MASTER** (EM) - Unique sets of parts/component modules which provide combinations of part number selections to establish individual product make-up (this is a master parts list).

- **FISHER LBP EXCHANGE** (FLEx) - A web-based system used for the transmittal of information between the LBP(s) and Fisher Controls International LLC.

- **FISHER SERIAL NUMBER** - A unique number assigned to each serialized assembly manufactured by the Company. This number is traceable through permanent records to a specific item description and included part numbers.

- **FOR REFERENCE ONLY** - Copies of revision controlled documents will not be used in final determination of issues relating to product, processes, or procedures. See **UNCONTROLLED COPY**.

- **HEAT CODE** – An identifying number which provides traceability to a Heat Number.

- **HEAT NUMBER** - An identifying number which provides traceability to **a** Certified Material Test Report (CMTR).

- **HOLD POINT** - A designated stopping place during or following a specific activity at which inspection or examination is required before further work can be performed.

- **INSPECTION** - Examination or measurement to verify whether an item or activity conforms to specified requirements.

- **INSPECTION, MEASURING, AND TEST EQUIPMENT** - Devices, systems, or gages used to calibrate, measure, gage, and test for final acceptance of parts or assemblies or for design verification.

- ***INTERESTED PARTY*** *– Person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity.*

- **ITEM** - An all-inclusive term used to designate any of the following: material, part, subassembly, assembly, component, unit, equipment, module, appurtenance, system, subsystem or structure.

- **MAJOR REPAIR (WELDING)** - A repair where the repair weld exceeds 20% of wall thickness or 1 inch, whichever is smaller, or exceeds 10 square inches in area, or was made to correct a hydrostatic test defect. See **WALL THICKNESS**.

- **MANUFACTURING PROCESSING REQUIREMENT** (MPR) - A specification which is written for a particular project/order which lists specific manufacturing requirements to meet the contractual requirements. When compliance to a specific procedure(s) is required, it shall be identified on the MPR.

- **NONCONFORMING AREA** - An area where items which do not conform to the engineering, manufacturing or contractual specifications shall be held awaiting appropriate disposition.

- **NONCONFORMITY** - A deficiency in a characteristic, documentation, or procedure which renders the quality of an item or activity unacceptable or indeterminate. Examples include: physical defects, test failures, incorrect or inadequate documentation, or deviation from prescribed processing, inspection or test procedures.

- **ORDER PROCESSING SYSTEM (OPS)** - A computerized system for total order processing.

- **ORGANIZATION** – see Company

- **PART NUMBER** - A unique number which represents an engineering description for a part or assembly.

- **PIECE SERIAL NUMBER** - A unique number assigned as an identification number to an item for traceability purposes.

- **PREVENTIVE ACTION** – A measure taken to eliminate the cause or causes of a potential nonconformity to prevent occurrence.

- **PROCUREMENT PROCESSING REQUIREMENT** (PPR) - A specification which is written for a particular project/order which lists specific procurement requirements to meet contractual requirements. When compliance to a specific procedure(s) is required, it shall be identified on the PPR.

- **PRODUCT ENGINEER** – A person who is assigned primary engineering design responsibility for an existing product.

- **PURCHASED PART** - A finished item which is received from a supplier as a result of a Purchase Order (nuts, studs, bolts, cap screws, etc.).

- ***RISK*** *– Effect of uncertainty.*

- **QUALITY ASSURANCE** - For purposes of this Manual, Quality Assurance shall comprise all those planned and systematic actions necessary to provide adequate confidence that all items are designed and constructed in accordance with specifications established by Research and Engineering and the customer's purchase contract. These actions shall include tests and examinations of products to verify compliance with established acceptance standards as well as the documentation which provides objective evidence that the quality control activities were conducted. In this Manual the words Quality Assurance and Quality are used interchangeably.

- **QUALITY REPRESENTATIVE** – Persons reporting to and including the Manager, Quality. QA Engineers, Manager QA Engineering, Quality Control Manager. *Also includes persons not reporting to the Manager, Quality when those persons are performing activities on behalf of the Manager, Quality such as Process Engineers and Process Coordinators.*

- **QUALITY PLAN** - A combination of the Shop Order and the Assembly Work Order which describes the planned steps for manufacture of a product. This may be supplemented by CSP Processing Documents as needed to provide nonstandard customer processing requirements.

- **REPRESENTATIVE** - An independently owned company authorized to sell Fisher Controls' products and enter order data directly into the OPS system. May also be referred to as a Local Business Partner (LBP)

- **REVIEW** - An act of evaluation of a document or activity. A positive endorsement is indicated by a signature, initials, or stamp on the document or on a record traceable to the document or activity. See **APPROVE**.

- **REWORK** - The process of physically restoring a nonconformance to a condition such that the item complies with design requirements.

- **SHOP PACK** - The document pack or group of electronic files which are associated with items being processed in the machine shop containing the Shop Order, Engineering Drawing, and Operation Sheet.

- **SPECIAL PROCESSING ORDER –** An order which includes special customer requirements and is processed using fabrication, assembly, test, and/or packaging specifications generated specifically for the order. May also be referred to as CSP orders.

- **SUPPLIER** - An organization engaged to supply materials, parts, or services.

- **TECHNICAL SPECIFICATION** - An engineering document specifying detailed performance parameters derived from input specifications, (i.e., marketing requirements, customer and manufacturing requirements, codes and standards, etc).

- **TESTING** - The verification of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions.

- **UNCONTROLLED COPY** - A copy of a document with revision control which has not been distributed in accordance with the applicable procedure or specification. Uncontrolled copies will not be updated with future revisions. Uncontrolled copies will not be used in final determination of issues relating to product, processes, or procedures. See **FOR REFERENCE ONLY**.

- **USE-AS-IS** - The process of accepting a nonconforming characteristic where the capability of an item to function reliably and safely is unimpaired, even though that item does not conform to Fisher Controls' design requirements. All contractual requirements shall be satisfied.

- **VALUE STREAM –** A collection of processes which support the lean flow of a product family from introduction of customer order in manufacturing through shipment.

- **WALL THICKNESS** – The *cross-sectional* thickness of a part. The thickness may be obtained by direct measurement or determined from the drawing. When two or more values are possible, the minimum value shall be used. For convenience, the minimum wall thickness specified on the drawing may be used as the wall thickness. See **MAJOR REPAIR (WELDING)**.

- **WITNESS POINT** - A designated stopping place preceding a specific activity at which inspection or examination of the activity is accomplished. Work may proceed beyond this point after notification to the designator.

- ***WORLD-WIDE QUALIFIED SUPPLIERS LIST*** *- A listing of suppliers qualified under the Fisher Controls International LLC Worldwide Quality Management System Manual to furnish material, parts, or services used in products.*

4. CONTEXT OF THE ORGANIZATION

4.1. Understanding the Organization And Its Context

Fisher Controls International LLC (Fisher Controls) is a wholly owned subsidiary of Emerson Electric Co., operating under Emerson Automation Solutions. Fisher Controls International LLC provides valves, actuators, flow-control devices and instruments to the Process Control Industry worldwide. Fisher Controls maintains facilities located throughout the world, with its President located in Marshalltown, Iowa, and Fisher Management in North America, Europe, and Asia. The President reports to Executives located with Emerson Electric in St. Louis, Missouri.

Fisher Controls International LLC, Marshalltown Operations has determined the external and internal issues that are relevant to its purpose and its strategic direction and that reflect its ability to achieve the intended results of the Quality Management System. Information about these internal and external issues are continuously monitored and reviewed as part of the yearly executive management-planning process with Emerson, described in Chapter 6.

4.2. Understanding the Needs and Expectations of Interested Parties

Due to their effect or potential effect on its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, Fisher Controls International LLC determined the interested parties as well as the requirements of these interested parties that are relevant to the Quality Management System (See Figure 2)

Fisher Controls International LLC monitors and reviews information about these interested parties and their relevant requirements. Necessary changes are implemented as appropriate.

Interested Party	Needs	Expectations	Metrics
Customers	Quality Product On Time	On-time delivery	PDSL RDSL Lead Time
		Meet Requirements	SR's Warranty Survey Sales
		Proactive Communication	Exception Reporting
Suppliers	Accurate PO	Actionable PO Committed Leadtime Commercial Considerations	Exception Reporting Short Dated Order Volume DPO
Employees	Employment	Compensation	Salary Plans Benefit Sign-ups
		Positive Work Envirionment	TRR Climate Survey
Parent Organization	Profit w/ integrity	Income	Sales GP Budget
		Integrity	Exception Reporting 3rd party certifications
External Non-customer Community	Corporate Social Responsibility	Trusted partner	Annual Report to Shareholders

Figure 2. Example of interested parties and their expectations.

4.3. Determining the Scope of the Quality Management System

This program covers all quality activities within the Fisher Controls International LLC, Marshalltown Operations with the exception of Customer-related processes and Design and Development Planning, which are carried out at the Division Level. This program does not cover activities carried out at other divisions, Representative offices, Fisher parts warehouses, Fisher Service Centers, on-site servicing or activities of freight carriers, brokers, or storage companies. Products produced within the Nuclear Quality Assurance Program and products produced within the ASME Section I Program carry requirements beyond the scope of this Manual.

Fisher Controls International LLC, Marshalltown Operations, recognizes its responsibilities as a provider of process control equipment to comply fully with customer and applicable statutory and regulatory requirements. To this end, a quality management system has been developed. This system establishes controls throughout the entire business cycle from proposals and bids to end-item delivery and service. It also assures meeting business and quality objectives and minimizes the possibility of compromises, which could affect product quality, safety, and reliability. The Quality Management System is complete and responsive to the requirements of the ISO 9001 standard. The

Quality Management System and referenced procedures outlined by this manual define the policy of Fisher Controls International LLC, Marshalltown Operations.

This Manual has been prepared to define the Quality Management System requirements for Fisher described herein. The Fisher Quality Management System Manual is a narrative description of the processes designed to provide our employees, as well as our customers and suppliers, with an overview and insight into our quality policies and procedures which govern the delivery of our products and services. It is to be used to implement activities affecting quality.

The referenced Fisher Quality Assurance Procedures are documents that prescribe actions and assign responsibility to whom, where, when, and how each procedure is to be performed. Compliance with the procedures is required.

Processing Requirements, in addition to those set forth within this Quality Management System Manual, have been prepared to specifically address certain statutory and regulatory requirements for Sales Orders which are subject to these regulations.

The Manager, Quality is responsible for the preparation, review, approval, distribution and revision of this manual. The Manager, Quality shall approve this manual by signing and dating the cover page.

The original copy of the Q.A. Manual is maintained as a controlled document on EDOCS. Primary access to the manual for internal employees will be EDOCS. The Manager, Quality shall notify users when new revisions are implemented.

Controlled paper copies will be available. Each controlled manual shall be assigned a serial number. A list of manuals issued by serial number and the individual assigned control of the manual shall be maintained by Quality Assurance.

Controlled copies shall require each individual receiving a controlled manual to acknowledge receipt. These manuals shall be maintained to current revision level.

Copies marked "UNCONTROLLED" will be supplied for non-production use, e.g. customer or regulatory agency audits. Uncontrolled manuals will be current at the time of issue, but will not be updated with future revisions.

The Manager, Quality is responsible for revisions to this Manual. The revision letter, indicated on the Cover Page and located at the upper right-hand corner of each page of each section, signifies the revision status of the Manual. The exhibit forms shown in the Manual represent the minimum information content required but not necessarily the exact final form of the document. As forms migrate to electronic media, the information content will be consistent with the earlier hardcopy versions. Exhibits are updated to represent the current information content at the time of the Manual revision. Minor changes, occurring as the organization continually improves established processes, will be noted in a controlled Q.A. Manual maintained by the Manager, Quality. Organization title and reporting relationship changes will not cause revision of the manual. Current organization relationship information is available from Human Resources. Latest revisions to the Manual will be indicated by

italicized (also blue when in color) that has been added and a vertical line in the margin when text has been revised and will indicate deleted text.

4.4. Quality Management System and its Processes

The Fisher Management organization determines the processes for the Quality Management system. These processes provide direction and common support activities for Marshalltown operations. It is for this purpose that this Quality Management System Manual has been prepared.

It is the responsibility of the manager of each process to establish a method to monitor, measure, analyze and improve the process(es) he/she is responsible for. These methods shall demonstrate the ability of the process to achieve planned results. When planned results are not achieved, corrective action shall be taken, as appropriate, to achieve the desired results.

The responsible manager shall collect and analyze appropriate data to demonstrate the suitability and effectiveness of the process and to evaluate where continual improvements of the effectiveness of the process can be made. This shall include data generated as a result of monitoring and measurement and from other relevant sources. The analysis of data shall provide information relating to top management's critical success factors, including but not limited to:

- Customer Satisfaction
- Conformity of product or service requirements from the process
- Characteristics and trends of the process, including opportunities for preventive action
- Suppliers to the process
- Job function/responsibilities relating top management's critical success factors to process measurements are linked by Goal documents.

Where Fisher Controls chooses to outsource a process that affects product conformity with requirements, Fisher Controls shall ensure control over such processes. These controls are further described in Section *8*.4.

5. LEADERSHIP

Core Values:

We are driven to solve customer problems.
We innovate, change, and continuously improve.
We act with integrity, accountability, and ethics in everything we do.
We are passionate about safety in our products and in our workplace.
We value and respect our customers, and our sales and supplier partners.
We are a workplace where people, teamwork and quality do make a difference.

5.1. Leadership and Commitment

5.1.1. General

The management of Fisher Controls International LLC, Marshalltown Operations demonstrates its commitment to the development and implementation of the quality management system and continually improving its effectiveness by having established:

- *Formal communication plans used to provide a means of effectively communicating its business Core Values, quality policies, goals, objectives, customer expectations, and statutory/regulatory requirements which impact Fisher's business activities and the products and services provided,*
- *A quality policy that mandates conformance to requirements and continual improvement,*
- *Measurable business and quality objectives, which enable Fisher to focus its attention and obtain meaningful results,*
- *A system by which management may review the performance of operations, measure performance in regards to the established goals and objectives, and make the necessary changes when required; and*
- *A system by which the business may identify and obtain the necessary human and physical resources needed to achieve success within the business operations.*

5.1.2. Customer Focus

Fisher Controls International LLC, Marshalltown Operations is committed to its customers. Fisher strives to provide products and services of the highest quality, which assures our customers that their requirements have been clearly satisfied. This commitment is expressed in the responsiveness of Fisher employees to address customer needs in the Quality Policy put forth by management.

5.2. Policy

Fisher Controls International LLC is committed to continual quality improvement. To achieve this objective, the policy of Fisher is defined as follows:

"Our mission is to be the leading supplier of process management solutions that provides excellent products and services to increase our customer's competitiveness.

Customer loyalty is our primary goal.

We are committed to comply with the Quality Management System and regulatory requirements.

We empower our employees to initiate actions to ensure both quality and continual improvement in all that we do.

We behave as an ethical and responsible organization in all we do."

Kevin G. Meyer
President
Fisher Controls International LLC

Management within Fisher is responsible for communicating this policy to each employee via communication plans, training, and postings.

The Quality Policy will be reviewed in accordance with the revision of the Fisher Quality Manual to assure its continuing suitability.

5.3. Organizational Roles, Responsibilities and Authorities

Plant Manager - Marshalltown Operations:

The Plant Manager is responsible for the overall administration and operation of the Marshalltown valve manufacturing site. He/she shall provide evidence of commitment to the development and implementation of the Quality Management System and continually improve its effectiveness by communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements, establishing the Quality Policy, ensuring quality objectives (critical success factors) are established, conducting management reviews, and ensuring the availability of resources. He/she shall ensure the integrity of the Quality Management System is maintained when changes to the QMS are planned, implemented, and appropriate communication processes are established within the organization.

Manager, Quality:

This manager reports directly to the Plant Manager and functionally to the Director, Quality Worldwide. He/she is responsible for the administration and control of the Quality Management System, technical management of the Quality Assurance and Quality Control personnel: including Inspection, Nondestructive examination, Quality Assurance documentation and Calibration. This manager is the Management Representative.

He/she has been given the Organizational freedom to identify Quality problems, initiate actions to correct those problems and verify the effectiveness of those actions.

- *Assuring processes needed for the Quality Management System are established, implemented and maintained.*
- *Reporting to top management on the performance of the Quality Management System and any need for improvement.*
- *Ensuring the promotion of awareness of customer requirements throughout the organization.*
- *Review qualifications, procedures, and documentation with customer inspectors/auditors. He/she is responsible for the maintenance and continued upkeep of quality assurance records. He/she is responsible for the preparation and approval of quality documentation records, including Certificates of Conformance. He/she is responsible for internal and external (supplier) audits. He/she is responsible for initiating, reviewing and implementing required supplier corrective action as related to products.*

The Manager, Quality and, other appointed management representatives, shall further be authorized and have the organizational freedom to:

- *Identify quality problems*
- *Initiate actions that result in solutions to these problems*
- *Verify implementation of solutions to those problems*
- *This authority includes the limitation and controlling of work when necessary.*

The Manager, Quality, and other appointed management representatives, are not to be overridden by other company divisions, departments, or managers.

