

COSASCO®

A **Halma** company

Rohrback Cosasco Systems, Inc.

Quality Manual

Revision AD

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Conforms to ISO 9001:2015

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0.0 Revision History and Approval

Rev.	Nature of changes	Approval	Date
AA	Initial Release (replaces QP-100 rev. X)	B. Ford	13-Mar-2012
AB	Revised Organization Chart	B. Ford	06-Mar-2014
AC	Revised to ISO 9001:2015	S. Stricklin	01-Mar-2017
AD	Revised QM per 2/2018 and 4/2020 audits. Updated Appendix A.	J. Hurlic	17-Sep-2020

1.0 Welcome to COSASCO

Cosasco is the world leader in corrosion monitoring technology. Since 1950, Cosasco has provided leading-edge corrosion monitoring and chemical injection solutions for such diverse industries as oil and gas, petrochemical, water treatment, chemical, pulp and paper, pharmaceutical, and utilities. Corrosion is an enormous cost to these industries as measured in equipment maintenance and replacement, leaks, and system failures. Cosasco helps dramatically reduce this waste by delivering corrosion monitoring equipment and services, extending equipment and asset life.

Halma, PLC is a global group of life-savings technology companies and they acquired RCS (Rohrback Cosasco Systems) on May 30th, 2014. RCS falls within Halma's Process Safety sector. Halma has a highly decentralized structure, which allows RCS to work as a separate legal entity with a Board of Directors.



2.0 About The Cosasco Quality Manual

This manual is prepared for the purpose of defining the company's interpretations of the ISO 9001:2015 international standard, as well as to demonstrate how the company complies with that standard.

This manual presents "Notes" which are used to define how Cosasco has tailored its management system to suit its purposes. These are intended to clarify implementation approaches and interpretations

for concepts which are not otherwise clearly defined in ISO 9001:2015. *Notes appear in italics, with gray background.*

Where subordinate or supporting documentation is reference in this manual, these are indicated by ***bold italics***.

3.0 Terms and Definitions

Cosasco adopts the following terms and definitions within its Quality Management System. Where no definition is provided, the company typically adopts the definitions provided in ***ISO 9000: Quality Management – Fundamentals and Vocabulary***. In some cases, specific procedures or documentation may provide a different definition to be used in the context of that document; in such cases, the definition will supersede those provided for in this Quality Manual or ISO 9000.

General Terminology

Cosasco – Rohrback Cosasco Systems, Inc.

Document – written information used to describe how an activity is done.

Record – captured evidence of an activity having been done.

Risk-Based Thinking Terminology

Risk – Negative effect of uncertainty

Opportunity – Positive effect of uncertainty

Uncertainty - A deficiency of information related to understanding or knowledge of an event, its consequence, or likelihood. (Not to be confused with measurement uncertainty.)

Nonconforming Product Terminology

Rework: Efforts to bring nonconforming product into conformance through additional operations that do not alter the original design of the product.

Repair: Efforts to bring nonconforming product into conformance through additional operations that alter the original design of the product; this may be through the addition of material not specified in the original design, or through altering pre-existing design features.

Scrap: The discard of nonconforming product in lieu of rework or repair.

4.0 Context of the Organization

4.1 Understanding the Organization and Its Context

Cosasco has reviewed and analyzed key aspects of itself and its stakeholders to determine the strategic direction of the company. This requires understanding internal and external issues that are of concern to Cosasco and its interested parties (per 4.2 below).

Such issues are monitored and updated as appropriate, and discussed as part of management reviews.

4.2 Understanding the Needs and Expectations of Interested Parties

The issues determined per 4.1 above are identified through an analysis of risks facing Cosasco and its interested parties. “Interested parties” are those stakeholders who receive our products and/or services, or who may be impacted by them, or those parties who may otherwise have a significant interest in our company.

This information is then used by senior management to determine the company's strategic direction. This is defined in records of Management Review, and periodically updated as conditions and situations change.

4.3 Determining the Scope of the Quality Management System

Based on an analysis of the above issues of concern, interests of stakeholders, and in consideration of its products and services, Cosasco has determined the scope of the management system as follows:

This Quality Management System pertains to processes relating to the design, manufacture, inspection, test, service, and repair of Corrosion Management Solutions, including corrosion monitoring equipment, systems, and high/low pressure access systems, primarily for the petrochemical, oil, and gas industries.

