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1.0 SCOPE

Interpoint has developed and implemented a Quality Management System (QMS) in accordance with the requirements of ISO 9001:2008, AS9100, and MIL-PRF-38534. The Company resolves its commitment in continuous maintenance for effectiveness and process improvements. This Manual is the top-level document of Interpoint's QMS.

This Manual defines and describes the quality system, delineates authorities and responsibilities of the management personnel involved in the operation of the system, and provide general procedures for all activities comprising the quality system. For our customers and other interested parties, it presents the quality system, informing them of what specific controls are implemented at our Company to assure quality.

This Manual applies to the activities of Interpoint in the following two locations for AS9100/ISO 9001:

10301 Willows Road Mail: P.O. Box 97005 Redmond, Washington 98073-9705	4F, 5 South 6th Road, K.E.P.Z., Kaohsiung, Taiwan
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This Manual also applies to the activities of Interpoint in the following two locations for ISO 9001 elements only:

8 Forge Court Yateley Hampshire GU46 7RX	2-4 Boulevard de la gare 95210 Saint Gratien – France
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2.0 REFERENCE DOCUMENTS

The following documents were used to develop this procedure:

ANSI/NCSL Z540-1	Calibration Laboratories and Measuring and Test Equipment - General Requirements
ISO 9001:2008	Quality Management Systems, Requirements, International Standard
SAE AS9100	Aerospace Standard SAE, Quality Systems-Aerospace-Model for Quality Assurance in Design, Development, Production, Installation and Servicing
MIL-PRF-38534	General Specification for Hybrid Microcircuits
QA-093	Quality Systems Procedures Matrix
GEN-047	Records Retention Matrix

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3.0 MANUAL ISSUANCE AND MAINTENANCE

The Quality Manual shall be initiated and maintained by the Interpoint Quality Assurance Department. The initial issue and any major updates of the manual shall be reviewed for concurrence and approved by management representatives with executive responsibility for quality prior to updated releases.

The controlled Quality Manual is available to employees via the internal Configuration Management System. All Interpoint Sales Offices outside the Redmond facility will be distributed one controlled copy of the Quality Manual; all other copies will be uncontrolled and issued for reference only.

The Quality Manual shall be reviewed at least annually for updating to reflect current practices, policies, and organizational structure.

4.0 QUALITY MANAGEMENT SYSTEM REQUIREMENTS


4.1 General Requirements

Interpoint's primary concern is for the quality of our products and services. In order to assure our success we must offer products and services that meet our customer's needs and requirements. These products or services must also satisfy or exceed our customer's expectations. Our products and services shall comply with laws and ethical standards of conduct in society. We shall also strive through continuous quality improvement and close cooperation with our suppliers to provide products and services that are competitive while assuring the financial well being of Interpoint.

Interpoint has established, documented, implemented and maintains a Quality Management System (QMS) aligned to the ISO 9001:2008, AS9100 standards, and MIL-PRF-38534. The System, where applicable, incorporates the requirements from each of these standards and any other appropriate requirements. The quality manual, procedures, work instructions and forms define organizational structure, responsibilities, processes, procedures, and resources available for quality management.

Interpoint has identified and documented processes necessary to establish an effective QMS throughout the organization (see FIGURES 3 - 6). Where appropriate the sequence and interaction of the processes has been determined and ensures that the operation and control of these processes are effective in maintaining the overall quality of the goods and services delivered by Interpoint (see FIGURE 2). Outplant services for production processes are controlled by the purchasing process.

Interpoint shall ensure that sufficient resources are made available to: implement, monitor, maintain and continually improve upon processes, in order to assure the continued effectiveness of the QMS.

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4.1 General Requirements (continued)

The effectiveness of the QMS is monitored against objectives established by the management using Business Unit Reviews, Key Process Indicators (KPI), and Internal Audits.

4.2 Documentation Requirements

4.2.1 General

Interpoint's QMS documentation includes:



- A Quality Policy and Quality Objectives
- A Quality Manual
- Documented procedures required by ISO 9001:2008
- Documented procedures required by AS9100
- Documented procedures required by MIL-PRF-38534
- Documents required by Interpoint to ensure the effective planning, operation and control of its processes
- Records required by ISO 9001:2008.
- Quality System requirements imposed by the applicable regulatory authorities.

Documented procedures and processes established for the Quality Management System are referenced herein and specifically found in QA-093 (Quality Systems Procedures Matrix).

Interpoint shall ensure that personnel have access to Quality Management System documentation and are aware of relevant procedures. Customer and/or regulatory authority representatives shall have access to QMS documentation.

4.2.2 Quality Manual

This manual was written to meet the requirements of ISO9001, AS9100 standards and MIL-PRF-38534.