In the event of an impasse between the Manager, Quality - Marshalltown Operations and other departments or managers, Plant Manager, the Manager, Quality - Marshalltown Operations, and the Director, Quality Worldwide will be the arbitrators and their decision will be final and binding on all parties

This responsibility and authority is evidenced by the approval of this manual by the Plant Manager – Marshalltown Operations.

Manager, Supply Chain:

This manager reports to the Plant Manager and is responsible for procurement of material and services, expediting, receiving, and raw material inventory.

Manager, Production:

A Manager who reports to the Plant Manager and whose responsibilities include activities for one or more production areas. Responsibilities may include materials, machining, assembly, manufacturing, customer service or operations. The Value Streams reporting to this Manager Production consist of a Value Stream Manager with core teams to handle lean development, inventory planning, master scheduling, order coordination, and production supervision. The Direct Supervisors report to the Value Stream Managers.

Manager, Customer Service:

This manager reports to the Plant Manager and is responsible for Shipping and Customer Service. He is responsible for the interface with customers and the coordination of delivery schedules.

Director, Human Resources:

This director reports administratively to the Plant Manager and is responsible for salary and hourly work force-benefits administration and training record maintenance.

Manager, Safety

This Manager is responsible for the administration of loss prevention, safety, environmental, industrial hygiene, medical, and security processes and compliance.

Manager, Finance:

This manager reports to the Plant Manager and is responsible for the administration of cost and financial accounting and reporting.

Manager, Manufacturing Engineering:

This manager reports to the Plant Manager and is responsible for the machined parts product actualization process (Quality Plan), including Routings, Methods, NC Part Programs, Tool Design, Fixture Design, Shop Pack Preparation, Shop Pack Distribution, Lean Development, Maintenance, Welding and Manufacturing Engineering.

Manager, Facilities and Maintenance:

This manager reports to the Plant Manager and is responsible for Infrastructure, Facilities Engineering and Maintenance. This manager develops and implements preventive and corrective maintenance on equipment used in the manufacture of product.

Process Coordinator / Process Engineer:

This function is responsible for measuring and monitoring operations processes and driving continual improvement and report to Product Line Managers.

Delegation / Designee

When the Manual places responsibility for an activity on an individual, he/she may delegate this activity to another qualified person who has a direct reporting relationship, but he/she retains the responsibility.

When the Manual places responsibility for an activity on an individual, he/she may designate a qualified individual to perform this activity, but he/she retains the responsibility. If the qualified individual does not have a direct reporting relationship, the designation shall be documented.

6. PLANNING

6.1. Actions to Address Risk and Opportunities

Fisher Controls International LLC, Marshalltown Operations participates annually in planning processes with Division management. These include:

a) ***Planning Conference*** *– An annual review that looks 5 years back and 5 years forward at the business with a focus on sales, markets, key customers, and products. The conference looks at 5 years of historical activity, present business position, and plans, goals and objectives for the next 5-year period.*
b) ***Profitability Review*** *– An annual review that looks 3 years back and 5 years forward with a focus on the Manufacturing Operations, performance to sales objectives, cost reductions, capital resourcing, material containment, research and development resources, and profitability. Performance plans, goals, and objectives are set as a result of this review.*
c) ***Perfect Execution Review*** *– an annual review that looks 3 years forward with a focus on Understanding Customer needs, Designing Products and Organization to meet those needs, Planning supply chain to provide material locally for short lead-times and Executing orders at high service levels to provide schedule certainty to Customers. The review looks at historical and future performance targets for Safety, Quality, and Execution with plans, goals and objectives for the next 3 year period.*
d) ***Technology Review*** *– A bi-annual review with a focus on marketing, engineering, manufacturing design technology, research, new product development, and manufacturing ability to produce new products, so as to provide quality products for customers at competitive prices.*
e) ***Organization Review*** *– An annual review that looks 3 years back and 3 years forward with a focus on organization structure, succession, diversity, and recruitment planning. The review emphasizes the levels of management and supervision and staffing requirements to run the business. In addition to the annual planning reviews, Fisher Management leads the Sales and Operations Planning (S&OP) process.*
f) ***S&OP Process*** *– The S&OP process is used to gain the consensus of the organization and implement into a single operating plan. This is done through a monthly planning process that consolidates time phased business projections for product demand and supply covering a rolling 18-month period.*

By means of the formal planning processes described herein, Fisher Controls International LLC, Marshalltown Operations management assures:

- *Processes needed for the management system and their applications throughout the plant are identified.*

- *Processes are sequenced in a timely and interactive fashion, so as to assure that the criteria and methods needed have been determined and the operation and control of the management processes are effective.*

- *Required resources and information necessary to operate the business successfully; and Processes to monitor, measure, and analyze the business management system are implemented to achieve the planned results and continual improvement of the business and its management system.*

Evidence of the planning process is maintained in the form of presentation documentation, meeting minutes, and reports, which are made available through management, as well as goals and objectives stemming from the planning processes that have been documented. Additionally, when changes to the business management system are anticipated, they are planned and implemented in a fashion that assures the integrity of the business management system and provide for a smooth transition.

6.2. Quality Objectives and Planning to Achieve Them

Based on the information resulting from the planning processes, executive management establishes goals and objectives needed to meet the requirements of the business. These include, but are not limited to, performance objectives that are communicated and measured throughout the organization and the expectations for customer satisfaction, product requirement and development, fiscal management, profitability, employee satisfaction, and organizational improvement.

Objectives, which are consistently set, are:

- *Customer Loyalty and Satisfaction*
- *On-Time Delivery to Customer Required Date*
- *Lead Time Reduction*
- *Sales Growth*
- *Cost Reduction*
- *Quality Metrics*
- *Safety*
- *Profitability*

6.3. Planning of Changes

When need for changes are anticipated during the Executive management business planning processes described in 6.1, they are planned and implemented in a fashion that assures the integrity of the business management systems and provides for a smooth transition while considering:

- *the purpose of the required changes and their consequences;*
- *the integrity of the quality management system;*
- *the availability of resources;*
- *the allocation or reallocation of responsibilities and authorities.*

7. SUPPORT

7.1. Resources

7.1.1. General

Fisher Controls International LLC, Marshalltown Operations, considers, plans, and arranges to provide Human and Infrastructure Resources during the Organization Review and Profitability Review planning processes described in Section 6.1.

7.1.2. People

Resource systems have been established to permit management to requisition both the Human and Infrastructure Resources needed to operate the business and taking into consideration those resources necessary to:

- *Implement and maintain the quality management system and continually improve its effectiveness*
- *Enhance customer satisfaction by meeting customer requirements.*

7.1.3. Infrastructure

Fisher Controls International LLC, Marshalltown Operations, determines, provides, and maintains the infrastructure needed to achieve product conformity and continue to improve business operations. This infrastructure includes, as applicable:

- *Buildings, workspace, and associated utilities,*
- *Process equipment (both hardware and software), and*
- *Supporting services (such as transport, communications, or information systems).*

Infrastructure is planned for by means of the capital appropriation request process. During the annual budgeting process, a list of capital projects is aligned with the level of capital funds allocated to the Marshalltown Operations. The method for determination of the level of capital funds available for allocation is described in Section 6.3 of Fisher Controls International LLC Worldwide Quality Management System Manual.

Capital planners prepare a list of items desired to run and improve the business. These lists are compiled, reviewed, and prioritized. Capital appropriation requests are submitted for approval based upon authorization levels and resources. Funds are authorized for capital spending in accordance with the capital plans. A contingency reserve is maintained for unforeseen projects, as they become necessary.

7.1.4. Environment for the Operation Processes

Fisher Controls International LLC, Marshalltown Operations, is committed to providing a safe, healthful work environment for its employees and the communities in which we do business.

Likewise, Fisher provides for the necessary environments needed to produce products within those environments necessary to achieve requirements (i.e. office facilities, clean rooms, calibration and inspection rooms, special process facilities – paint, welding, heat treatment, etc.). Environmentally controlled facilities used to meet product requirements are monitored and maintained to assure conformity.

7.1.5. Monitoring and Measuring Resources

Fisher Controls International LLC, Marshalltown Operations – Through the use of drawings, procedures and instructions, Fisher has established the monitoring and measurement procedures to be undertaken and the monitoring and measuring equipment needed to provide evidence of the conformity of product to determined requirements (see 8.6).

The Manager, Quality, is responsible for assuring conformance to the requirements included in this section.

The Manager, Quality, is responsible for preparing Fisher Manufacturing Procedures (FMP) for the calibration of inspection, measuring, and test equipment.

The Quality Control Technician, Quality Assurance Technician, and Maintenance personnel are responsible for calibration in accordance with FMP's written for each instrument type and shall record the FMP, date of calibration, and the calibration history of each item on a calibration record.

Individuals using inspection, measuring, and test equipment are responsible for using equipment that is not beyond the calibration due date.

Calibration

Calibration of inspection, measuring, and test equipment used for production shall be performed in accordance with Fisher Manufacturing Procedures (FMP2H series) that specify the calibration frequency, accuracy, and tolerance.

Master gages and measuring instruments used to calibrate gages and measurement equipment for production shall be calibrated at intervals specified in a Fisher Manufacturing Procedure (FMP) by Fisher Controls or by the calibration service suppliers listed on the WWQSL.

Calibration shall be to standards which are traceable to national standards, or where none exist, to industry-recognized standards, or if none of those exist, to a documented procedure.

Identification of Equipment to be calibrated:

- *The Quality Control Manager maintains a list of equipment to be calibrated and the unique serial number which is marked on each item.*

- *A calibration label shall be affixed to each item to indicate acceptance and will include the calibration due date.*

Defective Equipment Control

Defective/rejected equipment, used to verify dimensional properties and examination equipment, will be handled in accordance with FMP 2H2. Defective/rejected equipment used to measure pressure, torque, humidity, temperature, or electrical properties (voltage, current, resistance or frequency), will be handled in accordance with the specific Fisher Manufacturing Procedure (FMP2H Series) for that equipment.

Quality Control Technician, Maintenance personnel, or Quality Assurance personnel finding a discrepancy shall notify the Quality Control Manager. The Quality Control Manager will obtain an engineering assessment of potential performance impact of the discrepancy and determine if corrective action is necessary per Section 10.2 of this manual for the validity of inspections and tests previously conducted. Product determined to be unacceptable as a result of the assessment shall be processed in accordance with Section 10.2 of this manual.

Computer Software Control

When used in the acceptance of product, the ability of computer software to satisfy the intended application shall be confirmed.

Supporting Fisher Procedures

FMP 2H Series - As applicable to the Control of Calibration

7.1.6. Organizational Knowledge

Fisher Controls International LLC Management determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services.

Job descriptions are maintained by Human Resource Management. Salaried job descriptions outline the requirements of the position and the minimum education, training, skills, and experience needed to fulfill the position. Hourly job descriptions include essential functions of the position.

When addressing changing needs, employees are hired, transferred, and promoted based on their ability and willingness to effectively apply required knowledge and skills to fulfill job descriptions as assessed by the responsible manager.

7.2. Competence

Human resource needs are provided by means of the Human Resource Information System for salaried employees. Job opening requests are prepared by the hiring manager to fill vacancies and/or to add salaried employees where an identified human resource is needed. The job opening request requires approval by upper management prior to the position being filled. Openings for hourly positions are filled based on authorized manning levels, the hiring manager's request, Plant Manager's approval.

Headcount is reported by Human Resource Management on a monthly basis and is monitored by executive management to assure human resource goals and objectives are met based on the headcount plans developed during the Organization Review and Budget/Operations Review. Salaried employees are hired, transferred, and promoted based on their ability and willingness to effectively apply required knowledge and skills to fulfill job responsibilities as assessed by the hiring manager upon management approval. Hourly employees are hired based on their ability and willingness to effectively apply required knowledge and skills to fulfill job responsibilities. Hourly employees change positions based upon collective bargaining agreement language.

Fisher Controls International LLC Management, Marshalltown Operations is responsible for the competency, awareness, and training of the employees who report to them. Salaried employee performance is reviewed on an annual basis. Review includes competencies specific to the role type (non-exempt, exempt or leadership) as well as performance to goals and objectives assigned by their respective management.

Salaried employees are reviewed against goals identified in the Performance Management Process-PMP which set forth requirements for performance based on goals and objectives that have been established by executive management and driven down into the organization. Salaried employee goals and objectives are developed in support of the business goals and objectives set by management. These reviews are documented on a Goals, Objectives, and Performance Document and summarized on the appropriate Performance Review form. Review sessions are facilitated to share results and to provide employees the opportunity to express their desires and ideas for career growth. Hourly employees are reviewed against performance expectation. These reviews are documented on a Bargaining Unit Performance Appraisal form.

In either case, training needs and development plans are documented when appropriate and evaluated for effectiveness at the time of performance reviews or sooner, as the situation warrants. These reviews provide management with the opportunity to ensure that employees are aware of the relevance and importance of their activities and how they contribute to the achievement of the business and quality objectives.

The Manager, Quality, is responsible for assuring that personnel performing activities affecting quality have been indoctrinated and trained to a level which will assure suitable proficiency is achieved and maintained. He/she is responsible for assuring that the applicable Managers/ Supervisors are indoctrinated and trained in their specific responsibilities as outlined in the applicable sections of this Manual.

The Director, Human Resources is responsible for establishment and implementation of training.

Department Managers shall ensure that each employee is properly trained to perform the work assigned.

Department managers shall document the job competencies for each job position per FMP 2J4. The job competencies shall identify the training, education, skills, and experience required for an individual to perform the specific tasks related to product quality.

Department managers are responsible for assuring that a training record for each employee establishing the qualifications of the employee for the position he/she holds.

The manager shall identify the training needs for each employee and shall ensure that the employee receives the training on a timely basis.

When the department manager is satisfied that the employee is adequately trained, he/she shall indicate that the employee is considered "qualified."

The training record shall be reviewed, or initiated in the case of a new hire, whenever an employee transfers to a new job or department or whenever there have been changes in technology, processes, or standards that affect specific tasks related to product quality.

The department manager shall maintain the training record in a manner so that it is readily accessible.

The trainer will document the training on the Indoctrination and/or Training Form (similar to Exhibit 9).

Quality Management System Training

Quality Management System training shall be conducted to assure personnel are aware of this Manual and the Quality Policy, as it applies to them.