The quality system applies to all processes, activities and employees within the company. The facility is located at:

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Santa Fe Springs, California, 90670

Phone: +1 562-949-0123

Fax: +1 562-949-3065

Web: www.cosasco.com

4.4 Quality Management System and Its Processes

4.4.1 Process Identification

Cosasco has adopted a process approach for its management system. By identifying the top-level processes within the company, and then managing each of these discretely, this reduces the potential for nonconforming products and/or services discovered during final processes or after delivery. Instead, nonconformities and risks are identified in real time, by actions taken within each of the top-level processes.

Note: not all activities are considered "processes" – the term "process" in this context indicates the activity has been elevated to a higher level of control and management oversight. The controls indicated herein are applicable only to the top-level processes identified.

Top-level processes and sequence of interactions of these processes are illustrated in Appendix A.

Each process may be supported by other activities; such as tasks or sub-processes. Monitoring and control of top level processes ensures effective implementation and control of all subordinate tasks or sub-processes.

Note: Appendix A represents the typical sequence of processes, and may be altered depending on customer or regulatory requirements at the job or contract level, as needed.

4.4.2 Process Controls & Objectives

Objectives are established for key processes; this is a statement of the intent of the process. Each objective is then supported by at least one "metric" or key performance indicator (KPI) which is then measured to determine the process' ability to meet the quality objective.

Note: some processes have multiple objectives and multiple metrics. This is determined by the nature of the process, its impact on products and/or services, and associated risks.

Note: Whereas ISO 9001 discusses process measurements and "quality objectives" as separate concepts, Cosasco combines

them; i.e., quality objectives are used to control the processes. Additional objectives for products and/or services may be assigned, but these will also be used to measure process effectiveness.

Throughout the year, metrics data is measured and gathered by process owners or other assigned managers, in order to present the data to Top Management. The data is then analyzed by Top Management in order that Top Management may set goals and make adjustments for the purposes of long-term continual improvement.

The specific quality objectives for each process are defined in the TCS Program.

Metrics, along with current standings and goals for each objective, are recorded in records of management review.

When a process does not meet a goal, or an unexpected problem is encountered with a process, the Corrective and Preventive Action process is implemented to research and resolve the issue. In addition, opportunities for improvement are sought and implemented, for the identified processes.

4.4.3 Outsourced Processes

Any process performed by a third party is considered an “outsourced process” and must be controlled, as well. The company’s outsourced processes, and the control methods implemented for each, are defined below:

Outsourced Process	Provider	Controls
Machining	Various	Approved Supplier Reports from Supplier Receiving Inspection
Welding	Various	Approved Supplier Reports from Supplier Receiving Inspection
Coating	Various	Approved Supplier Reports from Supplier Receiving Inspection
PCB Fabrication	Various	Approved Supplier Reports from Supplier Receiving Inspection
PCB Assembly	Various	Approved Supplier Reports from Supplier Source Inspection Receiving Inspection
Calibration Services	Various	Calibration Certificates

The type and extent of control to be applied to the outsourced process take into consideration:

- the potential impact of the outsourced process on the company’s capability to provide product that conforms to requirements,
- the degree to which the control for the process is shared,
- the capability of achieving the necessary control through the purchasing contract requirements.

5.0 Leadership

5.1 Leadership & Commitment

5.1.1 General

Top Management of Cosasco provides evidence of its leadership and commitment to the development and implementation of the management system and continually improving its effectiveness by:

- taking accountability of the effectiveness of the management system;
- ensuring that the Quality Policy and quality objectives are established for the management system and are compatible with the strategic direction and the context of the organization;
- ensuring the integration of the management system requirements into the organization’s other business processes, as deemed appropriate (see note);
- promoting awareness of the process approach;

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- e) ensuring that the resources needed for the management system are available;
 - f) communicating the importance of effective quality management and of conforming to the management system requirements;
 - g) ensuring that the management system achieves its intended results;
 - h) engaging, directing and supporting persons to contribute to the effectiveness of the management system;
 - i) promoting continual improvement;
 - j) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

Note: "business processes" such as accounting, employee benefits management and legal activities are out of scope of the QMS.