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4.2.3 Control of Documents

Interpoint has established and maintains documented procedures to control documents and data that relate to our quality system and the requirements of ISO9001, AS9100 standards and MIL-PRF-38534. These shall include, internal procedures/work instructions/forms, documents of external origin such as drawings, specifications, manufacturer test reports and certificates of conformity, and internal documents such as sales/purchase orders, calibration and training records, audits and corrective actions.

Documents and data shall be maintained in hardcopy and/or electronic formats in such a manner as to maintain their legibility and fitness for use.

All documents such as procedures shall be reviewed and approved prior to release by authorized personnel as defined in Interpoint released procedures. This shall pertain to initial document releases as well as future revisions. Furthermore, a master list of documents shall be maintained and readily available to identify the current revision of documents, so as to preclude the use of invalid or obsolete documents.

Document revisions to procedures shall be noted on the individual documents as well as in the Configuration Control database.



The Configuration Control System shall ensure that essential documents, contract or data change information, contract instructions, specifications or any other documents are available at the point of use.

The issue, control and recall of documents shall be under the jurisdiction of the Configuration Control Supervisor and the QA Manager. Requests for changes to controlled documents shall be submitted to Quality Assurance at a minimum for review and initiation.

Where required due to contract or regulatory requirements, Interpoint shall coordinate appropriate document changes with customers or regulatory agencies.

Specific procedures related to the above QMS elements are, where applicable, defined in QA-093 (Quality Systems Procedures Matrix).

Changes to this Quality Manual are reviewed and approved by Senior Management.

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4.2.4 Control of Records

Records have been established and maintained to provide evidence of conformity to requirements and of the effective operation of the QMS. All records are legible, readily identifiable and retrievable. A Records Retentions Matrix (GEN-047) has been established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records.

Records are available for review by customers and regulatory authorities in accordance with contract or regulatory requirements.

Quality records will include as defined in GEN-047 (Records Retention Matrix):

- Management reviews;
- Employee certifications and training records;
- Design, development, and testing activities;
- Customer contract and / or purchase order reviews;
- Design inputs;
- Design reviews and resulting actions;
- Results of verification and validation testing, including any necessary actions;
- Changes during the development process;
- Supplier records;
- Qualified processes, equipment, and personnel as appropriate;
- Unique identification of the individual product or lot – when traceability is a specific requirement;

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4.2.4 Control of Records (continued)

- Notification to the customer when customer property is lost, damaged, or is otherwise unsuitable for use;
- Calibration records and test software verifications;
- Quality system audits;
- Inspection plans / control plans and results, including, as applicable, receiving, in-process, and final;
- Records of nonconforming material transactions, including: inspection rejections, internal rejections, deviations, customer complaints, and return material;
- Corrective and preventive actions;
- Other records as specified by the customer.

Safeguards shall be maintained for records on any media that protects against disaster, system obsolescence, and loss.

4.3 Configuration Management


Interpoint has established, documented and maintains a configuration management process appropriate to the product as defined in QA-093 (Quality Systems Procedures Matrix).

5.0 MANAGEMENT RESPONSIBILITY

5.1 Management Commitment

Senior management is actively involved in maintaining the QMS. It provides the vision and strategic direction for growth of the QMS, and establishes quality objectives and the quality policy.

To continue to provide leadership and show commitment to the improvement of the QMS, senior management communicates the importance of fulfilling customer, legal and regulatory requirements through the periodic communication meetings as well as by conducting management reviews to ensure the availability of resources.

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5.2 Customer Focus

Interpoint strives to meet or exceed the needs of its customers. Much of our ability to provide customer satisfaction will come from our review of customer purchase order documents and our effectiveness in complying with them, along with any other appropriate regulatory requirements. In addition it is Interpoint's intention to develop clear channels of communication with customers, both pre and post delivery, so that issues relating to order expediting/delivery /quality can be discussed. Interpoint will review customer generated feedback on our performance and will utilize the data during QMS reviews to help identify process improvements that will allow us to better server customer needs.

5.3 Quality Policy

Build the Best, Ship the Best, Be the Best and Continually Improve

Responsibility for upholding this policy applies to all sites under the leadership of the President of Crane Electronics and the guidance of the Director of Quality who encourage the personal commitment of all co-workers to address quality as part of their skills.

Build the Best


Crane Electronics is on a continual journey dedicated to building a world class organization. All employees are committed to build the best products, which meet or exceed requirements, and to provide the best services of any company in our industry.

Ship the Best

We are committed to 100% accurate, on time delivery of our products and services.