Supporting Fisher Procedures

FMP 2J4 – ISO Job Competency Policy and Procedure

7.3. Awareness

Fisher Controls International LLC Management ensures via communication plans, training, and postings that people at all level of the organization are aware of:

- *The Quality policy.*
- *Relevant quality objectives.*
- *Their contribution to the effectiveness of the quality management system including the benefits of improved performance.*
- *The implications of not conforming to the quality management system requirements.*

7.4. Communication

Organizational effectiveness and business growth is a direct result of creating an environment that encourages employees. In support of creating this positive environment, Fisher Controls International LLC communication's strategy focuses on the following key areas:

- ***Enrollment of People:*** *Communication of business results, strategies, policy, benefits changes, and special recognition of significant accomplishments.*

- ***Employee Involvement and Feedback:*** *Avenues for all employees to share their thoughts, concerns, and suggestions to any person in the organization. This also includes the utilization of cross-functional and natural work teams.*

- ***External Communication:*** *Establishing a bridge between our customers, suppliers, community, and our employees.*

This strategy facilitates communication at all levels and in all directions of the organization. Managers have the responsibility to ensure that information flows in accordance with this strategy and all employees share accountability for communicating.
Fisher's philosophy will also center on developing values and behaviors which foster high-performing individuals, teams, and organizations. The following values are inherent in our business and communications philosophy:

- ***Truth:*** *Openly sharing information, ideas, and thoughts.*

- ***Accountability:*** *Accepting the consequences of choices and learning from our mistakes.*

- ***Support:*** *Encouraging each other's personal and professional growth.*

- ***Trust:*** *Knowing, with confidence, that our employees have the company's best interest at heart.*

- ***Energy:*** *Being motivated to devote our best efforts to perform.*

Communication is everyone's responsibility and effective communication will be achieved only if everyone participates. Responsibility for communication varies depending upon one's role in the organization. These are outlined below:

Human Resources

- *Provide leadership in communicating business direction and strategy*
- *Sets the expectation that communication is critical to the success of the Fisher business and, therefore, everyone is expected to participate in the communication process*
- *Communicates with individuals at all levels of the organization*
- *Continually monitor employee morale and provides feedback to the Plant Manager*
- *Listens for the changing needs of individuals in the organization*
- *Explores and provides training in areas such as diversity, sexual harassment, and other areas.*

Plant Manager

- *Provide timely communication of progress to achieve business results*
- *Translate business direction and strategy so that the function understands its role and contribution to the whole*

- *Continually monitor employee morale and provide feedback to the Vice President, Operations and Human Resources*
- *Establish strong relationships with other functions in order to ensure consistency in direction.*

Managers/Supervisors

- *Translate business direction into specific tactics to be achieved by each department*
- *Communicate progress to targets at departmental and company level*
- *Gather feedback from employees at all levels of the department and provide feedback to Human Resources*
- *Communicate with departments to ensure consistency*
- *Provide reasoning behind decisions or changes that are made.*

Employees

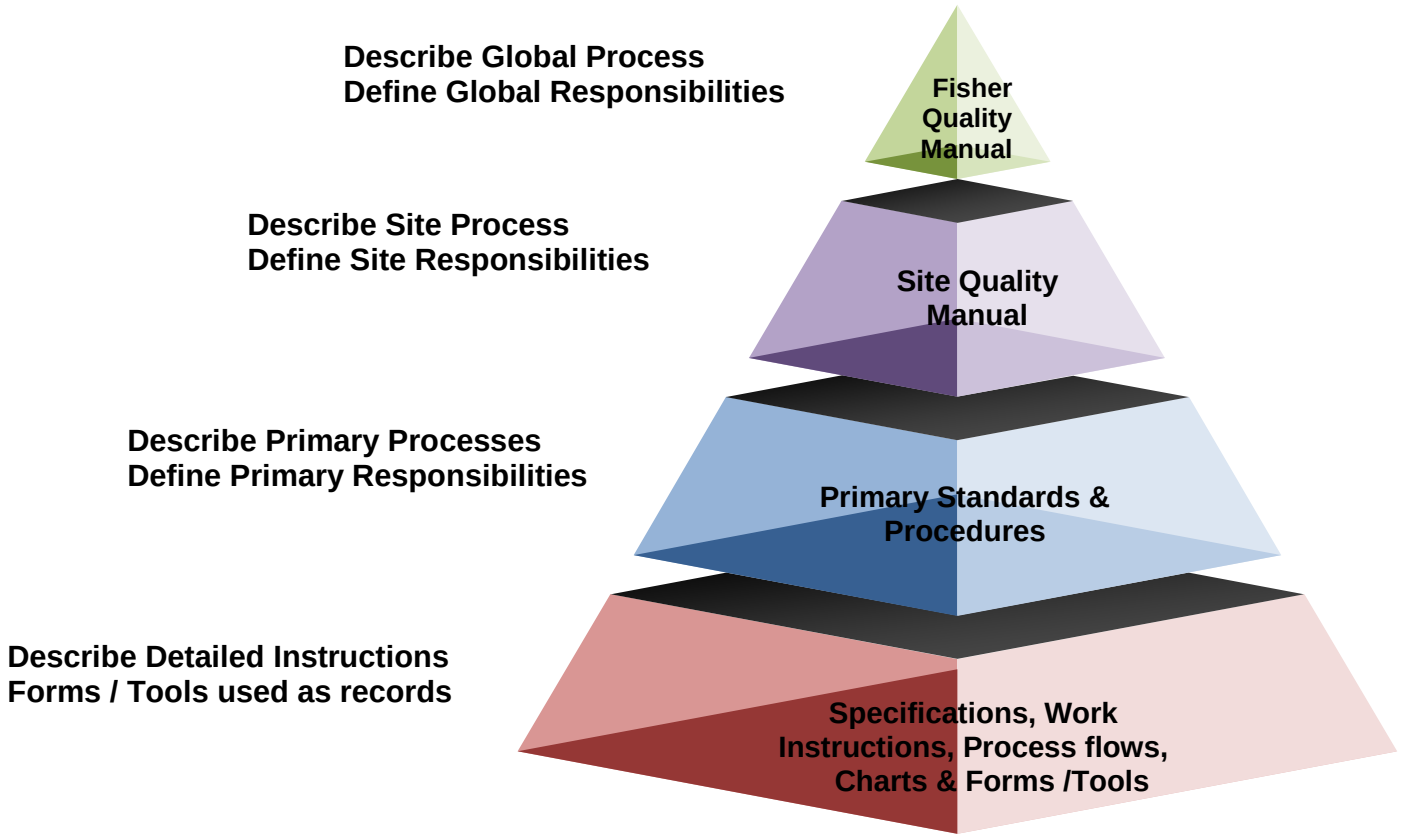
- *Listen to the rationale behind decisions that are made*
- *Share concerns and ideas with manager/supervisors/team leaders*
- *Ask questions regarding expectations and direction*
- *Give feedback to manager/supervisor on communication style*
- *Initiate career planning discussions.*

7.5. Documented Information

7.5.1. General

Fisher's Quality Management System is described through various levels of documents as shown in the Documentation Pyramid.

Documentation Pyramid



Required records shall be maintained per Section *7.5.3* as required by Fisher Controls, Codes and Standards, and regulations.

7.5.2. *Creating and Updating*

Table *7.5.2* identifies documents that shall be controlled by the document control system to allow identification of the current issue and identifies those responsible for the preparation, review, approval and distribution of the documents. The responsibility for the revision of documents shall be the same as that for preparation. Revised documents shall be reviewed, approved and distributed as the original documents. Except as authorized in this Manual or in referenced standards, all obsolete, inactive, or superseded documents shall be promptly removed from all points of issue or use. All obsolete documents retained for legal and/or knowledge preservation purposes shall indicate revision status. EDOCS will contain the current version of all documents. Controlled documents will reside electronically on EDOCS.

Each person who has supervisory responsibility for activities affecting quality shall ensure the current issues of appropriate documents are available at all locations where operations essential to the effective functioning of the quality system are performed.

All employees are responsible for using the correct revision of specifications and procedures in final determination of issues relating to product, processes, or procedures.

Red line drawings and EDOCS controlled documents that are signed and dated by the approver may be used on a *one-time* basis. Signature and date gives revision control without having to wait for changes to show in EDOCS.

DOCUMENTS	PREPARATION	REVIEW	APPROVAL	DISTRIBUTION
Audit or Survey Summary Reports	Lead Auditor	Lead Auditor (second signature not required)	Manager Quality	Manager Quality
DS, ES, EP, FFS, FGS, FMS, FTEP Except FGS 8F Series,	VP Global Technology or VP Engineered Products Business Unit (1)	VP Global Technology or VP Engineered Products Business Unit (1)	VP Global Technology, or VP Engineered Products Business Unit (1)	Responsible Engineer
WMP	VP Global Technology or VP Engineered Products Business Unit (1)	Quality Engineer, or VP Global Technology or VP Engineered Products Business Unit (1)	Manager Quality	Responsible Engineer
FGS 8F Series	QP&S Analyst	QP&S Analyst	*Manager QP&S*	QP&S
FWPS, PQR	*Division Weld Engineer*	*Division Weld Engineer (1)*	*Materials Engineering Manager (1)*	Responsible Engineer
Engineering Drawings	Drafter	Assigned checker	Applicable Product or Design Engineer	*Responsible Engineer*
Engineering Masters	Product or Design Engineer	Assigned checker	Applicable Product or Design Engineer	*Responsible Engineer*
Fisher Manufacturing Procedures (FMPs)	FMP Administrator and Responsible Engineer (1)	Responsible Engineer and FMP Administrator (1)	Manager Quality *(2)*	Responsible Engineer
CSP *Processing* Documents (PPR, MPR, APR)	QP&S Analyst *(1)*	QP&S Analyst *(1)*	*Manager QP&S or QP&S Analys (1)t*	QP&S or *Value Stream Associate*
Purchase Order	Buyer	Buyer (second signature not required)	*Manager Quality*	Buyer
Shop Order	Routings	*N/A*	*Routings*	*N/A*

(1) An individual may not perform more than 2 of the activities in this table. There must be an independent verifier of at least one of the activities

(2) NDE procedures are *also* approved by the appropriate Level III.

Table *7.5.2*: Persons Responsible for Original Documents and Revisions

7.5.3. Control of Documented Information

Engineering Documentation

The Vice President of Global Technology shall control the release, distribution and revision of all drawings, Engineering Documentation, and Engineering Masters per ES 242.

Revisions to these documents are initiated through an Engineering Change Request/Notice (Exhibit 8) which must be reviewed by the designated Product Engineer for its impact on product function.

Review and approval of all new engineering documents and their revisions must be performed by independent qualified persons per the requirements of Table *7.5.2*.

The Global Standards Coordinator is responsible for maintenance and distribution of all engineering documentation, per ES 242.

The department releasing the Shop Order for production assures drawings are referenced to the orders in accordance with this Section.

Revisions to orders in process will be handled in accordance with this Section.

Fisher Manufacturing Procedures

The FMP Administrator shall be responsible for the distribution and control of Fisher Manufacturing Procedures in accordance with Fisher Manufacturing Procedure FMP 14A3.

Customer Specifications

Customer Specifications are controlled per Section *7.5.3* of Fisher Controls International LLC Worldwide Quality Management System Manual.

Customer Order

The process for creating a customer order is described in Section *8.2.3* of Fisher Controls International LLC Worldwide Quality Management System Manual.

CSP Processing Documents

Distribution of processing documents is defined by CSP-P003. The Quality, Plans, and Specifications Manager shall be responsible to maintain a file containing the original and revised PPR, MPR, and APR.

These documents may be reused on new orders where the requirements have not changed. It is permissible to use different revisions of the forms from those shown in the Exhibits section of this Manual provided all of the information requirements have been met.

Shop Orders

Shop Orders are instructions developed from part number information, which establish manufacturing operations.

The *Manager Manufacturing Engineering* shall be responsible for the preparation, maintenance and revision to the shop order database.

Purchase Orders

Purchase orders issued to suppliers are initiated from a material requisition issued by Inventory Planning. Purchase Orders are approved and revised by the Purchasing function of respective product types.

Quality Management System Manual

The Quality Management System Manual shall be prepared, reviewed, approved, and distributed as described in Section *4.3* of this Manual.

Control of Electronic Documents

The Vice President of Business Processes and Systems is responsible for ensuring electronic information (records, procedures, specifications, etc.) has appropriate controls to maintain security.

Methods and devices shall be used to ensure the accuracy, validity, and propriety of the information system activities including:

- System security monitoring software will require a user ID and password which will protect against unauthorized use. The passwords shall be required to be changed periodically.

- Multilevel hierarchy of authorization shall limit access to data, programs, and information. The level of authorization shall be appropriate to the responsibilities of the position and shall be approved by the security group owner.

- Computer information shall be backed up at defined intervals and stored in a separate building with similar Facility Controls.

Methods and devices shall be used to protect the Company's computing and network facilities from loss or destruction including:

- Access to the Company's facilities will be controlled by electronic keys. Personnel shall be identified by Company badges.

- Multilevel hierarchy of authorization shall limit access to computing facilities. The level of authorization shall be appropriate to the responsibilities of the position and shall be approved by the employee's manager/supervisor.

- Computing equipment shall be protected from accidents and natural disasters (fire, flood, etc.). Emergency power systems may be used in case of power failures.

- External fire walls will be used to prevent unauthorized Internet access from outside the Company.

Personnel are responsible for not sharing their individual password and for protecting against inadvertent sharing of individual passwords.

Control of Records

The Manager, Quality, is responsible for assuring conformance to the requirements included in this Section.

The responsibilities for record storage and retention are specified in FMP 2K36.

Maintenance, Storage, Retrieval, and Disposal

All quality records shall be legible and identifiable to the product or process involved.

All record files shall be stored in an environment to reduce chance of loss, fire damage, and deterioration and in a manner to still provide reasonable accessibility.

Copies of quality records may be obtained from the department responsible for storage. Where data is maintained in a computer file, adequate back-up is maintained.

Quality records shall be stored for the minimum time as specified in FMP 2K36. After the retention time has expired, the records may be discarded without notification.

Required corrections to records shall be made only by or with the specific permission of the individual or organization who originated the document. Overall review, approval, and validation shall be by the same authority as for the original document. Corrections shall be initialed and dated. The preferred method is a single line through the original information. Correction fluid shall not be used.

The use of stamps to show approval shall be controlled in accordance with FMP 2K24. When not in use, stamps shall be secure to prevent unauthorized use.

Content of Records

The combination of the Serial Card and Assembly Data Sheet include the following information:

- Fisher Controls' serial number
- "Ship To" and "Sold To" names and addresses
- As built construction (and field modifications if notified by customer)
- Hydrostatic and seat leak test requirements
- Other contractually agreed tests
- Heat number of all pressure boundary parts for valves
- Ship date.

Quality Documentation Records include the following as contractually agreed:

- Certification of Conformance
- Material test reports
- NDE reports
- Weld Order Cards
- Heat treatment records
- Radiographs
- Weld repair records
- Customer approved quality plans
- Valve signature test
- Heat numbers for other than valve pressure boundary parts.

Supporting Fisher Procedures

ES 242 - Controlled Documents and Data
FMP 14A3 - Distribution and Control of Fisher Manufacturing Procedures
FMP 20A11 - Engineering Change Request Notification (ECRN) Process
FMP 2K24 – Control of Inspection Stamps
FMP 2K36 – Quality System Records

8. OPERATIONS

8.1. Operational Planning and Control

Fisher Controls International LLC, Marshalltown Operations has planned and developed the processes needed for the manufacture of valves, actuators, and instruments.

The purpose of this Manual is to outline the processes carried out by Marshalltown Operations as opposed to those processes which are carried out at the Division level.

In planning product realization, Fisher Controls International LLC has determined the following, as appropriate for the valves, actuators, and instruments being provided to our customers:

- *Quality objectives and requirements for the product;*
- *The need to establish processes, documents, and provide resources specific to the product;*
- *Required verifications, validations, monitoring, measurement, inspection and test activities specific to the product, and the criteria for product acceptance:*
- *Records needed to provide evidence that the realization processes and resulting product meets requirements (see 7.5.3).*

8.2. Requirements for Products and Service

The Customer Order Fulfillment Process is addressed in Section 8.2 of Fisher Controls International LLC Worldwide Quality Management System Manual.

Outputs from the Customer Order Fulfillment Process are inputs to the Manufacturing Process include the Assembly Work Order Pack.

8.3. Design and Development of Products and Services

The Design and Development Process is addressed in Section 8.3 of Fisher Controls International LLC Worldwide Quality Management System Manual.

Outputs from the Design and Development Process that are inputs to the Manufacturing Process include product specifications which identify the product performance characteristics and the associated manufacturing attributes.

8.4. Control of Externally Provided Processes, Products and Services

8.4.1. General

Fisher Controls International LLC World Wide Global Supply Chain is responsible for the evaluation and selection of suppliers who provide material, parts, and services to multiple Fisher locations. The Vice President - Fisher Global Supply Chain is responsible for these activities. However,

Marshalltown Operations may evaluate and select suppliers based on need. Suppliers evaluated and selected by Worldwide Global Supply Chain or by a Manufacturing Site may be used by any other Fisher location for the materials, parts, and services they were qualified to provide.

The Manager, Materials is responsible for setting direction on purchase order placement, expediting and changes to purchase orders.

The Product Engineer shall be responsible for providing part structure which details the technical and quality requirements for procurement associated with raw material, product and service to be provided.

The Manager, Quality shall be responsible for ensuring suppliers have the capability to meet technical and quality requirements.

8.4.2. Type and Extent of Control

Fisher Controls International LLC has established purchasing processes that ensure purchased product conforms to specified purchase requirements.

Supplier selection shall be based on their ability to meet the following:

- *Technical and quality requirements*
- *Delivery requirements*
- *Cost requirements*
- *Business stability and financial position.*

Supplier selection shall be controlled in accordance with Fisher – Corporate Fisher Procurement Procedure (FPP-009). Supplier evaluation and selection shall be based on their ability to meet procurement requirements, including quality system and specific quality and technical requirements. The type and extent of control over the supplier shall be dependent upon the type of product, the impact of the supplier product on the quality of the final product, and on the quality records of previously demonstrated capabilities and performance. Criteria for the selection, evaluation, and re-evaluation are described within FGS 15B13.2. Suppliers meeting these requirements are identified on the World Wide Qualified Supplier's List (WWQSL).

External Audits are scheduled as needed to provide surveillance of new and established suppliers and subcontractors. These audits shall be performed under the direction of a Lead Auditor qualified in accordance with FMP 2J3.

Results of such audits and any required corrective action shall be reported to the Manager, Quality. A Corrective Action Request will document a deficiency and shall be forwarded to the supplier.

The supplier shall complete the Corrective Action Request indicating cause, action taken, and action taken to prevent recurrence. The Lead Auditor is responsible for reviewing the Corrective Action Request response and for determining if further action is required. If a re-audit is performed, the results shall be recorded and attached to the Corrective Action Request.

The Manager, Materials and the Manager, Quality shall be responsible to initiate necessary follow-up action when a supplier's quality performance is deficient. Failure on the part of a supplier to initiate timely corrective action may result in the removal of the supplier from the WWQSL per the requirement of Section 10.2.