5.1.2 Customer focus

Top Management of Cosasco adopts a customer-first approach which ensures that customer needs and expectations are determined, converted into requirements and are met with the aim of enhancing customer satisfaction.

This is accomplished by assuring:

- a) customer and applicable statutory and regulatory requirements are determined, understood and consistently met;
- b) the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;
- c) the focus on enhancing customer satisfaction is maintained.

5.2 Policy

Top Management has developed the Quality Policy that governs day-to-day operations to ensure quality.

The Quality Policy is communicated and implemented throughout the organization.

The Quality Policy of Cosasco is as follows:

At Cosasco, we are committed to providing the highest quality products and services available in the industries we serve. We will strive to produce safe and reliable products fully meeting our published specifications as well as individual customer's requirements. We are committed to achieving the highest customer satisfaction by delivering quality products while meeting our delivery commitments at a competitive price. We will maintain a quality management system that meets or exceeds all requirements of ISO 9001, and will adhere to a philosophy of continual improvement in all operations, including the Quality Management System.

5.3 Organizational Roles Responsibilities and Authorities

Top Management has assigned responsibilities and authorities for all relevant roles in the company. These are communicated through the combination of the Organization Chart and Job Descriptions.

In addition, the following overall QMS responsibilities and authorities are assigned as follows:

Responsibility	Assigned To
Ensuring that the management system conforms to applicable standards	Top Management
Ensuring that the processes are delivering their intended outputs	Applicable process owner
Reporting on the performance of the management system and providing opportunities for improvement for the management system	Quality Assurance Manager
Ensuring the promotion of customer focus throughout the organization	Top Management
Ensuring that the integrity of the management system is maintained when changes are planned and implemented	Top Management

The Quality Assurance Manager has been assigned the role of Management Representative when having a single point of contact to represent the Cosasco quality system is useful or required by customer or regulations. Other duties of the Quality Assurance Manager may be defined herein or within other documented procedures.

6.0 Planning

6.1 Actions to Address Risks and Opportunities

Note: Cosasco deviates slightly from the approach towards risk and opportunity presented in ISO 9001. Instead, Cosasco views “uncertainty” as neutral, but defines “risk” as a negative effect of uncertainty, and “opportunity” as a positive effect of uncertainty. Cosasco has elected to manage risks and opportunities separately, except where they may overlap. Formal risk management may not be utilized in all instances; instead, the level of risk assessment, analysis, treatment and recordkeeping will be performed to the level deemed appropriate for each circumstance or application.

Coscasco considers risks and opportunities when taking actions within the management system, as well as when implementing or improving the management system; likewise, these are considered relative to products and services. Risks and opportunities are identified and discussed by Top Management as well as throughout all other activities of the QMS.

Risks and opportunities are addressed by Top Management in order to minimize their likelihood and impact, and address how opportunities are managed to improve their likelihood and benefit.

6.2 Quality Objectives and Planning to Achieve Them

As part of the adoption of the process approach, Cosasco utilizes its process objectives, as discussed in 4.4 above, as the main quality objectives for the QMS. These include overall product-related quality objectives; additional product-related quality objectives may be defined in work instructions or customer requirements.

The process objectives have been developed in consideration that they:

- be consistent with the quality policy;
- be measurable;
- take into account applicable requirements;
- be relevant to conformity of products and services and to enhancement of customer satisfaction;
- be monitored;

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- f) be communicated;
 - g) be updated as appropriate.

Process quality objectives are defined in the minutes of management review per section 9.3 below.

The planning of process quality objectives is defined in section 4.4. above.

6.3 Planning of Changes

Changes to the quality management system and its processes are carried out in a planned manner, considering the purpose of the changes and their potential consequences, the integrity of the quality management system, the availability of resources, and the allocation or reallocation of responsibilities and authorities.

7.0 Support

7.1 Resources

7.1.1 General

Cosasco determines and provides the resources needed:

- a) to implement and maintain the management system and continually improve its effectiveness
- b) to enhance customer satisfaction by meeting customer requirements

Resource allocation is done with consideration of the capability and constraints on existing internal resources, as well as needs related to supplier expectations.