Be the Best

Crane Electronics recognizes that the disciplines of quality, environmental management, health and safety are integral parts of its management function. We view these as a primary responsibility, and fundamental to the best business practice of operating under the control of a Quality Management System in compliance with ISO 9001 and AS9100 standards. Crane Electronics implements continual improvement initiatives focused on Safety, Quality, Delivery, and Cost by taking action to:

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5.3 Quality Policy (continued)

- Communicate Quality objectives, as well as performance in achieving these objectives, throughout the Company and to interested parties;
- Take due care to ensure that activities are safe for employees, associates and others who come into contact with its products, work and other activity;
- Work closely with Customers and Suppliers in seeking to establish the highest Quality standards;
- Adopt a forward-looking view on future business decisions which may have an impact on Quality;
- Train all members of staff in the needs and responsibilities of Quality Management;
- Constantly strive to meet, and where possible exceed, our customer's expectations.

5.4 Planning

5.4.1 Quality Objectives


Interpoint has established that relevant functions and levels within the organization have clear, measurable quality objectives that are consistent with the company policies and product requirements. These are represented under the Key Process Indicators (KPI) of Safety, Quality, Delivery and Cost. Adequate resources are available and output is planned in a controlled manner as is required by the QMS, being mindful of the process, the impact of change, and the need for continual improvement.

5.4.2 Quality Management System Planning

Quality planning at the company level shall consist of implementation, updating, and maintenance of this Quality Manual and the supporting quality specifications. Customer and supplier feedback as supplied through formal reports, through performance reviews, during audits or through surveys shall be considered during the update reviews of this document.

The approach and deployment of quality planning within the Business Unit shall include, as appropriate:

- Design / Development Assurance Plans;
- Short and long term plans, including Continuous Improvement Projects, with goals for improving quality and customer satisfaction. Performance to these goals shall be monitored and reported.

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5.4.2 Quality Management System Planning (continued)

These plans shall address:

- Product quality
- Cycle time
- Customer service
- Training
- Cost
- Delivery commitments
- Process capability
- Product reliability
- Maintaining methods for disaster recovery;
- Cross-functional teams;
- Subcontractor / supplier input;
- Feasibility reviews;
- Failure Mode and Effects Analysis (FMEA);
- Control plans, inspection and testing techniques;
- Identification of customer special characteristics;
- Consideration and awareness of product safety issues relative to design and process control;
- Utilization of mistake proofing methodologies when planning processes, facilities, equipment and tooling;

Business Plan:

Each Business Unit shall have the authority and responsibility for ensuring compliance to the company's Business Plan requirements. As appropriate, the Business Plan shall be communicated throughout the organization. Comprehensive continual improvement activities shall be included in the plan. These activities shall address opportunities in quality and productivity. Business Plan results shall be tracked, reviewed, and revised by management at appropriate intervals. Records of such reviews shall be maintained. Senior management of the Business Unit shall define quality objectives that address customer expectations and measurements that shall be included in the Business Plan and used to deploy the Quality Policy.

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5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

As part of the QMS, a hierarchical organizational chart has been created which defines the management authority structure within the company. This chart shall be maintained by the Human Resources Department and made available for reference to interested parties.

5.5.2 Management Representative

To ensure the integrity and overall suitability of the QMS, a member of management has been appointed who will have the responsibility and authority to implement, modify or amend the QMS, as necessary, to assure that the requirements imposed on the quality system are maintained and the quality principles of the company adhered to. In addition, the management representative shall have the responsibility and authority to resolve matters related to quality and product conformity.


5.5.3 Internal Communication

The appointed management representative shall further be responsible for raising employee awareness and acceptance of the QMS through effective communication (e.g., memo's, meetings, etc) and training. As part of the awareness effort, employees shall be made aware of appropriate customer imposed requirements (e.g., as highlighted on orders, included in special messages, references in procedures, verbal/written notifications, etc...) that could affect the quality level of delivered goods and services.

5.6 Management Review

5.6.1 General

The management representative shall be responsible for reviewing Interpoint's quality system on an annual basis at a minimum and reporting to senior management on its performance and any areas that require improvement (e.g., procedures, work instructions, policies or quality objectives). This will be done to ensure the QMS continued suitability and effectiveness in satisfying the requirements of AS9100, ISO9001, customer needs/requirements and/or the stated quality policy and objectives of Interpoint's Management. Any other relevant supporting documentation from the reviews shall be maintained on file, as appropriate (e.g. ., corrective actions, recommendations for improvement, requests for resources, meeting minutes, etc). At a minimum, the members of senior management in attendance during the review are the Director of Quality, the Solution Leaders, Supply Chain Manager and Operations Manager (or respective designates for each).

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5.6.2 Review Input

The Management Review input includes:

- Result of internal and external audits
- Customer feedback
- Processes performance and product conformity (Balanced Scorecards)
- Status of preventive and corrective actions (CAR aging)
- Follow-up actions from previous Management Review
- Strategic or operational changes that could affect the QMS
- Improvement recommendations

5.6.3 Review Output

The Management Review Output comprises the minutes of the meeting and the resulting action items regarding:

- Improvement of the effectiveness of the QMS
- Improvement of the product related to customer requirements
- Resources needed

6.0 RESOURCE MANAGEMENT


6.1 Provision of Resources

Interpoint's goal is to provide all of its customers with the highest quality goods and services. To this end, the companies QMS shall be provided, by management, sufficient human, material and financial resources to ensure that it is effectively implemented, maintained and improved upon. Through planned and efficient use of: technology, resources, customer participation, supplier participation, and quality management techniques, Interpoint shall ensure that customer needs are met now and into the future.