The Manager, Quality is responsible for assuring purchased parts/materials are appropriately inspected for compliance with Purchase Order requirements through receiving inspection or source verification as required.

Receiving Inspection

For items identified as 'Inspection Required', the Quality Control Technician, or other qualified QA personnel, shall inspect parts and materials after they are received from a supplier, in accordance with FMP 2A1 and shall indicate inspection approval on the Receipt Traveler or Shop Order.

Whenever bar, plate, or tubular material is withdrawn from the nuclear storage area for use on a non-nuclear order, bar-stock personnel shall re-stamp, etch, or tag the cut end of the remaining material with heat/lot number. The Quality Control Technician, or other qualified QA personnel, shall verify the markings and ensure Bar Stock personnel return the remaining material to the original nuclear storage area location.

When heat/lot number traceability is required (as defined in ES 53), the Shop Order will specify the process which will be followed to maintain heat/lot traceability. For special processing Shop Orders, the Quality Control Technician, or other qualified QA personnel, shall assure the stamp or etch of the heat/lot number and the piece serial number is on each piece of material. He/she shall record the heat/lot number and supplier on the Receipt Traveler or Shop Order.

Nonconforming materials shall be controlled by Section 10.2 of this Manual.

Source Inspection

The Company may utilize source inspection in lieu of utilizing a supplier listed on the WWQSL provided the following conditions are met:

- *Source inspection shall be specified on the Purchase Order and the Purchase Order shall provide for verification arrangements and the method of product release.*
- *The source inspection occurs at the time the purchased part is produced or service is rendered.*
- *The source inspection is conducted by a Quality Representative or their designee.*

Customer Verification of Purchased Material, Product or Services

When specified in a customer's order requirements, source inspection may take place at a supplier's facilities. The Purchase Order shall provide for verification arrangements and the method of product release.

Verification by the customer or by the Company of material, product or services at the subcontractor's facilities shall not relieve the Company or the supplier of the responsibility to provide acceptable product or service, nor shall it preclude subsequent rejection and corrective action.

When a customer or the Company carries out source inspection at a supplier's facility, this shall not be used as evidence of effective quality control by the supplier.

Supporting Fisher Procedures

ES 53 – Marking Requirements for Valve Bodies, Bonnets, and Leveltrols
FMP 2A1 - Raw Materials Inspection Procedure

Supporting Fisher Procedures

FGS 15B13.0 – Supplier Quality Manual
FGS 15B13.2 – Supplier Evaluation
FMP 2J3 – Qualification of Auditors/Audit Program
FPP-009 - New Supplier Approval Worksheet Procedure

8.4.3. Information for External Providers

Material, products, and services are procured through the issuance of a purchase order. The purchase order may take the form of electronic communication or paper communication.

Each Purchase Order shall describe the following information as applicable:

- *Name and address of the supplier.*
- *Part number, revision level and description or service description.*
- *Type, size, class, material, reference codes or other descriptive requirements.*
- *Applicable drawings, procedures, instructions including their revision levels.*
- *Requirements for quality documentation and certifications.*
- *Requirements for source inspection.*
- *Requirements for adherence to quality program standards applicable to the material, product or service being procured.*
- *CSP Processing Document reference, if applicable.*
- *Requirements for qualifications of personnel.*

Each purchase order shall be reviewed for adequacy then approved and released by the authorized Buyer, Assistant Buyer, or Inventory Planner prior to issuance.

The Manager, Materials will assure that product is purchased only from suppliers on the WWQSL except for the provision of source inspection or by direct QA Engineering approval.

8.5. Production and Service Provision

Quality plans shall be established to plan, identify, and define manufacturing, assembly, and quality control requirements. These documents shall describe and identify production flow, material control, inspection points, and manufacturing processes. In addition, manufacturing procedures shall be utilized in areas where the absence of such instructions would adversely affect quality. The production processes which directly affect quality shall be identified, planned, and shall be carried out under controlled conditions.

8.5.1. Control of Production and Service Provisions

Controlled conditions shall include the following:

- Documented procedures and/or inspection and test plans defining the manner of production, (excluding installation and servicing) where the absence of such procedures could adversely affect quality.
- Use of suitable production equipment and a suitable working environment.
- Compliance with referenced standards/codes, quality plans and/or documented procedures.
- Monitoring and control of suitable process parameters and product characteristics.
- The approval of processes and equipment, as appropriate.
- Criteria for workmanship, which shall be stipulated in the clearest practical manner (e.g. written standards, parts and instruction manuals, representative samples, or illustrations, and product design drawing dimensions).
- Suitable maintenance of equipment to ensure continuing process capability. The integrity of the equipment utilized in the manufacturing, assembly, inspection, and testing processes shall be ensured by preventive maintenance programs, and/or calibration and validation programs, as is appropriate to the type of operation/process being performed.

Activities affecting quality shall be described by and performed in accordance with documented instructions, procedures and drawings as appropriate to the circumstances. These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining prescribed activities have been satisfactorily accomplished.

Fisher Design Standards:

Establishes requirements utilized in product design to ensure conformance to various codes, standards and Fisher design requirements. Fisher Design Standards are comprised of:

- Drafting Standards (DS) - Establish requirements for engineering drawings: format, content, and detail.

- Engineering Practices (EP) - Establish non-mandatory basic product design and analysis practices.

- Engineering Standards (ES) - Establish basic product design and analysis requirements.

- Fisher Finishing Standards (FFS) - Establish standards for surface coatings.

- Fisher General Standards (FGS) - Establish methods and procedures for general product requirements.

- Fisher Material Specifications (FMS) - Establish special material specifications and processing requirements.

- Fisher Test and Evaluation Procedures (FTEP) – Establish test and evaluation procedures used in the design, development, maintenance, and support of the company's products.

Other Fisher Engineering Documents:

Establish product construction requirements. Fisher Engineering Documents are comprised of:

- Engineering Drawings shall include sufficient detail and general notes to define an item's size, shape, configuration, and finish condition. These drawings are divided into 4 categories:

  - Casting/Forging Drawing - Used for the purchase of castings, forgings, and other raw materials which provide sufficient detail to the suppliers for the production of these materials.

  - Finished/Machining Drawings - Used for the manufacture or procurement of finished parts.

  - Fabrication Drawings - Used to provide the detail required to join parts into subassemblies or assemblies. These are typically used to specify requirements for weld joints, plug-stem assembly, and bushing installations.

  - Assembly Drawings - Used to provide the relationship of parts and subassemblies with respect to the completed assembly.

- Engineering Masters - Unique sets of part numbers which establish individual product construction.

Manufacturing Documents:

Establish requirements for product manufacture. Manufacturing Documents are comprised of:

- Fisher Manufacturing Procedures (FMP) - Establish procedures for manufacturing processes, such as welding, heat treating, cleaning, nondestructive examination, etc. and contain specific instructions such as equipment required and acceptance criteria. FMPs are also utilized to describe activities and processes that support product manufacture.

- Purchase Order (Exhibit 11) - Describes the product being ordered from a supplier including the precise identification, applicable specifications, drawings, processing requirements and other relevant data.

- Shop Order (Exhibit 12) - Establishes specific manufacturing and inspection steps for each part and/or assembly. This document together with the Assembly Work Order constitutes a quality plan for commercial orders.

- CSP Processing Documents include:
  - Procurement Processing Requirements (PPR).
  - Manufacturing Processing Requirements (MPR)
  - Assembly Processing Requirements (APR)

- Additional Processing Documents – Communicate special customer and/or construction code requirements including the following cases:
  - ASME Section I (processed to *"S & R" QA Manual*); ASME Section III; 10CFR50, Appendix B; and Nuclear Safety-Related components (Process to *Nuclear Quality Assurance Manual*).
  - Documented nondestructive examination requirements.
  - Documented use of customer approved vendor and/or Fisher procedures.
  - Special material chemistry or mechanical certification other than standard ASTM/ASME or Fisher Material Specification requirements (i.e. NACE MR-01-75 compliance without hardness test reports is standard processing, hardness test reporting requires special processing).
  - Special welding certification requirements such as weld maps, filler material traceability, welder performance qualification.
  - Customer hold points prior to assembly.
  - PED order with fabrication welding.
  - Material sourcing restrictions.

Customer Specifications:

Establish specific product requirements. Customer specifications are comprised of:

- Design Specification - generally establishes specific product type, size, materials, applicable codes and standards, design requirements, environmental conditions, and scope of work to be performed.

- Other contract documents such as purchase order, terms and conditions, etc.

Sales Order:

Establishes an internal translation of the contract specifications to provide useable information for purchasing, machining, assembly, testing and inspection activities.

Shop Order/Assembly Work Order;

The Shop Order and/or Assembly Work Order, constitutes a quality plan for commercial orders.

Quality Assurance Program Documents:

Provide a formal description of the Quality Assurance Program. The Quality Management System Manual establishes quality policy and describes the quality program.

Fisher Procurement Procedure (FPP):

FPP defines some of the processes necessary to manage the supply base.

Work Instructions:

Provides the means for department managers or supervisors to document department specific techniques, procedures, or guidelines. Controlled as FMPs.

Servicing

Servicing is restricted to *non-PED* products returned to the Company for repair. Servicing is performed in accordance with FMP 2Q24.

Fisher Controls International LLC, Marshalltown Operations, uses "Special" processes where the output cannot be verified by subsequent monitoring or measurement. These processes may include those where deficiencies become apparent only after the product is in use or the service has been delivered.

It is the policy of Fisher Controls International LLC to validate these processes in accordance with the following codes and standards, at a minimum:

Personnel performing special manufacturing processes will be qualified/trained in accordance with this Section and Section *7.2* of this Manual. Special processes include welding, NDE, painting, and heat treatment.

Welding:

Qualifications of procedures and welders for welds on pressure retaining components are per ASME Section IX. Welding Procedure Specifications (WPS) are prepared, reviewed, approved, and distributed according to Section *7.5.2* of this Manual. Welding Procedure Specifications qualified in accordance with ASME Section IX, by other Fisher locations may be utilized without further qualifications. Welding on non-pressure retaining parts will be performed in accordance with FGS 15B08.2.

The qualification of the Welding Procedure Specification shall be witnessed by a Welding Engineer or Direct Supervisor or Process Coordinator who records the actual parameters being used. Upon the successful completion of the testing and examination required by the Code, the Welding Procedure Specification and the Procedure Qualification Record (PQR) shall be approved by the Manager, Quality. Procedures written outside of Marshalltown Operations are approved by inclusion in FMP 5B3.

The qualification of welders and welding operators shall be witnessed by the *Welding Engineer or their designee* who records the actual parameters used in accordance with FMP 5B5. The Welding Engineer certifies the Welder Performance Qualification record following satisfactory testing and examination of the qualification coupon is in accordance with the Code. He/she shall maintain a Welding Log for each welder or welding operator, listing the name of the welder or welding operator and the material process and procedure for which the welder or welding operator has been qualified. The names of the welders and the processes he/she is qualified to perform are kept in a database which is available for review by the Manager, Quality, Authorized Inspector, Quality Control Manager, and the Direct Supervisors with welding responsibilities.

Upon initial qualification, each welder or welding operator shall be issued a unique identification symbol. This symbol is applied to the part either on or adjacent to fabrication welds, as appropriate, to identify the welder or weld operator. If traceability as to the welder or weld operator is required, and it is not feasible or practical to physically stamp the part, then appropriate records shall be maintained.

The performance qualifications of welders or welding operators shall be kept current in accordance with the requirements of ASME Section IX.

The Direct Supervisor shall verify welders/welding operators are properly qualified.

Welding material shall be purchased per Section *8.4* and received per Section *8.4.2* of this Manual. Welding material shall be controlled as follows:

- Material containers shall clearly identify the welding material by indicating the material specification, classification number, manufacturer's name, and lot and/or heat control number and controlled in accordance with FMP 5A1.

For special processing shop orders, the Direct Supervisor, *Welding Scheduler,* or Crib Attendant is responsible for issuing the appropriate welding materials based on the requirement specified in the MPR and / or WPS.

For special processing shop orders, the Direct Supervisor or *Welding Scheduler* is responsible for completing a Weld Order Card identifying the welding procedure, procedure amendment, if any, lot / heat number of filler material, manufacturer, size and lot number of flux for submerged arc welding and shall sign and date the Weld Order Card.

Upon completion of the welding operation, the Welder or Welding Operator and the Quality Control *Technician*, or other qualified QA personnel, shall legibly place their signature and date on the Weld Order Card. Weld order cards are kept in shop packs relating to the materials. *If the welding operation is completed over multiple shifts, each unique welder shall include their signature and date on the Weld Order Card.*

Post weld heat treatment of fabrication welds and repair welds shall be in accordance with the appropriate procedure, the material specification, and the MPR in the case of a special processing shop order.

Fabrication welding and weld repair of ferritic production material requiring impact testing shall be performed using only welding filler material from the heats/lots which have been impact qualified to the same requirements as the base material.

Weld repairs to either base material or fabrication welds shall be handled as nonconformities and shall be processed in accordance with Section *10.2* of this Manual. Weld repair of nonconformities will be authorized by a deviation report and performed as permitted by the material specification and the MPR (if a special processing order). Weld records, when required by the appropriate manufacturing document, will be processed as follows:

- A Weld Map *(Exhibit 13)* showing the location, orientation, and size of major repairs shall be prepared by the Quality Control *Technician*, Direct Supervisor or other qualified personnel for special processing orders and included in the shop pack.

- A post weld heat treat time/temperature chart shall be made for each furnace cycle. The Direct Supervisor or other qualified personnel reviews heat treat records to assure cumulative time at temperature does not exceed the time permitted by the WPS.

Welding machines, weld rod ovens, and submerged arc flux ovens shall be calibrated as specified in Section 7.*1.5* of this Manual.

Heat Treatment:

The following requirements apply to heat treatment operations:

- Documentation of heat treatment, for special processing shop orders, shall be with a time-temperature chart which shall include the following information:

  - Part Number
  - Piece Serial Number
  - Material Heat
  - Procedure and Revision Number
  - Furnace or Thermocouple Recorder Serial Number
  - Date
  - Results of Hardness Testing and Additional Hardness Testing as Required by CSP Processing Documents shall be recorded on the time-temperature chart
  - Furnace Operator Signature, Clock Number and Date
  - Time Scale
  - Quality Control *Technician* Signature, Clock Number, and Date.

- Documentation of heat treatment for standard orders, shall be with a time-temperature chart which shall include the following information:

  - Material
  - Procedure and Revision Number

- Furnace Machine Number or Thermocouple Recorder Serial Number
- Shop Order Number(s)
- Furnace Operator Signature, Clock Number, and Date.

- The results of hardness testing will be recorded/attached on the time-temperature chart or the shop order.

- The operator shall review the time-temperature chart to assure the heat treatment was correctly performed prior to signing off the shop order operation. All time-temperature charts shall be forwarded to the Quality Control Manager. Time-temperature charts may be in either electronic or paper form.

- All nonconformities shall be processed in accordance with Section *10.2* of this Manual.

- The furnace controllers and recorders shall be calibrated in accordance with Section *7.1.5* of this Manual.

Nondestructive Examination:

NDE procedures are required for nondestructive examinations (MT, PT, RT, UT, VT) performed. NDE procedures are documented as FMPs and shall be reviewed and approved by a NDE Level III. All personnel performing NDE activities must be qualified and certified to the written practice, FMP 2J1, meeting the requirements of the Code and ASNT SNT-TC-1A.

Personnel qualified by examination and certified to previous editions of ASNT SNT-TC-1A are considered qualified to the latest Code accepted edition when recertification is based on continuing satisfactory performance. All reexaminations and new examinations shall be in accordance with the latest Code accepted edition.

All personnel qualification records shall be on file with the NDE Level III. Requalification may be required of any NDE personnel by the Manager, Quality, or the NDE Level III if he/she has reason to question the performance of that person.

Reports *may* be prepared when nondestructive examinations are required. Such reports shall contain, as a minimum: examination procedure and revision, materials, equipment, surfaces examined, and results. The evaluation must be signed and dated by the person performing the examination indicating the level of his/her qualification. Evaluation will be performed only by NDE Level II or NDE Level III personnel.

NDE services may be subcontracted to approved suppliers.

NDE equipment shall be calibrated as specified in Section 7.*1.5* of this Manual.

Painting:

Procedures for painting of items which cannot be inspected by direct measurement shall be qualified to demonstrate acceptable results.

Qualified processes shall be monitored continuously to ensure conformance to the requirements of the operating procedures. Records shall be maintained of measurements taken during the monitoring activities.

Other Processes – (such as plating, coating and potting which may fall within the category of "Special" processes) – validated based on Fisher Engineering acceptance criteria described within applicable instructions, procedures, and specifications.