Resources and resource allocation are assessed during management reviews.

7.1.2 People

Senior management ensures that it provides sufficient staffing for the effective operation of the management system, as well its identified processes.

7.1.3 Infrastructure

Cosasco determines, provides and maintains the infrastructure needed to achieve conformity to product requirements. Infrastructure includes, as applicable:

- a) buildings, workspace and associated facilities;
- b) process equipment, hardware and software;
- c) supporting services such as transport;
- d) information and communication technology.

Scheduled maintenance, including data backup, is performed on the following:

- a) Production Equipment
- b) Computer Systems
- c) Company Vehicle(s)

7.1.4 Environment for the Operation of Processes

Cosasco provides a clean, safe and well-lit working environment. The Area Managers of Cosasco manages the work environment needed to achieve conformity to product requirements. Specific environmental requirements for products are determined during quality planning and are documented in subordinate procedures, work instructions, or job documentation. Equipment is maintained in accordance with the **Equipment Maintenance Procedure**. Work environment controls include the following:

Condition	Control
Temperature	Thermostat
Electro-static Discharge (ESD)	Grounded ESD Controls

Human factors are considered to the extent that they directly impact on the quality of products and/or services.

Note: Social, psychological and safety aspects of the work environment are managed through activities outside of the scope of the management system. Only work environment aspects which can directly affect process efficiency or product and service quality are managed through the management system.

7.1.5 Monitoring and Measuring Resources

Where equipment is used for critical measurement activities, such as inspection and testing, these shall be subject to control and either calibration or verification; see the **Monitoring and Measuring Equipment Procedure**.

Quality Control is responsible for all aspects related to the system of controlling monitoring and measurement.

Where necessary to ensure valid results, measuring equipment is:

- calibrated or verified, or both, at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification is recorded,
- adjusted or re-adjusted as necessary,
- identified in order to determine its calibration status,
- safeguarded from adjustments that would invalidate the measurement result,
- protected from damage and deterioration during handling, maintenance and storage.

In addition, the organization assesses and records the validity of the previous measuring results when the equipment is found not to conform to requirements. The organization takes appropriate action on the equipment and any product affected. Records of the results of calibration and verification are to be maintained.

When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application is confirmed. This is undertaken prior to initial use and reconfirmed as necessary.

Note: Calibration and measurement traceability is not employed for all measurement devices. Instead, Cosasco determines which devices will be subject to calibration based on its processes, products and services, or in order to comply with specifications or requirements. These decisions are also based on the importance of a measurement, and considerations of risk.

7.1.6 Organizational Knowledge

Cosasco also determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services. This may include knowledge and information obtained from:

- a) internal sources, such as lessons learned, feedback from subject matter experts, and/or intellectual property;
- b) external sources such as standards, academia, conferences, and/or information gathered from customers or suppliers.

This knowledge shall be maintained, and made available to the extent necessary.

When addressing changing needs and trends, Cosasco shall consider its current knowledge and determine how to acquire or access the necessary additional knowledge.

7.2 Competence

Staff members performing work affecting product quality are competent on the basis of appropriate education, training, skills and experience. The **Competence, Training and Awareness Procedure** defines these activities in detail.

The Training Coordinator will work with Department Managers to determine competency requirements and to oversee the training process. Training requirements are defined in job descriptions.

The Training Coordinator maintains appropriate records of education, training, skills, and experience.

As of the latest release of this document, all current employees are considered to be competent.

Note: the management system does not include other aspects of Human Resources management, such as payroll, benefits, insurance, labor relations or disciplinary actions.

7.3 Awareness

Training and subsequent communication ensure that staff are aware of:

- a) the quality policy;
- b) relevant quality objectives;
- c) their contribution to the effectiveness of the management system, including the benefits of improved performance;
- d) the implications of not conforming with the management system requirements.