Supporting Fisher Procedures

FGS 15B08.2 – Development and Operational Control of Welding Procedure Qualifications – Non-Code Parts
FMP 2J1 – Nondestructive Testing Personnel Qualification and Certification
FMP 5A1 – Storage, Treatment, and Distribution of Covered Welding Electrodes and Submerged Arc Flux
FMP 5B3 – Standard and Special Qualification Welding Procedures
FMP 5B5 – Test and Evaluation Requirements for Welder Performance Qualification Tests
FMP 2Q24 – LSC Order Processing System – Commercial Repair Order Processing

8.5.2. Identification and Traceability

The Manager, Materials and the Product Line Managers shall be responsible to assure required identification and traceability is established, transferred and maintained throughout the manufacturing process.

The Operations Manager shall be responsible to assure required identification and traceability is transferred to the manufacturing documentation as required.

The Manager, Quality shall be responsible to monitor, verify and audit the controls described in this section to assure the identification and traceability of product is maintained.

General

Product identification is maintained based on part numbers which are assigned via the Engineering Module or Requisition by the Product/Project Engineer. The Item Master File lists part numbers assigned to finished product.

Part numbers are used to describe the item and are assigned to raw material, semi-finished parts, finished parts, sub-assemblies and assemblies.

Part numbers may consist of either a numeric or alpha numeric format up to 11 digits. FS numbers, up to 20 digits, may be used to describe subassemblies and assemblies. Part numbers reference the following information:

- Part description
- Material specification and description
- Drawing number and revision level
- Standard and/or special technical requirements.

As the major manufacturing processes are completed, as prescribed by the Shop Order or Purchase Order, the part number may change to reflect the level of completion of the part.

For example:	53B7402X01A	2"-V150 body casting
	43B7403X012	2"-V150 body finished machined
	24B5250X012	2"-V150 body finished machined and chrome oxide coated interior

Identification

Iron, bronze and brass castings shall be identified with the pattern number and supplier identification as required by the material specification and/or Purchase Order.

Castings of other materials shall be identified with pattern number, material type and grade, heat numbers, and supplier identification as required by the material specification and/or Purchase Order.

Closed die forgings shall be identified with die number, material type and grade, heat numbers, and supplier identification as required by the material specification and/or Purchase Order.

Open die forgings shall be identified with material type and grade, and heat numbers as required by the material specification and/or Purchase Order.

Pipe, plate and bar shall be identified with material type/grade, and heat numbers as required by the material specification and/or Purchase Order.

Fasteners shall be identified as required by the material specification and/or Purchase Order.

Each item requiring material identification and/or traceability shall be identified by marking, etching, low stress stamping, casting, tagging, etc. Identification shall be maintained on (or with) the material throughout the manufacturing process.

Raw material (other than bar stock) and finished parts located in Stores shall be identified by part number and placed in an identified location.

Bar stock shall be identified by color code and heat number as required by the Purchase Order.

Product processed through manufacturing shall be controlled by the Shop Order or Assembly Work Order which identifies the applicable part number.

Product shipped to suppliers for processing shall be controlled by the Purchase Order which identifies the applicable part numbers.

Assemblies shall be identified on the Assembly Work Order. Parts ready for Assembly, or to be shipped to fill spare part orders, shall be drawn from Stores in accordance with the pick list.

The pick list shall identify the part number and its location, description of the part, drawing number, material and quantity required to be drawn from Stores.

Finished valve assemblies shall be identified with a serial number which is stated on the Assembly Work Order. A nameplate shall be attached to each valve assembly identifying the serial number, size, type and rating of the product. Other products are identified in accordance with engineering requirements.

Customer tag numbers and other required information specified by order requirements shall be applied using other tagging.

Product received from suppliers which were ordered with special NDE requirements (e.g., radiography, magnetic particle, liquid penetrant, visual, or ultrasonic examination) will be identified per Section 4.5 of *FGS 15B13.9*.

Traceability

The term traceability, as it relates to the Company's products, is associated with the ability to maintain identification of a raw material to its corresponding chemical and/or mechanical analysis. This is usually accomplished by the material manufacturer assigning a heat number or heat code to the material and identifying the material with its corresponding heat number, thus establishing a vehicle for material traceability.

The Company maintains material traceability on pressure boundary parts as required by Engineering Standard ES 53 or when required by customer order.

Material traceability will be maintained on non-pressure boundary parts when specifically required by the customer order, and defined on CSP Processing Documents. Material traceability shall be maintained on the Shop Order or Assembly Work Order when required.

Machine operators shall assure the required markings are maintained on the material. Should a machine operator need to remove this identification, it shall be recorded and the material shall be re-identified upon completion of the operation.

At the time of assembly, the assembler (or stockroom attendant) shall record the heat/code numbers for the pressure boundary parts (valve bodies, bonnets, etc.), on the Assembly Data Sheet. If needed, additional pages may be utilized.

The Quality Assurance Documentation Analyst or assigned Value Stream *Associate* shall accumulate the Certified Material Test Reports and other information and provide this documentation in accordance with requirements on the processing documents.

Materials or parts requiring traceability which cannot be identified shall be processed in accordance with *10.2* of this Manual.

Supporting Fisher Procedures

ES 53 – Marking Requirements for Valve Bodies, Bonnets, and Leveltrols
FGS 15B13.9 – Pressure Containing and Structural Castings

8.5.3. *Property Belonging to Customers or External Providers*

It is the policy of the Company that customer furnished material, equipment, special tooling, and/or test equipment shall be examined prior to use and it shall be properly identified and protected from unauthorized use or disposition. Damage, malfunction, or deterioration shall be recorded and immediately reported to the customer.

Receiving, Handling, and Storage

Components supplied by the customer to be incorporated in the product will be handled and stored with care and in compliance with customer contract requirements. Positive identification to the customer's order will be maintained until the component is assembled in the product. Intellectual property supplied by the customer will be handled and stored in compliance with customer contract requirements, will be protected from loss or inadvertent disclosure outside of the organization, and will be properly disposed of when it is no longer needed.

The Receiving Department will verify receipt and perform a visual examination for completeness, proper type and possible transit damage. Discrepancies will be reported to the representative/customer. Verification by the Company does not absolve the customer of the responsibility to provide acceptable product.

Discrepancies in identification and control of material shall be considered as nonconformities and shall be handled in accordance with Section *10.2* of this Manual.

8.5.4. Preservation

The Manager, Quality, is responsible for assuring conformance to the requirements of this Section.

Handling

Each department manager shall be responsible for the proper handling of material in his/her area.

Physical protection of parts and assemblies is achieved through use of a combination of plastic netting, tubing, protective covers, plugs, protective film, and special packaging.

Corrosion protection shall be used wherever the effect of machine coolant, cleaning, and testing mediums will cause harmful rusting of steel parts.

Storage

Material is received, stored, and disbursed in a manner that controls inventory accuracy, material acceptability, and customer requirements.

Limited shelf-life parts are stored and maintained on a first-in first-out basis per FMP 3C5.

Preservation

The Company shall apply appropriate methods for preservation and segregation of product. Methods shall include, where applicable, surface protection by plating, primer preparation, the use of rust inhibitors in parts washing equipment, and the application of an oil protection on flanged surfaces, and protective plugs in all inlet/outlet ports and tubing NPT connections. Application of oil is waived and may be replaced with a water based protection if requested by the customer.

Packaging and Delivery

Standard packaging methods are designed to provide adequate product protection during delivery and storage and include WMP 11A1, WMP 11A3, and WMP 11A8, unless otherwise specified.

Special packaging requirements imposed by the customer's contract shall be identified on the Assembly Work Order or on the appropriate processing document.

Packing lists are printed using information from the order entry process at the time the product is packaged. Packing lists shall be included on or in the shipping container, or as required by the customer.

Quality documentation, e.g., material certification, Certificate of Conformance, etc., as required by the customer's purchase contract, shall be placed in a specially marked envelope and included with the shipment or sent as requested by the customer. This documentation may also be available electronically.

Supporting Fisher Procedures

FMP 3C5– Stocking and Rotation Control of Elastomer Parts
WMP 11A1 – Procedure for Packaging for Domestic Shipment – Immediate Use
WMP 11A3 – Procedure for Packaging for Export Shipment – Immediate Use
WMP 11A8 – Packaging for Extended Storage, Vapor Phase Inhibitor, Domestic or Export Shipment

8.5.5. Post-Delivery Activities

The Sales Representatives and Fisher Sales Offices are responsible for defining and documenting product or service requirements as specified by the customer, statutory and regulatory requirements applicable to the product and any additional requirements considered necessary by the organization.

8.5.6. Control of Changes

Change Order Processing

The Change Order Coordinator will advise the Change Order Specialist via the Change Order Request Form (see Exhibit 4).

The Change Order Specialist will review the Change Request Form to determine the action required and the status and location of the effected order.

The Value Stream Associate will implement the necessary actions, and communicate to the Change Order Specialist that the actions have been implemented.

Changes may be made to the order manually when specified by the Change Request Form by a Value Stream Associate. Changes manually made to the order shall identify the name of the Value Stream Associate who made or authorized the change and the date of the change.

Revision Control for Shop Orders and Assembly Work Orders

The Change Order Coordinator is responsible for coordinating activities on non-special processing customer orders and stock orders.

Change Order Specialist shall notify a Value Stream Associate when an order needs a revision and the Value Stream Associate shall determine if it is necessary to put the order, including work in process, on hold. The Value Stream Associate will notify the Change Order Specialist if changes to the order are required. The Change Order Coordinator will forward the requirement to the Manager, Order Entry.

The Manager, Order Entry shall revise the order and communicate to the Value Stream Associate. The Value Stream Associate shall determine the disposition of all parts affected by the revision.

All changes or requests for changes which involve new design are addressed in Section 8.3.

Distribution of revised drawings to machining areas for work in-process shall be handled in accordance with FMP 20A11

Items requiring a decision as to acceptability shall be considered nonconforming and processed in accordance with Section 10.2 of this Manual.

Additional Revision Control for Special Processing Orders in Process

Special Projects Group, Value Stream Associates, and/or Buyers are responsible for notifying and distributing CSP Processing Documents as necessary.

Special Projects group is responsible for:

- *Review of all document changes.*
- *Notify applicable Value Streams and Buyers*

The Value Stream Associate is responsible for:

- *Review of all document changes.*
- *The implementation of document changes on all affected orders.*

The Buyer is responsible for:

- *Notify suppliers of all document changes*
- *Issue a change order to the Purchase Order as necessary to implement the change.*

Affected material requiring a decision on usability shall be considered as "nonconforming material" and handled in accordance with Section 8.3 of this Manual.

8.6. Release of Products and Services

Fisher Controls International LLC, Marshalltown Operations, monitors and measures the characteristics of the products to assure that product requirements have been met. Monitoring and measuring activities are carried out at appropriate stages throughout the product realization process in accordance with quality plans. Quality plans will describe the planned steps of manufacturing and the inspection and test activities relevant to the product. It shall identify equipment, fixtures (including special inspection and test equipment) required to achieve desired quality and shall ensure compatibility of the design and production process. Monitoring and measuring activities include drawings, work instructions, procedures, routings, and shop travelers.

Machining Inspection

The requirements for machining inspection shall apply to other operations in addition to machining including heat treatment, cleaning, and painting. Parts shall be inspected in accordance with FMP 2K30 with visual examination to FGS 10G1. Each operation shall be inspected by the Machine Operator responsible for reporting completion of the operation.

The Machine Operator is also responsible for maintaining heat/lot, piece serial number, and material identity on parts during machining, including the re-stamping of heat/lot, serial numbers, and/or material identity on parts as necessary.

The record of acceptance inspection shall be the reporting of "Pieces Good" by the Machine Operator upon completion of each operation. This record shall include the Machine Operator's employee

number, date, Shop Order number, operation number, and signature. A cross reference of employee numbers and employee names is kept by Human Resources.

Items on Shop Orders with subcontracted services shall be inspected after the subcontracted service operation at a minimum.

Weld Shop Inspection

The Quality Control Technician, or other qualified QA personnel, shall be responsible for monitoring (auditing) the following welding functions in accordance with FMP 5B2. As applicable, he/she shall sign and date the Shop Order and the Weld Order Card. When items with CSP processing requirements have been accepted, he/she shall sign and date post-weld heat treatment time-temperature charts indicating his/her inspection and approval. Each operation shall be inspected by the Welder/Welding Operator responsible for reporting completion of the operation.

The Quality Control Technician, or other qualified QA personnel, shall inspect all incoming weld materials in accordance with the requirements of FMP 2A1.

The Quality Control Technician, Direct Supervisor or other qualified personnel, shall prepare a weld map (Exhibit 13) for repairs when required.

Assembly, Testing, and Inspection

Assembly, test, and inspection of product are the responsibility of each assembler.

Final assembly of parts is controlled using material lists, assembly drawings (where needed), the Assembly Work Order, and assembly procedures.

Each assembler shall visually check all parts prior to assembly and call to the attention of the Assembly Supervisor or Quality Control Technician any questionable parts.

All valves or pressure boundary valve components shall be hydrostatically tested in accordance with ISA-75.19.01 and FGS 4L1, and customer requirements. Some valves will be hydrostatically tested to ASME B16.34 at the assembly level as required on the Assembly Work Order.

Assembly or stores personnel shall record heat numbers of cast, forged, fabricated valve bodies and bonnets (not required on cast bronze and grey cast iron bodies and bonnets). They shall record heat numbers of other parts as specified on the Assembly Work Order Pack. The Assembler shall indicate approval on the Assembly Data Sheet to indicate satisfactory test results.

Each Assembler shall perform a general inspection of the completed item which will include a visual inspection. The Assembler shall verify heat numbers for pressure boundary parts and the results of assembly tests have been recorded and are acceptable. They shall also verify heat numbers for other parts (as identified in Section 8.5.2 of this manual) are recorded as specified on the Assembly Work Order Pack. The Assembler shall indicate approval on the Assembly Data Sheet. The Quality Control Technician may audit the assembly, testing, and inspection.

Nonconforming Material

All nonconforming material shall be handled in accordance with Section 10.2 of this Manual.

Selection of Measuring and Test Equipment

Persons responsible for performing inspection activities shall also be responsible for selecting the appropriate measuring/test equipment to be utilized. Generally, dimensional measuring equipment used shall have a higher degree of accuracy and resolution than the measurement being taken.

Analog pressure gages used for product testing shall be graduated over a range of about double the intended test pressures, but in no case shall the range be less than 1 1/2 nor more than 4 times the intended test pressure.

All inspection, measuring, and test equipment used for acceptance inspection shall be calibrated in accordance with the requirements of Section 7.1.5 of this Manual.

Supporting Fisher Procedures

ASME B16.34 – Valves – Flanged, Threaded, and Welding End
FGS 4L1 – Hydrostatic Testing
FGS 10G1 – Visual Inspection Criteria for Surface Imperfections
FMP 2A1 – Raw Material Inspection
FMP 5B2 – Visual Inspection Requirements for Weldments
FMP 2K30 – Machining Inspection Procedure
ISA-75.19.01 – Hydrostatic Testing of Control Valves

8.7. Control of Nonconforming Outputs

The Manager, Quality, is responsible for assuring conformance to the requirements included in this Section.

The Quality Representative or Supervisor is responsible for proper disposition of nonconforming items. Customers will participate in the disposition of nonconforming product as required. The Manager, Quality, shall approve any exceptions to this practice.

The Project Administrator is responsible for proper disposition of contractual nonconformities and documentation of disposition in the order file. Resolution of contractual nonconformities shall be in accordance with the provisions of the customer's purchase contract.

Disposition

All nonconforming materials and items shall be identified and controlled, including segregation when necessary, to prevent its unintended use or delivery per FMP 2K29.

Rework:

The Supervisor, Quality Representative, or qualified personnel shall create a Disposition Report (Exhibit 7) as required by FMP 2K29, and assign the rework operations. Any required customer "hold points" in accordance with the applicable Manufacturing Processing Requirements or Assembly Processing Requirements shall also be indicated. He/she shall then sign the deviation report to authorize the rework cycle to commence. The Direct Supervisor with Weld responsibility shall approve all deviation reports requiring weld repair.

Reworked material or items shall be inspected prior to completion of the manufacturing cycle per FMP 2K29.

Scrap:

When materials or items are to be scrapped, a Disposition Report is generated by the Supervisor or Quality Representative, or qualified personnel. If material or items are to be scrapped, the material or item shall be tagged with the Disposition Report, and reviewed for corrective/preventive actions.

Use As Is:

When a nonconformance is to be considered for "use-as-is" disposition, the Product Engineer responsible for the product shall be consulted for a determination of acceptability of the nonconforming condition on the form, fit and function of the product. A Disposition Report, including the Product Engineer's name that gave approval, shall be attached to the part and a copy shall be placed with the shop pack. The consultation shall be initiated by a Supervisor or Quality Representative, and he/she shall approve the Disposition Report.

After Shipment Nonconformities:

Nonconformities detected in products or services after shipment to customers shall be documented on a Fisher Service Request by the appropriate Fisher Sales Representative or Applications Engineer.

Nonconformities detected in products shipped to other company locations shall be documented, investigated, and closed, as prescribed by that location.