7.4 Communication

Top Management of Cosasco ensures internal communication takes place regarding the effectiveness of the management system. Internal communication methods include:

- a) use of corrective and preventive action processes to report nonconformities or suggestions for improvement
- b) use of the results of analysis of data
- c) meetings (periodic, scheduled and/or unscheduled) to discuss aspects of the QMS
- d) use of the results of the internal audit process
- e) regular company meetings with all employees

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- f) individual department meetings held by Department Managers
 - g) internal emails
 - h) information monitors in the facility
 - i) Cosasco's "open door" policy which allows any employee access to Top Management for discussions on improving the quality system

7.5 Documented Information

The management system documentation includes both documents and records.

Note: the ISO 9001:2015 standard uses the term "documented information"; Cosasco does not use this term, but instead relies on the terms "document" and "record" to avoid confusion. In this context the terms are defined by Cosasco as provided for in section 3.0 above. Documents and records undergo different controls as defined herein.

The extent of the management system documentation has been developed based on the following:

- a) The size of Cosasco
- b) Complexity and interaction of the processes
- c) Risks and opportunities
- d) Competence of personnel

Documents required for the management system are controlled in accordance with the **Control of Documents Procedure**. The purpose of document control is to ensure that staff have access to the latest, approved information, and to restrict the use of obsolete information. All documented procedures are established, documented, implemented and maintained.

The **Control of Record Procedure** has been established to define the controls needed for the identification, storage, retrieval, protection, retention time, and disposition of quality records. This procedure also defines the methods for controlling records that are created by and/or retained by suppliers.

These controls are applicable to those records which provide evidence of conformance to requirements; this may be evidence of product requirements, contractual requirements, procedural requirements, or statutory/regulatory compliance. In addition, quality records include any records which provide evidence of the effective operation of the management system.

8.0 Operation

8.1 Operational Planning and Control

Cosasco plans and develops the processes needed for realization of its products and/or services. Planning of product realization is consistent with the requirements of the other processes of the management system. Such planning considers the information related to the context of the organization (see section 2.0 above), current resources and capabilities, as well as product requirements.

Such planning is accomplished through:

- a) determining the requirements for the products and/or services;
- b) establishing criteria for the processes and the acceptance of products and/or services;
- c) determining the resources needed to achieve conformity to the product requirements;
- d) implementing control of the processes in accordance with the criteria;

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- e) determining, maintaining and retaining documented information to the extent necessary to have confidence that the processes have been carried out as planned and to demonstrate the conformity of products and/or services to their requirements.

The output of this planning is in a form suitable for the organization's method of operations. Planning output includes Engineering Drawings and Job Travelers.

The Operations Manager is responsible for planning production and for maintaining associated records.

8.2 Requirements for Products and Services

8.2.1 Customer Communication

Cosasco has implemented effective communication with customers in relation to:

- a) providing information relating to products and/or services;
- b) handling enquiries, contracts or orders, including changes;
- c) obtaining customer feedback relating to products and services, including customer complaints;
- d) handling or controlling customer property;
- e) establishing specific requirements for contingency actions, when relevant.

Product information is communicated via brochures/datasheets, company website, and direct sales contacts. Product information is maintained by Marketing.

Customer inquiries, contracts, orders, etc. are received by phone, e-mail, mail, fax, and website contact.

Customer feedback is recorded and managed by e-mail survey as well as direct communication with the customer (phone, e-mail, fax, etc.).

8.2.2 Determining the Requirements Related to Products and Services

During the intake of new business Cosasco captures:

- a) requirements specified by the customer, including the requirements for delivery and post-delivery activities;
- b) requirements not stated by the customer but necessary for specified or intended use, where known
- c) statutory and regulatory requirements related to products and/or services;
- d) any additional requirements determined by Cosasco.

Customer Service is responsible for determining all customer requirements, whether specified; not stated, but necessary; or statutory and regulatory. Requirements are determined by review of customer documentation and communication with customers and/or representatives.

8.2.3 Review of Requirements Related to Products and Services

Once requirements are captured, Cosasco reviews the requirements prior to its commitment to supply the product or service. This review ensures that Cosasco has the capability and capacity to:

- a) meet all requirements specified by the customer, including requirements for delivery and post-delivery activities;

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- b) meet any requirements not stated by the customer, but which Cosasco knows as being necessary;
 - c) meet all requirements determined necessary by Cosasco itself;
 - d) meet all related statutory and regulatory requirements;
 - e) meet any contract or order requirements differing from those previously expressed (i.e., from a previous Cosasco quote).

Requirements are reviewed by daily Sales Order meetings, with representatives from Customer Service, Operations, Quality Assurance, and Accounting/Finance present.

Records of the results of the review and actions arising from the review are maintained. Customer Service is responsible for the review and for maintaining the records.

Where the customer provides no documented statement of requirement, the customer requirements are confirmed by the organization before acceptance. Confirmation of verbal orders is done by communication (i.e. phone, e-mail, etc.) with the customer and/or order confirmation sent to the customer.

8.2.4 Changes to Requirements for Products and Services

Cosasco updates all relevant requirements and documents when the requirements are changed, and ensures that all appropriate staff are notified.

Where product requirements are changed, Customer Service ensures that relevant documents are amended and that relevant personnel are made aware of the changed requirements.

8.3 Design and Development of Products and Services

For new designs and for significant design changes, Cosasco ensures the translation of customer needs and requirements into detailed design outputs. These address performance, reliability, maintainability, testability, and safety issues, as well as regulatory and statutory requirements.

This process ensures:

- a) Design planning is conducted
- b) Design inputs (requirements) are captured
- c) Design outputs are created under controlled conditions
- d) Design reviews, verification and validation are conducted
- e) Design changes are made in a controlled manner.

These activities are further defined in the document ***Engineering and Product Development Procedure***.

8.4 Control of Externally Provided Processes, Products and Services

Cosasco ensures that purchased products and/or services conform to specified purchase requirements. The type and extent of control applied to the supplier and the purchased products or services are dependent on the effect on subsequent product or service realization or the final product.

Cosasco evaluates and selects suppliers based on their ability to supply products and services in accordance with the organization's requirements. Criteria for selection, evaluation and re-evaluation are

established.

Purchases are made via the release of formal purchase orders and/or contracts which clearly describe what is being purchased. Received products or services are then verified against requirements to ensure satisfaction of requirements. Suppliers who do not providing conforming products or services may be requested to conduct formal corrective action.

The organization evaluates and selects suppliers based on their ability to supply product in accordance with the organization's requirements. Criteria for selection, evaluation and re-evaluation are established.

Criteria	Selection	Evaluation/ Re-evaluation
Technical specifications	x	x
Price and availability	x	x
Product quality		x
On time delivery		x

Records of the results of evaluations and any necessary actions arising from the evaluation are maintained by the Quality Control Manager.

Purchasing is responsible for controlling the purchasing process and for maintaining appropriate records. Approved suppliers are identified in the company ERP system. The ERP system shall block purchasing from using non-approved suppliers.

As of the latest release of this document, all current suppliers in good standing are considered to be approved.

The organization establishes and implements the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements. Purchased product is verified by receiving review, receiving inspection, and/or review of supplier documentation.

Where the organization or its customer intends to perform verification at the supplier's premises, the organization states the intended verification arrangements and method of product release in the purchasing information.

These activities are further defined in the **Purchasing Procedure** document.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

To control its provision of products and/or services, Cosasco considers, as applicable, the following:

- a) the availability of documents or records that define the characteristics of the products and/or services as well as the results to be achieved;
- b) the availability and use of suitable monitoring and measuring resources;
- c) the implementation of monitoring and measurement activities;
- d) the use of suitable infrastructure and environment;
- e) the appointment of competent persons, including any required qualifications;

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- f) the validation and revalidation of special processes if applicable (see below);
 - g) the implementation of actions to prevent human error;
 - h) the implementation of release, delivery and post-delivery activities.

Cosasco validates any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement and, consequently, deficiencies become apparent only after the product is in use or the service has been delivered.

Validation demonstrates the ability of these processes to achieve planned results.

The organization establishes arrangements for these processes including, as applicable:

- a) defined criteria for review and approval of the processes,
- b) approval of equipment and qualification of personnel,
- c) use of specific methods and procedures,
- d) requirements for records, and
- e) revalidation.