The Manager, Quality is responsible for initiating investigation of the cause of all nonconformities covered by a Fisher Service Request occurring in components and parts manufactured at the Marshalltown location. The results of such investigations, including any required/recommended corrective action, are furnished as a reply to the Fisher Service Request in question. Implementation

of any required corrective action shall be the responsibility of the functional area responsible for the nonconformity.

Results of the investigation are reported to the originator of the Fisher Service Request. A record of each Fisher Service Request is maintained and all pertinent investigative data is retained for a minimum of 3 years. Review of Fisher Service Requests is performed by Management monthly.

Recall of nonconforming parts or assemblies which have shipped will be accomplished by following the general procedure outlined below as appropriate:

- *The time period during which the product was shipped shall be determined.*
- *A computer search of the Order Item Data Base records shall be made using part number, customer name, or any other key information to identify those customers who might have received non-conforming items.*
- *Serial number records shall be obtained from the Serial Card File as needed to identify customer names and addresses.*
- *Method of notification and instructions for the disposition of nonconforming items shall be determined by the Product Safety Committee.*

Engineering Hold

If the occurrence of a nonconformity dictates that an Engineering "HOLD" (production, shipment) be implemented, such action(s) shall be accomplished upon notification from a Product Engineer to the Manager, Quality. The Manager, Quality, shall ensure that the affected product is identified as nonconforming and, when practical, segregated.

Supporting Fisher Procedures

FMP 2K29 – Processing of Nonconforming Materials and Items

9. PERFORMANCE EVALUATION

9.1. *Monitoring, Measurement, Analysis and Evaluation*

9.1.1. General

Fisher Controls International LLC, Marshalltown Operations, plans and implements the monitoring, measurement, analysis and improvement processes needed to:

- Demonstrate conformity to product requirements,
- Ensure conformity of the quality management system, and
- Continually improve the effectiveness of the quality management system.

Additionally Fisher Controls International LLC, Marshalltown Operations, monitors and measures the Quality Management System processes by tracking performance against goals and objectives set by Management. Fisher is able to demonstrate its ability to achieve planned results by monitoring the Quality Management System processes and reporting measurements to goals and objectives.

Management shall define measurement objectives appropriate to the activities for which they are responsible and shall report these measurements on a monthly basis. These measurements are to be reviewed by the Management. When planned results are not achieved, correction and corrective actions shall be taken, as appropriate, to ensure conformity of the products and improve the Quality Management System.

Goals and objectives are further defined at the Fisher locations to be meaningful to each employee. Measurement charts and graphs are utilized by Fisher locations for this purpose and are to be conspicuously posted in the work areas by management to provide employees information relative to their performance and the performance of the Quality Management System.

Fisher has set goals and objectives to provide Management the ability to monitor the performance of the Quality Management System. The following goals and objectives set by Fisher include but are not limited to:

- *Sales Orders*
- *Shipments*
- *Order Backlog*
- *On-Time Delivery to Customer Request and Acknowledgement Date*
- *Recordable Injury Rate*
- *Inventory Turns*
- *Cost of Goods Sold*
- *Scrap and Rework Cost*
- *Lead-time*

Use of Statistical Techniques

The Manager Production and Manager Machining and Welding shall be responsible for the training of machine operators and assemblers in the use of techniques as appropriate. The Manager, Quality is responsible for the application of statistical techniques during receipt inspection as applicable.

Machining operations shall be process controlled per FMP 2K30.

When statistical process control is specified on the drawing per FGS 15A8, manufacturing will use FMP 2S2 on the specified feature.

The use of statistical techniques in assembly is not mandatory; however, its use is encouraged and may be applied to selected operations.

Managers responsible for specific processes of the Quality Management System shall monitor, measure, and analyze data that is appropriate for that process. These measurements and analysis will support the suitability and effectiveness of the process to achieve planned results. When planned results are not achieved, corrective action shall be taken as appropriate to achieve the desired results. All process planned results support the organization's critical success factors.

Supporting Fisher Procedures

FGS 15A8 – Statistical Process Control Charting for Variable Data
FMP 2K30 – Machining Inspection Procedure
FMP 2S2 – Use of Quality Control Charts for Process Control

9.1.2. Customer Satisfaction

Fisher Controls International LLC monitors information relating to customer perception and to whether Fisher has met customer requirements in the following ways:

Customer Support Network (CSN) – The Fisher CSN system has been established to improve Fisher's ability to identify, resolve, and archive field problems encountered by Sales Representatives/ Fisher Field Sales Office and customers. This system enables improved responsiveness on warranty claims, goodwill claims, and product problem resolution. It relies upon the Sales Representative/ Fisher Field Sales Offices to play a key role in responding quickly to customer hardware problems. In addition to problems associated with the products and parts, the system has been designed to accommodate significant and/or recurring service and support concerns.

Customer Audits – Fisher locations may be audited by customers periodically. These audits present an opportunity for Fisher to better understand the expectations of customers and to improve communication. Audit findings and recommendations for improvement are acted upon via the corrective action and preventive action processes at each of the Fisher locations.

Informal Customer Satisfaction and Perception Feedback – Information is obtained from the following: Customer visits of the Fisher locations or Fisher employee visits to customer sites.

Information arising from these visits is communicated via employee monthly reports and trip reports which are shared with management.

Formal Customer Satisfaction and Perception Surveys – Customer loyalty and satisfaction information is obtained periodically through surveys conducted by third party organizations. This information is reported to Customer Service so improvement opportunities may be identified.

9.1.3. Analysis and Evaluation

Fisher Controls International LLC, Marshalltown Operations, has identified relevant data that is collected, analyzed, and reported to management. This data, and the information extracted there from, provides the ability to determine the suitability and effectiveness of the quality management system. The data provides management with information for evaluation so continual improvement of the quality management system may be implemented effectively.

Data is generated as a result of the monitoring and measurement processes discussed in Section 9.1.3, and from other relevant sources deemed appropriate by management, and included within Management Review activities (Section 9.3).

The data provides meaningful information for management to measure performance against established goals and objectives.

In addition to financial, environmental, safety, health, and other business related data, information is provided based on data analysis relating to:

- ***Customer satisfaction/loyalty*** *– in the form of Fisher On-Time Delivery, Lead-time, Market Share, Warranty, Goodwill, and third party customer survey results.*
- ***Conformity to product requirements*** *– in the form of Fisher Scrap and Rework*
- ***Characteristics and trends of processes and products*** *– including opportunities for preventive action as a result of new initiatives*
- ***Suppliers*** *– in the form of Supplier On-Time Delivery, Scrap and Rework*

Data may be presented using techniques such as performance indicators, Pareto diagrams, charts, and graphs so as to transform data into meaningful information that shows trends or comparisons to expected results, to which management may respond.

9.2. Internal Audit

The Manager, Quality, is responsible for the establishment of an Internal Audit Schedule for all functions performed in accordance with this Manual and FMP 2K41. These audits shall be performed under the direction of a Lead Auditor qualified in accordance with FMP 2J3. Auditors shall not audit

their own work. An audit of this entire Manual and its associated functions will be accomplished annually. Audits shall be conducted utilizing an appropriate audit plan and checklist.

Results of audits and any required corrective action shall be reported to the Manager, Quality, and managers of the departments that have been audited. Audit findings shall be documented on a Corrective Action Request (CAR). Corrective action will be handled per Section *10.2* of this Manual.

The Manager, Quality, shall maintain a file of all Audit Reports.

Supporting Fisher Procedures

FMP 2J3 – Qualification of Auditors/Audit Program
FMP 2K41 – Requirements for Performing and Reporting Results of Internal Audits for NQAM, *QMSM*, ATEX, and PED

9.3. Management Review

9.3.1. General

A comprehensive review by management shall be conducted at least once per year to ensure the continuing suitability, adequacy and effectiveness of the quality management system. This review shall include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives. This meeting will occur at more frequent intervals if the quality management system is found to be inadequate or ineffective.

Although others may attend, the required participants for the Management Review shall include the Plant Manager - Marshalltown Operations and his/her staff.

In addition to the annual comprehensive review, the following activities take shall place as a minimum in order to inform the Plant Manager - Marshalltown Operations and his staff of the status and adequacy of the quality system:

- *Weekly staff meetings where the status of priorities and objectives are discussed. Meeting minutes are taken and filed with the Plant Manager - Marshalltown Operations.*

- *Annual Budget Review Meetings where prior years activities and upcoming years commitments are reviewed with Division Management.*

- *Monthly reports to the Plant Manager - Marshalltown Operations by members of staff.*

The monthly report from Manager, Quality reports on quality issues, such as:

- *Internal and External Audits*
- *Customer and Inspection Agency Audits*

- *Status of Corrective Actions*
- *Customer Quality Complaints.*

The Quality Assurance monthly report is reviewed by the Plant Manager - Marshalltown Operations and distributed to the management staff.

9.3.2. Management Review Input

Inputs to the review process include data relating to:

- *Results of audits*
- *Customer feedback*
- *Process performance and product conformity (critical success factors)*
- *Status of preventive and corrective actions*
- *Follow-up actions from previous quality reviews*
- *Changes that could affect the quality management system*
- *Recommendations for improvement*
- *Adequate resources (trained personnel, equipment, etc.).*

9.3.3. Management Review Output

As a result of the management review, activities, decisions, and actions from management are formulated for many areas of the business including:

- *Statement of the effectiveness of the quality management system and its processes,*
- *Improvement of product related to customer requirements, and*
- *Resource needs.*

The results of the management review meeting, including recommended corrective actions, shall be documented in meeting minutes. The minutes shall also document responsibility and targets for completion of corrective actions

Supporting Fisher Procedures

FMP 2K35 – Management Review

10. IMPROVEMENT

10.1. General

Fisher Controls International LLC Marshalltown Operations is committed to continually improving the effectiveness of the quality management system through the use of the:

- Quality Policy - 5.*2*
- Quality Objectives - *6.2*
- Management Review - *9.3*
- Internal Audits - *9.2*
- Analysis of Data - *9.1.3*
- Corrective Action - *10.2*
- Preventive Action - *10.3*

Continual improvement of products, processes, and systems is an objective of each employee within Fisher, as set forth in the Quality Policy.

The effectiveness of the Quality Management System is determined by Fisher's ability to realize and achieve results by the attainment of goals and objectives set forth by the Management Team. Effectiveness is monitored and measured from information provided through data analysis and reported through management review.

The process of establishing goals and objectives, and identifying opportunities for improvement is a continual process made possible through the use of audit findings, data analysis, and management review. The cyclical process generally leads to corrective actions or preventive actions which re-establish goals and objectives, a continual improvement process.

10.2. *Nonconformity and* Corrective Action

Fisher Controls International LLC Marshalltown Operations is committed to eliminating the causes of nonconformities in order to prevent recurrence. Corrective actions are to be appropriate to the effects of the non-conformities encountered.

A nonconformance report may be originated by any employee for problems that are identified during the product actualization process per Section 8.*7*.

A Corrective Action Request (CAR) (Exhibit 5) may be originated by any employee discovering or becoming aware of a significant or recurring nonconformity, i.e. rejected part of assembly, findings from audits, customer complaints, or when other formal corrective action is required.

Responsibilities

The Manager, Quality, is responsible for assuring conformance to the requirements included in this Section. Internal nonconformances, supplier nonconformances, and CARs shall be reviewed by the

Manager, Quality, or his designee, with the cooperation of the department manager involved. This review shall include verification that root cause is determined, appropriate action to prevent recurrence has been determined and implemented, and that these actions are effective per FMP 2K9.

The Manager, Quality, shall be responsible for keeping a copy of all open CARs, maintaining a log, and filing of completed CAR forms.

Corrective Action Verification

Implementation of required corrective action shall be verified by a Quality Representative. Additional corrective action required as a result of these verifications shall be per this Section of this Manual.

Analysis of Nonconformances

Reviews shall be conducted by Quality Representatives to detect and eliminate potential causes of nonconforming product on at least an annual basis. These reviews include, but are not limited to, scrap history analysis (internal and supplier), rework trends, and customer complaints. Corrective action may be initiated based upon the results of these analyses.

10.3. *Continual Improvement*

Fisher Controls International, LLC Marshalltown Operations, is committed to eliminating causes of non-conformities to prevent their occurrence. Preventive Actions are to be appropriate to the effects of the potential non-conformity.

Preventive Action is taken when a potential nonconformity is identified as a result of analysis of records and other relevant sources of information, such as the following:

- Complaints from customer or other sources
- Purchased items, rejected on receipt, that need rework
- Internal and supplier products, processes, and quality management system information.

Information on preventive actions taken is an integral part of the management review process to maintain and improve the effectiveness of the quality management system. Some examples of preventive actions are:

- Tryout parts processing for various forms of material
- Machine tool capability tryout and trial runs
- Process qualification (i.e. plating, paint, heat treat, welding)
- Actions resulting from process improvement audits
- Action on audit recommendations not considered findings
- Lean manufacturing initiatives
- Capital and resource planning process
- TPM (total preventative maintenance)
- Business system development and process mapping
- Establishment of quality management system.

Supporting Fisher Procedures

FMP 2K9 - Corrective Action
FMP 2K9.1 – Procedure for Preventative Action

11. EUROPEAN PRESSURE EQUIPMENT DIRECTIVE

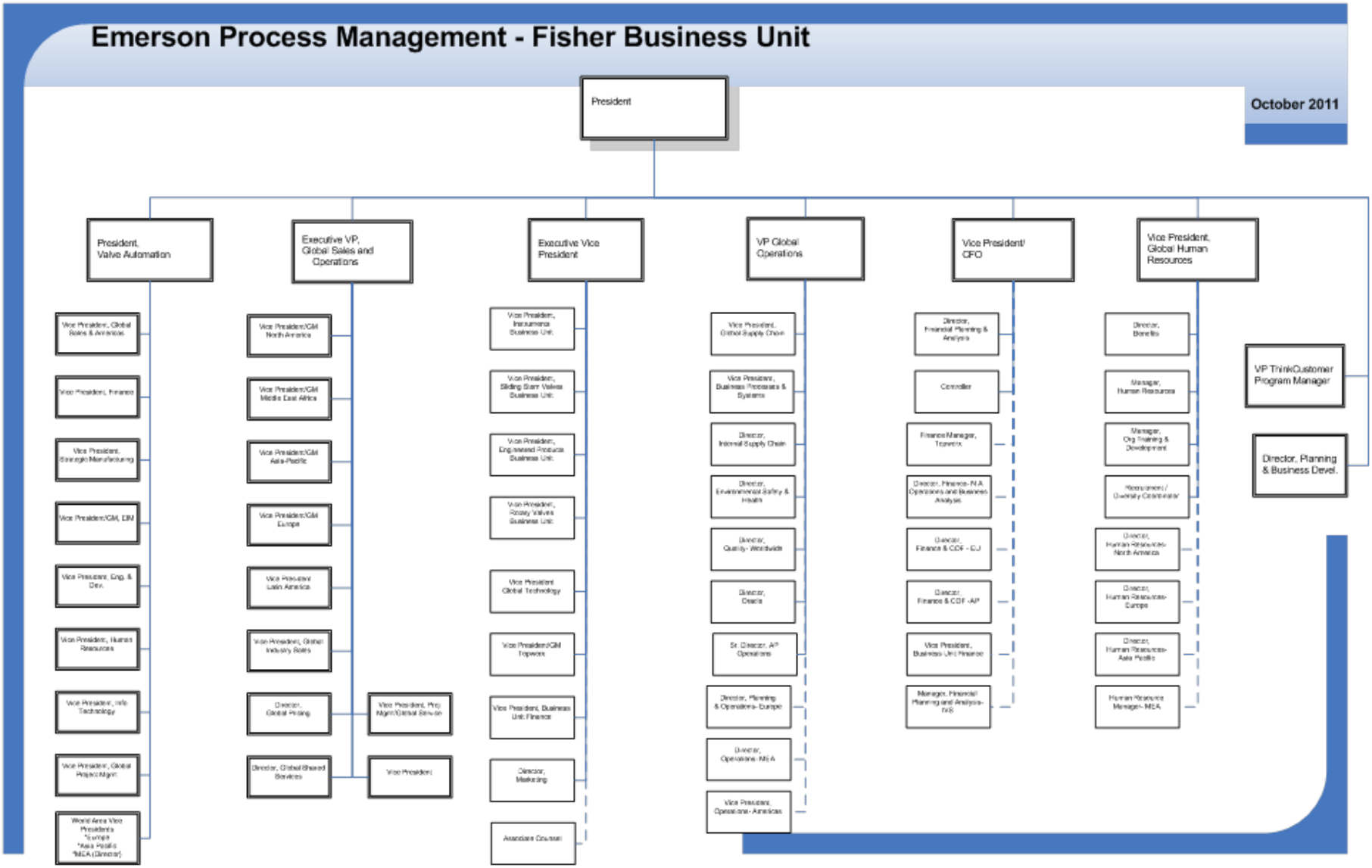
Pressure Equipment Directive (PED) Processing Requirements are specified in FGS 15B15.2 Pressure Equipment Directive (PED) Processing Requirements.