Process	Control/Validation
Welding	Controlled Welding Procedures

8.5.2 Identification and Traceability

Where appropriate, Cosasco identifies the product by suitable means throughout product realization. Products are identified by means of unique part numbers, labeling, marked containers and job travelers.

Cosasco identifies the product status with respect to monitoring and measurement requirements throughout product realization.

Where traceability is a requirement, Manufacturing controls the unique identification of the product and maintains records. Traceability is documented by use of heat (lot) numbers and serial numbers.

The **Material Traceability Program Procedure** defines these methods in detail.

8.5.3 Property Belonging to Customers or External Providers

Cosasco exercises care with customer property while it is under the organization's control or being used by the organization. Cosasco identifies, verifies, protects and safeguards customer property provided for use or incorporation into the product. If any customer property is lost, damaged or otherwise found to be unsuitable for use, the organization shall report this to the customer and maintain records. Customer property can include intellectual property and personal data.

Customer property includes customer supplied material and drawings or other customer documentation. Customer property is controlled by means of assignment of unique part number (for customer supplied material) or filing in proper sales order files (for drawings or other customer documentation).

The Materials department is responsible for controlling and recording customer supplied material. The Customer Service department is responsible for controlling and recording customer supplied drawings or other documentation. Customer Service is responsible for all communication with the customer regarding their property.

8.5.4 Preservation

Manufacturing is responsible for preserving the product during internal processing and delivery to the intended destination in order to maintain conformity to requirements. As applicable, this preservation includes identification, handling, packaging, storage and protection. Preservation also applies to the constituent parts of a product.

Special handling techniques include proper handling (gloves, clean clothing, etc.), electrostatic precautions (grounded workstations, etc.), corrosion protection precautions (cleanliness of parts, proper packaging, corrosion inhibitors, etc.) and proper packaging (cardboard boxes, wooden crates, etc.)

The ***Preservation of Product Procedure*** defines the methods for preservation of product.

8.5.5 Post-Delivery Activities

As applicable, Cosasco conducts the following activities which are considered “post-delivery activities”:

- Installation and/or commissioning
- Troubleshooting/repair
- Maintenance/service

Post-delivery activities are conducted in compliance with the management system defined herein. In determining the extent of post-delivery activities that are required, Cosasco considers:

- a) statutory and regulatory requirements;
- b) the potential undesired consequences associated with its of products and/or services;
- c) the nature, use and intended lifetime of its products and/or services;
- d) customer requirements;
- e) customer feedback.

8.5.6 Control of Changes

Cosasco reviews and controls both planned and unplanned changes to processes to the extent necessary to ensure continuing conformity with all requirements.

Documents are changed in accordance with ***Control of Documents Procedure***.

8.6 Release of Products and Services

Cosasco monitors and measures the characteristics of the product to verify that product requirements have been met. This is carried out at appropriate stages of the product realization process in accordance with the planned arrangements.

Methods for monitoring and measuring of products include testing and in process inspections.

Evidence of conformity with the acceptance criteria is maintained. Records indicate the person(s) authorizing release of product for delivery to the customer. Product and service release is indicated by means of job traveler sign-off.

The release of product and delivery of service to the customer does not proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and, where applicable, by the customer.

8.7 Control of Nonconforming Outputs

The organization ensures that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. A documented procedure has been established (see **Control of Nonconforming Product Procedure**) to define the controls and related responsibilities and authorities for dealing with nonconforming product.

Where applicable, the organization deals with nonconforming product by one or more of the following ways:

- a) by taking action to eliminate the detected nonconformity;
- b) by authorizing its use, release or acceptance under concession by a relevant authority and, where applicable, by the customer;
- c) by taking action to preclude its original intended use or application;
- d) by taking action appropriate to the effects, or potential effects, of the nonconformity when nonconforming product is detected after delivery or use has started.

When nonconforming product is corrected, it is subject to re-verification to demonstrate conformity to the requirements.

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, are maintained.

The controls for such nonconformances are defined in the **Control of Nonconforming Product Procedure**.

9.0 Performance Evaluation

9.1 Monitoring, Measurement, Analysis and Evaluation

9.1.1 General

Cosasco has determined which aspects of its quality management system must be monitored and measured, as well as the methods to utilize and records to maintain, within this Quality Manual and subordinate documentation.