12. EUROPEAN EXPLOSIVE ATMOSPHERE DIRECTIVE (ATEX)

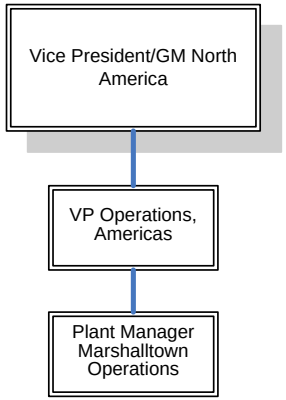
Explosive Atmosphere Directive (ATEX) Processing Requirements are specified in *FGS 15B15.3* Explosive Atmosphere Directive (ATEX) Processing Requirements.
The Manager, Quality shall serve as the Site Certification Coordinator.

APPENDIX A: ORGANIZATION CHART

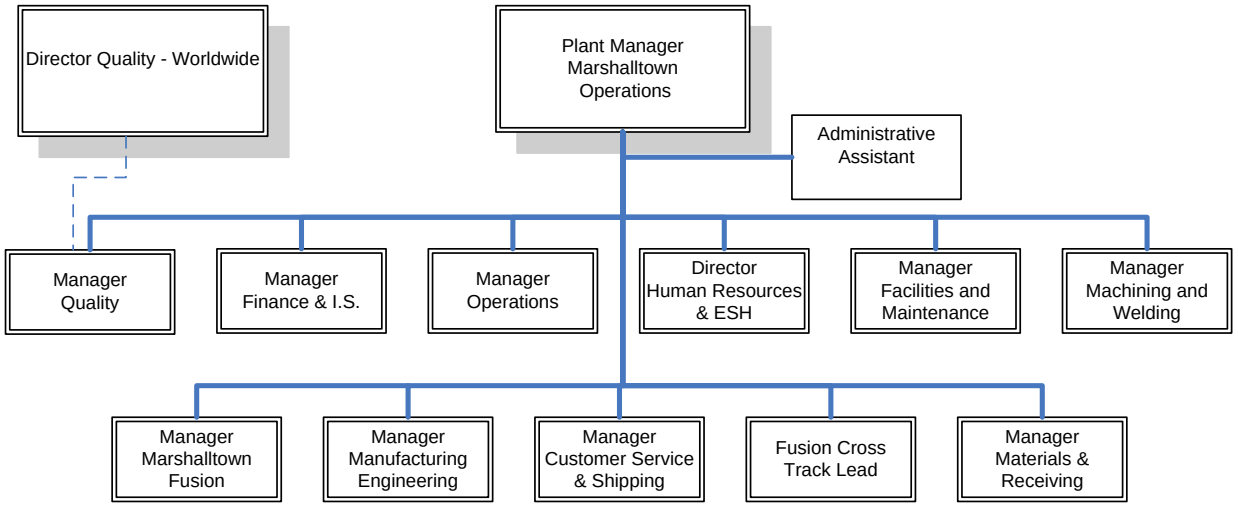
Fisher Controls Business Unit (For latest version, contact Fisher Business Unit Human Resources department)



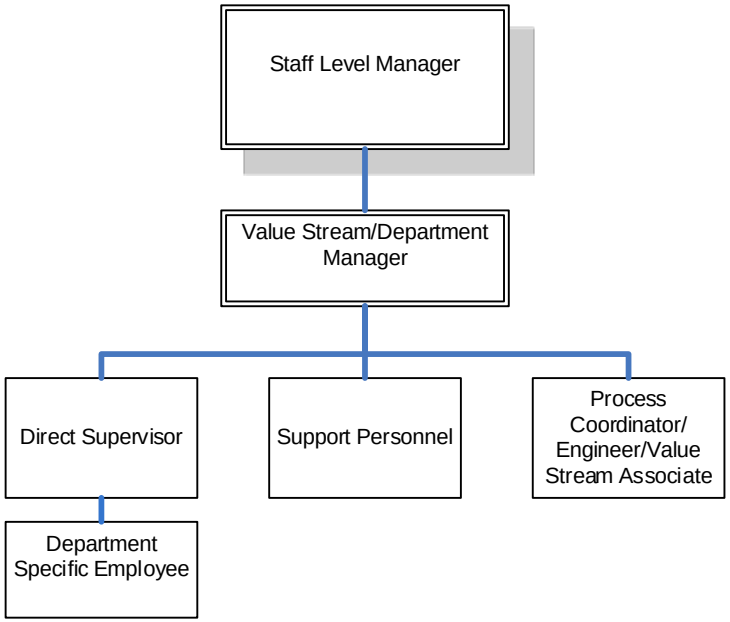
Organization Chart: Fisher Controls Manufacturing



Organization Chart: Marshalltown Operations



Organization Chart: Value Stream/Department



APPENDIX B: EXHIBITS

Exhibit Index

Listed below are exhibits referenced in this Manual.

Form Name	Exhibit #
Assembly Data Sheet	2
Assembly Work Order	3
Change Order Request Form	4
Corrective Action Request	5
CSP Processing Documents	6
Disposition Report	7
Engineering Change Request/Notice	8
Indoctrination and/or Training Form	9
Nonconformance Tag	10
Purchase Order	11
Shop Order	12
Weld Map	*13*

Note: Many forms are being converted into computer based forms and data files. The forms shown in the exhibits represent the information content required, but not necessarily the exact format of the form.

Exhibit 2 – Assembly Data Sheet

Discrete Job # _____ Serial Number _____

MARKINGS	Type	Body	Bonnet	Bonnet Spacer / Extension	Plug (2)	Stem/ Stem Bellows (3)	Seat Ring	Cage/ Seat Ring Reatiner
	Heat/Lot #							
	Pat/Die #							
	Item Serial #							
	RT/UT #							
	LPT/PT #							
		Nipple (2)	Flange (2)	Studs	Nuts	Body Outlet V250	Packing Box Housing V250	Volume Tank
	Heat #							
		Seal Protector/ Flow Ring	Retainer	Disc/Ball	Drive Shaft	Follower Shaft	Bottom Cap	Bottom Flange
	Heat #							
TESTING	Media	Seat Leak FGS4LS FGS4L6 A W H N ☐ ☐ ☐ ☐	Air Test (FGS4L1)	Automation FMP2C6	Stroke Speed (Open/Closed)	Calibration/ Signature Series/Flowscan	Hydro Test (FGS4L1)	Clean/Degrease (FGS8A11)
	Class	CL						
	Travel							
	Test Pressure	☐ 50 psi	☐ 80 psi				☐ 150#	
	Time (min)	☐ 1 min	☐ 1 min					
	Allowable Leakage							
	Leak Results UPP/FWD							
	Leak Results LOW/REV							
	Employee							
	Date							
OPS		Stock Selector	PMI (FGS15B19.3)	Acutuator Builder	Special Paint	Valve Builder	Operational Tester	Final Inspector (SMP2K14)
	Employee							
	Date							
	Shift							

Pin/Stack/Set: Date: Tagging Attached By/Date:

Weld: Date: PED ATEX

Exhibit 3 – Assembly Work Order

Job Order

VLVS_USA_IO_Marshalltown_IA

Assembly:
DESIGN_ED/ES/ET_*10199001

Job# : 5147991

Job Qty: 1

Description : CONFIGURED ASSY VLVS.NO.DVC6200.SPRING & DIAPHRAGM.657.8.SST-S41000.CAGE GUIDED.ED
Material :

Drawing Nbr	Drawing Rev	Process Code	Sch Group	Group Tech Code	Comp Date
			MTN-SMALL		11-NOV-13

Process Code Description:

Planner	: MTNSMALL	Accounting Class Code	: S Assembly
Spec . Req	: Job Mass Loaded on 24-SEP-2013 04:09:38 (server timezone)	Print Date	: 11-Oct-13 14:47:04 PM
Sub Inv	: FG	Start Date	: 05-NOV-13
Location	: FG.....	Heat #	:
Proj Nbr	:	Vendor	:
Proj Name	:	Kanban Card #	:
Proj Manager	:		
Proj Admin	:		

Assembly Job Information

Customer Name	: COORS BREWING CO	**Ultimate Destination**	: **US**
Customer PO #	: 20130923LDW1		
Ship Set	: No	Rep Order Number	: 001 -130923LDW1
Arrival Set	: No	Rep Order Line number	: 10
Schedule Date	: 11-NOV-13	JDE Number	:
Promise Date	: 11-NOV-13	Order Type	: Order_TD_US EndUse_USA_VLVS
Cust Req Date	: 11-NOV-13	Sales Order Number	: 1143358
OE Detailer	: No detailer defined	Sales Order Line #	: 1.1
Serial Number Range	: **F000339683 To F000339683**	Shipment Priority	: STANDARD PRIORITY
		Paint	**: STANDARD**

Routing Summary

Op#	Dept	Resource	Op Description	Supplier
10	SM ASSY	SMSTOCK	PULL PARTS	
1099	SM ASSY	SMEIGHT SMSTANDARD	DPSM	
2218	SM ASSY	SMEIGHT	Assemble Valve Body	
4100	SM ASSY	SMEIGHT	Mount FieldVue Series	
5100	SM ASSY	SMEIGHT	Mount Regulators	
8800	INSPECTION	ASSY-INSP	FINAL INSPECTION	

Wip Job / Schedule Attachments

Routing Comments:

Additional Specs

Spec Number	Spec Rev	Spec Name	Specification Details

Component Item Additional Specs

Exhibit 4 – Change Order Request Form

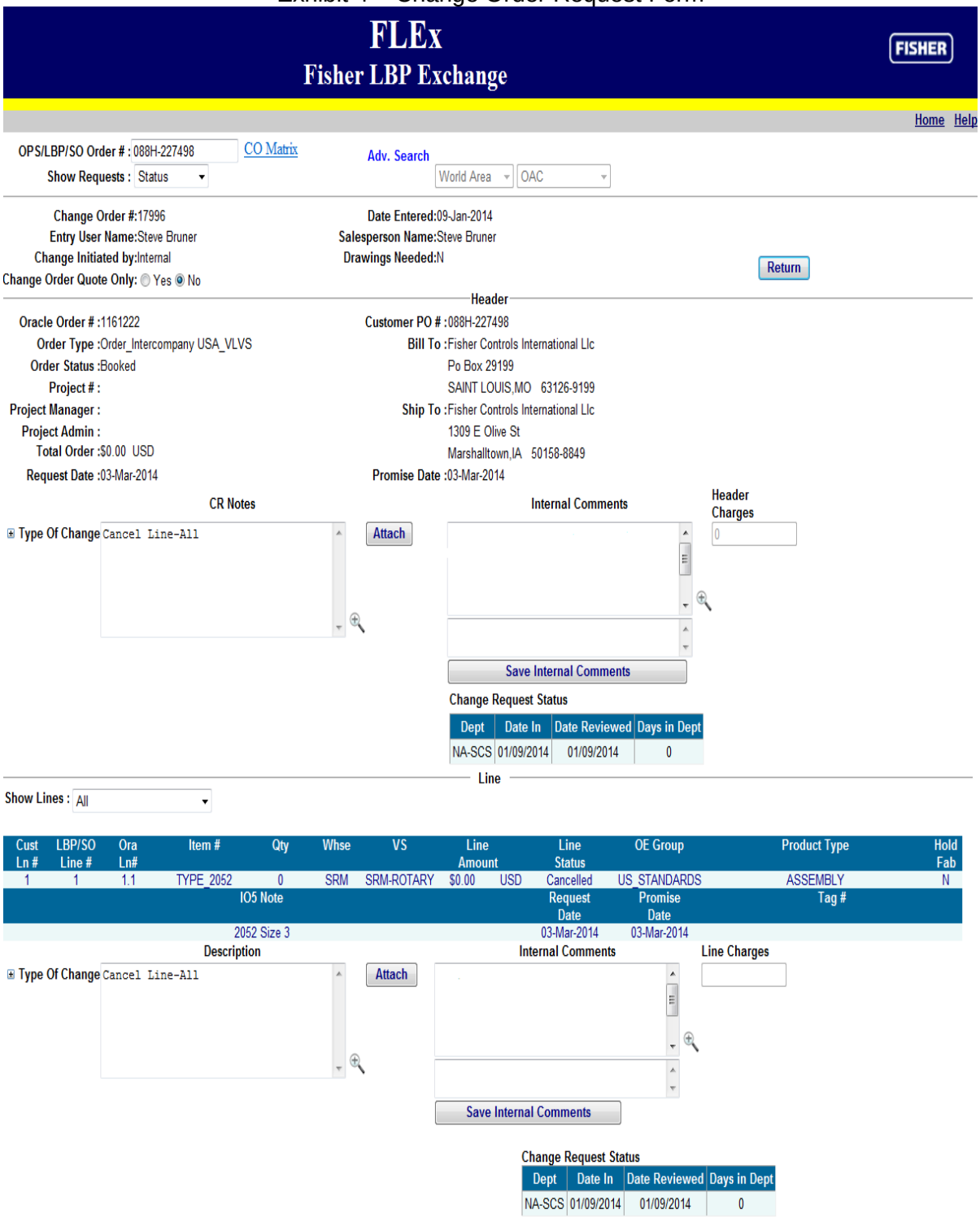


Exhibit 5 – Corrective Action Request

FISHER CONTROLS

Marshalltown, IA 50158

CORRECTIVE ACTION REQUEST

Ref: FMP 2K9

Evaluation for10 CFR21? No
Discovery Date:
NPT Investigation #: NA
FIN: NA

CAR Number:

Quality Program:

Cause

To be completed by Originator:
(Sections, if not applicable, should be documented as N/A or left blank.)

Issued To:

Originated By: | QA MAnual affected: | Manual section: | Additional Manual section(s): | Other Procedures:

Other CARs referenced: | Part Number: | FS Number: | Quantity : | NCR NO: | Vendor # | Date Issued:

*Finding:

Significant Conditions AdverseTo Quality: No

QA Log By:

Reply Expected

To be completed by owning (including Supplier) Manager/Foreman/Supervisor:

Problem solving Team Member(s):

*Cause of finding:

*Action taken to correct finding:

Completed Date:

*Action plan to prevent re-occurance of finding or eliminate cause of finding : | Owner | Target date

This finding will be ready for re audit on:

Owning Manager/Supervisor:

Date:

To be completed by Quality Assurance Manager/Representative :

The corrective actions, target dates, and assignments are sufficient for this problem:

QA Representative:

Agreed solution date:

Reaudit or verification indicates that the corrective action has been effectively implemented:

Comments

Quality Assurance Manager/Representative:

Verfication Date:

Replaced CAR#:

Exhibit 6 – CSP Processing Documents

FISHER EMERSON Process Management

Specification	CSP-W001		Rev C		Page 1 of 2
Welding Documentation Basic PL		Originator	C.R. Colwell	Date	10 Sept 2009
		Reviewed By	K Stonewall	Date	17 Jan 2013
		Revised By	D Meyer	Date	16 Dec 2013
		Approved By	D Speese	Date	13 Jan 2014

I. Scope

A. Documentation of fabrication welds and weld repairs resulting from NDE

II. Welding Requirements

A. Documentation of weld repairs resulting from NDE

B. Documentation of pressure boundary fabrication welds

C. Documentation of fabrication welds that have had NDE (volumetric or surface exam)

D. Welds shall conform to the requirements of the applicable material specification

E. Repair welds shall be examined by the same NDE method that discovered the defect

F. Repair of defects by welding shall only be performed using weld procedures approved by Emerson/Fisher Controls

III. Documentation Requirements

A. Weld repair report including the WPS used, welders name, and filler material heat/lot identification

1. If Fisher supplier performed NDE but did not perform any welding as a result of NDE, provide statement "No welding has been performed as a result of NDE"

B. Actual analysis of filler material

C. Weld maps of major repairs defined by the material specification (if any)

D. PWHT chart or statement (if performed)

E. NDE test reports (if any)

Exhibit 7 – Disposition Report

FISHER

EMERSON Process Management

Nonconforming Material Disposition Report

Inventory Organization VLVS_USA_IO_Marshalltown_IA **Date printed** 28-MAR-18

Disposition Number	DISP000120828	Nonconformance Number	NC000218122

Disposition	SCRAP	Project Number		Sales Order Number	
Source Owner		Task Number		SO Line Number	
Defect Code	13.01	**Job**	16272735	Supplier	
Cause Description	Failed to meet item requirements	Customer Reference Item		PO Number	
Disposition Status	CLOSED	**Item**	GE95167X012	PO Line Number	
Disposition Quantity	1	Item Description	PLUG RETAINER, DISHED, BORE SEAL, HF&G ~ SIZE 6.25 PORT, ALL CLASSES	PO Release Number	
Disposition UOM	Each	Item Material Description	2.25 CR 1 MO,30 KSI MIN YS,FMS20B68/COCR-A FMS32A3	Supplier Lot Number	
Disposition Owner		Pattern Number		PO Receipt Number	
Implementation By		Revision		**Component Item**	
Entered by User	SELKEN, MICHELLE	Serial Number	AA040939	Comp. Item Description	
Date Opened	28-MAR-18	Lot Number		Comp.Item Material Desc	
Date Closed	28-MAR-18	Heat Number	244374	Comp.Pattern Number	
Rework Job		Code		Component Revision	
Value Stream	MTN-LARGE	Section		Component Lot No.	
Line Type		Design Code		Component Serial No.	
Name of Original Detailer		Other Code		Subinventory	
Name of Change Order Detailer		Nuclear Class		Locator	
		Stamp		License Plate Number	