Monitoring and measurement of the processes, as defined in 4.4 above, ensure that the Top Management evaluates the performance and effectiveness of the quality management system itself.

9.1.2 Customer Satisfaction

As one of the measurements of the performance of the management system, Cosasco monitors information relating to customer perception as to whether the organization has met customer requirements. The methods for obtaining and using this information include:

- a) recording customer complaints
- b) product rejections or returns
- c) repeat orders for product
- d) submittal of customer satisfaction surveys

The corrective and preventive action system shall be used to develop and implement plans for customer satisfaction improvement that address deficiencies identified by these evaluations, and assess the effectiveness of the results.

9.1.3 Analysis and Evaluation

Cosasco analyzes and evaluates the data and information arising from monitoring and measurement in order to evaluate:

- a) conformity of products and/or services;
- b) the degree of customer satisfaction;
- c) the performance and effectiveness of the quality management system;
- d) if planning has been implemented effectively;
- e) the effectiveness of actions taken to address risks and opportunities;
- f) the performance of external providers;
- g) the need for improvements to the quality management system.

Statistical techniques used may be defined in appropriate documented procedures; in all cases, the methods are based on established standards or are otherwise determined to be statistically valid.

9.2 Internal Audit

Cosasco conducts internal audits at planned intervals to determine whether the quality management system:

- a) conforms to the planned arrangements, to the requirements of ISO 9001 and to the quality management system requirements established by the organization, and
- b) is effectively implemented and maintained.

An audit program has been planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods are defined. This selection of auditors and conduct of audits ensures objectivity and impartiality of the audit process. Auditors do not audit their own work.

The **Internal Audit Procedure** has been established to define the responsibilities and requirements for planning and conducting audits, establishing records and for reporting results. Records of the audits and their results are maintained. The Quality Assurance Manager is responsible to oversee the internal auditing system and for maintaining appropriate records.

The management responsible for the area being audited ensures that any necessary corrections and corrective actions are taken without undue delay to eliminate detected nonconformities and their causes. Follow-up activities include the verification of the actions taken and the reporting of verification results.

9.3 Management Review

Top management reviews the organization's quality management system annually to ensure its continuing suitability, adequacy and effectiveness. This review includes assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.

Records from management reviews are maintained by the Quality Assurance Manager.

The input to management review includes information on:

- a) the status of actions from previous management reviews,
- b) changes in external and internal issues that are relevant to the quality management system,
- c) information on the performance and effectiveness of the quality management system, including trends in:
 - customer satisfaction and feedback from relevant interested parties,
 - the extent to which quality objectives have been met,
 - process performance and conformity of products and services,
 - nonconformities and corrective actions,
 - monitoring and measurement results,
 - audit results,
 - the performance of external providers,
- d) the adequacy of resources,
- e) the effectiveness of actions taken to address risks and opportunities,
- f) opportunities for improvement.

The output from the management review includes:

- opportunities for improvement,
- any need for changes to the quality management system,
- resource needs.

The following individuals normally attend Management Reviews (when available): President, Quality Assurance Manager, VP of Operations, VP of Finance/Accounting, VP of Marketing Department Manager, and Technical Manager. Others may attend as necessary.

10.0 Improvement

10.1 General

Cosasco uses the management system to improve its processes, products and services. Such improvements aim to address the needs and expectations of customers as well as other interested parties, to the extent possible.

10.2 Nonconformity and Corrective Action

Cosasco takes corrective action to eliminate the cause of nonconformity in order to prevent recurrence. Likewise, the company takes preventive action to eliminate the causes of potential nonconformities in order to prevent their occurrence.

These activities are done through the use of the formal Corrective Action system, and are defined in the **Corrective/Preventive Action Procedure** document.

10.3 Continual Improvement

Through the process effectiveness reviews, done as part of Management Review, Cosasco works to continually improve the suitability, adequacy and effectiveness of the quality management system. This includes seeking opportunities for improvement.

Appendix A: Overall Process Sequence & Interaction*

*Refer to Form 78 Process Characteristic Diagrams for detailed process.