Customer PO Disposition Description	**BOM-Weld, plasma-lrg, 1st shift, EMP 11802**			
	Rework Operation Description	Rwk Op Seq No.	Rework Dept.	Resource Code
Detailed Description	**GE95167X012 has lack of fusion on the 6.33-6.35 dia. the hard face broke out on finish pass on the part measuring .125 wide, and 3.00 long. FMP 5B2 Rev. 9 Appendix A it exceeds the amount allowed.**			
Notes				

Approver Name	MICHELLE_SELKEN			
Date of Approval	28-MAR-18			
Approver Title	Quality Assurance	Product Engineer	Nuclear Qualification Engineer	Authorized Nuclear Inspector

Exhibit 8 – Engineering Change Request/Notice

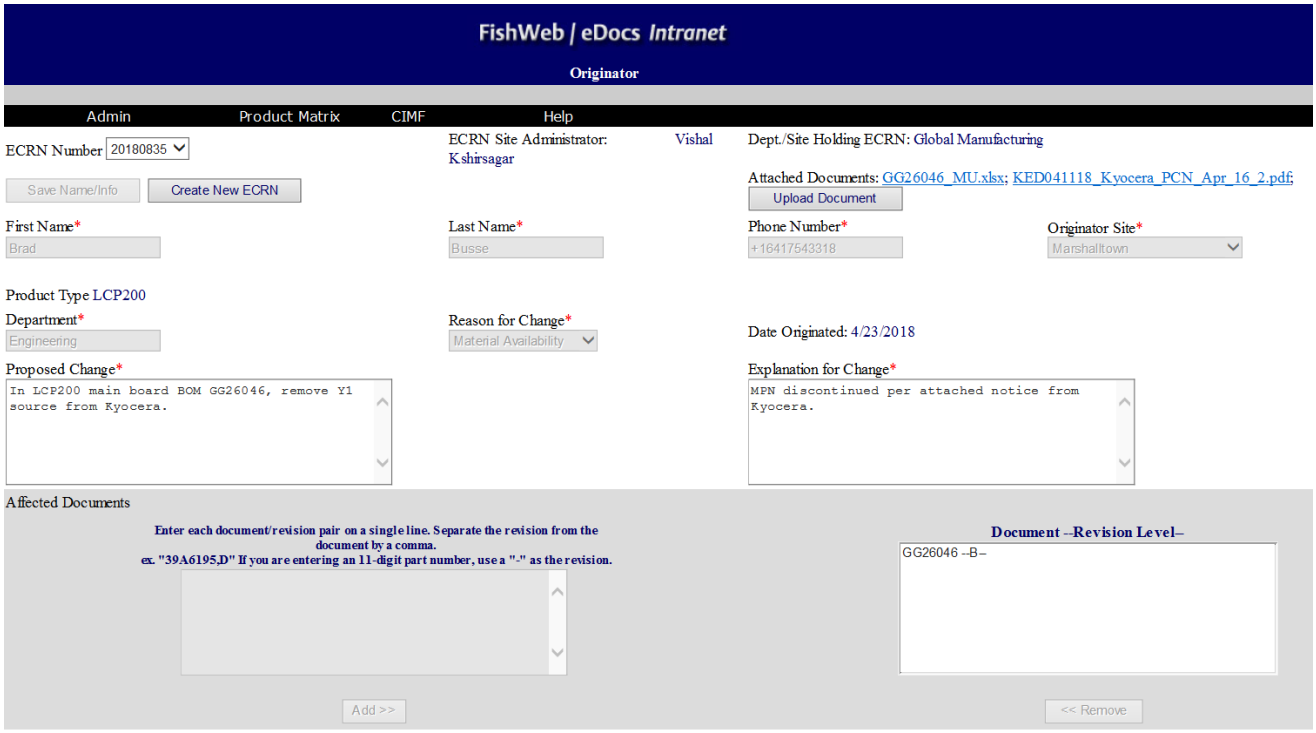


Exhibit 9 – Indoctrination and/or Training Form

EMERSON Process Management

GROUP TRAINING LOG

FISHER

Session Start Date: _____ **Session Completed Date:** _____

Presenter/s: _____

Originator: (if different than Presenter/s) _____

Course Title: _____

Category: (Required)

ONLY ONE course code per log.

DO NOT combine two or more course codes on one log.

Course Code		Type	Description
☐	I100	Business/Personal Dev	(Career Development, Written/Verbal Communication Skills, etc.)
☐	I200	Computer Skills	(Word, Excel, Powerpoint, Access, etc.)
☐	I300	Health	(Wellness Programs, Weight Loss Incentive Program, Smoking Cessation, etc.)
☐	I500	Quality	(Quality Orientation, Total Quality Involvement, etc.)
☐	I600	Safety	(PEO, Machine, Hazardous Materials, Accident/Injury Reporting, Industrial Hygiene, etc.)
☐	I001	On-the-Job Training	(Informal Training)
☐	I002	Accredited	(College Courses, Seminars)
☐	I003	Non-Accredited	(Seminars)
☐	I005	Specialized Dept Training Programs	(Technical)
☐	____	_____	

PLEASE NOTE: PeopleSoft Empl ID (4-5 digit #) is required.
If you do not know your PeopleSoft Empl ID or not sure, please leave space blank.

Please Check One: Regular Employee	Co-op / Intern / STW	Contractor	Your Building Location	LEGIBLY PRINT FULL NAME	PEOPLESOFT EMP ID (required) Not Clock #	
☐	☐	☐				1
☐	☐	☐				2
☐	☐	☐				3
☐	☐	☐				4
☐	☐	☐				5
☐	☐	☐				6
☐	☐	☐				7
☐	☐	☐				8
☐	☐	☐				9
☐	☐	☐				10
☐	☐	☐				11
☐	☐	☐				12
☐	☐	☐				13
☐	☐	☐				14
☐	☐	☐				15
☐	☐	☐				16
☐	☐	☐				17
☐	☐	☐				18
☐	☐	☐				19
☐	☐	☐				20

Recordkeeping: Presenter/Originator should keep original and supporting documents for their file. If any course info is incomplete, log cannot be entered. Presenter/Originator should send a copy of completed log only to the Human Resources Assistant responsible for your building for data entry. It will be destroyed after entry.

07/07 gjl

Exhibit 10 – Nonconformance Tag

Nonconforming Material Report

Date printed: 25-Oct-13

Inventory Org: VLVS_USA_IO_Marshalltown_IA

Nonconformance Number	NC000048196	Sales Order Number		Supplier	KEOKUK STEEL CASTINGS COMPANY
Nonconformance Source	SUPPLIER	SO Line Number		PO Number	4123212347
Nonconformance ItemType	COMPONENT	CUSTOMER PO		PO Line Number	
Nonconformance Status	NEW	Customer		PO Release Number	
Quantity Nonconforming	1	Project Number		Supplier Lot Number	
Defect Code	3.01	Task Number		PO Receipt Number	
Cause Description	Failed to meet material requirements	**Job**	5158731	**Component Item**	13B2575X04A
Entered by User	KETCHAM, MICHAEL	From Op Seq Number	101	Component Item Decription	VALVE BODY CSTG,WF-A31A,NPS8,CL150
Employee Name	KETCHAM, MICHAEL	From Intraoperation Step	Queue	Component Item Material Description	ASME SA351 CF8M FMS20B58
Date Opened	25-OCT-13	Department	STOCKROOM	Component Pattern Number	HXZ
Item	13B2573X032	To Op Seq Number	101	Component Revision	
Item Decription	VALVE BODY,WAFER~A31 A,NPS8,CL150,SPCL	To Intraoperation Step	Reject	Component UOM	Each
Item Material Description	ASME SA351 CF8M FMS20B58	To Department	STOCKROOM	Component Lot Number	
Pattern Number		FILE NUMBER		Component Serial Number	AA000001
Revision		CODE	ASME	Component Subinventory	
Quantity	1	SECTION	III, DIVISION 1	Component Locator	
UOM	Each	EDITION	1998	Subinventory	
Serial Number	AA000001	ADDENDA	1998	Locator	
Lot Number		NUCLEAR CLASS	1	License Plate Number	
Heat Number	A123	STAMP	N	Value Stream	MTN-NUCLEAR
				Line Type	
				Order Detailer	
				Change Order Detailer	

Detailed Description	0.25" SAND INCLUSION IN FLANGE FACE

Exhibit 11 – Purchase Order

EMERSON Process Management

Standard Purchase Order

PO Nbr: 4123830776 **PO Rev.:** 0

PO Issue Date: 07-Aug-17
PO Rev. Date:
Sys-Gen. Approved PO Date: 07-Aug-17

Issued By: Fisher Controls International LLC
Tax ID/RFC/VAT: 43-1156463

Ship To: Attn: Receiving
FISHER CONTROLS INTERNATIONAL LLC
GOVERNOR ROAD PLANT 1309 E OLIVE ST
MARSHALLTOWN, IA 50158

Supplier:
ANHUI YINGLIU ELECTROMECHANICAL CO LTD
566 FANHUA AVENUE HEFEI ECONOMIC AND TECHNOLOGY DEVELOPMENT ZONE
ANHUI, 230601
China

Supplier Contact: Phone:
E-Mail: Fax:

Buyer: DOYLE, AMY R Phone:
E-Mail: Amy.Doyle@Emerson.com Fax:

Bill To: Attn: Accounts Payables
Fisher Controls International LLC
vivsmtowninvoices@dataserv-stl.com
P.O. Box 29199
St. Louis, MO 63126-9199

Payment	Curr	Delivery	Title Transfer	Freight	Carrier	Final Destination
NET75	USD	EMR2006		Collect	FEDEX	

This Purchase Order number and Revision, Release Number and Revision, and appropriate line item Number(s) must appear on all Invoices, Packing lists, cartons and correspondence related to this order. See the "Additional Instructions" section below for further information!

Line	Ship #	Item No. / Rev Description	Tax	Req. Ship Date	Req. Rec. Date	Qty	UoM	Unit Price	Ext. Price
1	1	GE37002X01A Rev # C VALVE BODY,CSTG,NFLO ~ 6,CL600,GLOBE,FLG	N	02-OCT-17	16-OCT-17	2.00	EACH	[redacted]	[redacted]

Supplier Item:BY AIR
HTS Number - 8481909060
Pattern: LKT-C
Material: ASME SA216 WCC FMS20B101
FMS20B101 Rev # Y: CARBON STEEL CASTINGS ACCEPTABLE PER NACE MR0175/ISO 15156 AND NACE MR0103
Additional Specifications:
FGS7D4 Rev # H: MATL MARKING SYMBOLS FOR CSTGS AND FORGINGS
GE37002 Rev # C: ENGINEERING DRAWING

Total: [redacted]

Additional Instructions:
Adherence to FGS 15B13.0 Rev. A "Supplier Quality Manual" is required
Solid Wood Packing Materials shall comply with ISPM-15 for all international shipments
FGS7E4 Rev C Part marking requirements – mark country of origin per FGS 7E4
WMP11H7 Rev A Solid wood packing materials to comply w/IPPC regulations – USA import instructions

Supplier Acknowledgement And Acceptance

Please acknowledge receipt of this PO and confirm the required date of delivery, the order price and quantity to the buyer contact at top of document. Please review Additional Instructions below.

Accepted By: _____ **Authorized Signature:** _____ **Accepted Date:** _____

Exhibit 12 – Shop Order

VLVS_USA_IO_Marshalltown_IA

Assembly:
13B2573X032

Job# : 5158731

Job Qty: 1

Description : VALVE BODY,WAFER~A31A,NPS8,CL150,SPCL

Material :
3309AM.. -- ASME SA351 CF8M FMS20B58

Drawing Nbr	Drawing Rev	Process Code	Sch Group	Group Tech Code	Comp Date
13B2573	0A	NU.--.--.01	MTN-NUCLEAR		17-DEC-13

Process Code Description: GENERAL- NUCLEAR UNITED STATES/NORTH AMERICA SOURCED AND ACCEPT/Q.A.- SECT III ASME BPVC/10CFR PART 21 APPLIES - REPORTING OF DEFECTS AND NONCONFORMANCES IS MANDATORY

Planner : MTN800
Spec . Req :
Sub Inv : NUCSTORES
Location : NUINCOMING.....
Proj Nbr :
Proj Name :
Proj Manager :
Proj Admin :

Accounting Class Code : S Prod
Print Date : 25-Oct-13 16:40:51 PM
Start Date : 25-OCT-13
Heat # :
Vendor :
Kanban Card # :

Routing Summary

Op#	Dept	Resource	Op Description	Supplier
101	STOCKROOM	ROUGHSTK	GET FROM STOCK	
301	ROTARY	LATHE-0122	TN 5226 MACHINE 1ST END	
401	ROTARY	LATHE-0122	TN 5227 MACHINE 2ND END	
501	ROTARY	MILL-0776	MACH SHAFT BORES	
601	ROTARY	MILL-0855	TN 106788 MACHINE LINE BOLTING	
602	ROTARY	MILL-0895	TN 106789 MACHINE LINE BOLTING	
701	PROCESS	WASH	WASH	
1001	NUCLEAR	STOCKROOM	INSPECT-CHECK MIN WALL PER ITR	
9501	INSPECTION	M-QA-DOCS	REVIEW QA DOCUMENTS	

Wip Job / Schedule Attachments

Routing Comments:

Additional Specs

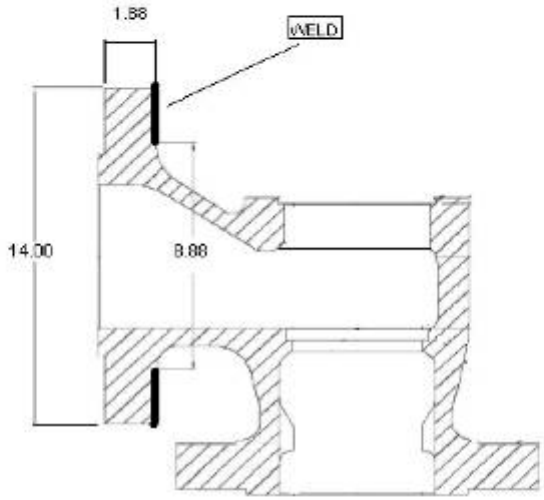
Spec Number	Spec Rev	Spec Name	Specification Details
13B2573	0A	PRIMARY DRAWING	ENGINEERING DRAWING
FGS8A1.2	0Z	GENERAL SPEC	FLANGE FINISH PER FGS 8A1-2 STANDARD FINISH ALL FF & RF ANSI/ASME,EN1092, & JIS
FGS4L1.8.25	AY	HYDRO SPEC	HYDRO 450 PSI/2 MIN
CSP-0429048-ITR-1-2	0B	ITR	See Specification CSP-0429048-ITR-1-2
CSP-0429048-MPR-1	0B	MPR	See Specification CSP-0429048-MPR-1

Component Item Additional Specs

Item / Spec Number	Item Description	Spec Rev	Spec Name	Specification Details
13B2575X04A				
CSP-0429048-PPR-1	VALVE BODY CSTG,WF~A31A,NPS8, CL150	0A	PPR	See Specification CSP-0429048-PPR-1
FGS7D4	VALVE BODY CSTG,WF~A31A,NPS8,	0H	GENERAL SPEC	MATL MARKING SYMBOLS FOR CSTGS

Exhibit 13 – Weld Map

WELD TO ADD 1/8 INCH MATERIAL TO THE BACK FACE OF THE SIDE FLANGE.
THE DIMENSIONS SHOWN ARE PRIOR TO WELDING.



MAJOR WELD

	DATE 2/15/2012		**NCR.** 110009-1		
			MAP OPER. 014-9		
DRAWN BY:			**WELD OPER.** 016-9	**AM.**	NONE
			FMP 5CP5A.5AG1.1TSPN	**REV.**	3
CUSTOMER NO. 010 -P07945A 009		**SHOP ORDER** PA9621		**NHS/SHS/MPR NO.** 1009746-1	
SERIAL NO. AG9368-1	**HEAT NO.** FYCK	**S/N** 18		**VENDER** KEOKUK	
		PATTERN NO. 90B-2	**TYPE** EA	**SIZE** 6	
FISHER Marshalltown, Iowa	WELD MAP		**DWG. NO.** 2U3834		**REV.** D