6.2 Human Resources

6.2.1 General Competence Awareness and Training

Anyone in Interpoint having an assignment associated with any of the processes of the QMS is competent through education, skill, training and experience as necessary. Requirements for education, skills, training and experience are found in the job descriptions maintained by the Human Resources department.

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6.2.2 Competence, Awareness and Training

The needs for training of personnel are identified, and documented procedures for providing that training are established and maintained as defined in QA-093 (Quality Systems Procedures Matrix). Appropriate training is provided to all levels of personnel within Interpoint performing activities affecting quality. All employees are aware of the importance of their activities and how they contribute to achieving quality objectives. The qualifications of personnel performing specialized operations, processes, tests or inspections are evaluated and documented. The employee's performance review is also used to identify specific individual training as well as evaluate effectiveness of actions taken to satisfy competency needs. Formal training records are maintained by the Quality Assurance Department for Development and Training. These include proof of certification for special processes, as applicable. Additional documented education and experience records are maintained in the employee personnel files. It is the responsibility of the Senior Management to ensure that their employees are aware of the quality objectives and of the importance of their activities in achieving these objectives.


6.3 Infrastructure

Interpoint has developed and continues to improve upon an infrastructure that it believes enhances operational effectiveness, maintains product conformity/fitness for use and promotes employee teamwork. To ensure product integrity, Interpoint products are maintained in a controlled environment as required by MIL-PRF-38534. To allow for proper material tracking within the facility, material routing is used to identify both materials and storage locations. In addition, designated areas have been established to ensure proper segregation of accepted, un -accepted, bonded and scrap materials; so as to prevent the inadvertent use of unapproved or unacceptable materials.

To ensure efficient use of human resources, sufficient technological and material resources are made available to employees, to enable them to safely and effectively carry out their job responsibilities.

6.4 Work Environment

Facilities, including workstations and associated equipment, shall be maintained in a state of order, cleanliness, and repair appropriate to the product(s) manufactured. All work areas must comply with established safety, regulatory and environmental standards and codes.

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7.0 PRODUCT REALIZATION

7.1 Planning of Product Realization

Interpoint's QMS has been developed to ensure that all customers receive the highest quality products and services; as exemplified in the companies overall quality objectives. Through the establishment of procedures and processes relating, but not limited to: customer contract review, material inspection, equipment, calibration, purchasing and order processing, Interpoint shall ensure that all applicable requirements for material and contract conformances are consistently met. Where appropriate, records shall be maintained which support product conformance.

While the products supplied by Interpoint are not considered to be serviceable and do not require maintenance, Interpoint shall make appropriate resources available to its customers for the purpose of verifying product conformance and/or with questions relating to specifications, installation and use. If Interpoint staff are not immediately able to assist the customer, the material manufacturer shall be consulted for support and/or clarification.

Specific procedures and work instructions related to the above QMS elements are, where applicable, defined in QA-093 (Quality Systems Procedures Matrix).



7.2 Customer Related Processes

7.2.1 Determination of Requirements Related to the Product

Interpoint has a documented review process for all purchase orders and contracts received to ensure that our customer's requirements (e.g., product type, quantities, delivery, revision, etc) are adequately defined and documented; so that potential problem issues can be identified and resolved prior to final acceptance.

7.2.2 Review of Requirements Related to the Product

The appropriate functions responsible for verifying that the customer request can be satisfied shall include review the purchase order, request for quote, drawing or specification. Appropriate action shall be initiated to resolve differences to ensure satisfaction of contractual requirements before acceptance of the order. This verification shall include a consideration of verbal and electronic ordering methods as well as a means to convey changes to existing order requirements. Amendments to contracts shall be reviewed and appropriate actions shall be initiated to resolve any differences.

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7.2.2 Review of Requirements Related to the Product (continued)

The review of customer specifications shall include as appropriate:

- The Development / Product Engineering function shall be responsible for determining product compliance with the customer's requirements and the initiation of the cross-reference process;
- The Quality function shall be responsible for determining compliance to those quality requirements that include measurement data, performance criteria, verification and/or validation requirements, customer special requirements, audit parameters and compliance to special labeling and packaging requirements;
- The Materials function shall be responsible for determining compliance to the delivery requirements;
- The Manufacturing Engineering function shall investigate, confirm and document the manufacturing feasibility of the proposed products, including risk analysis.

7.2.3 Customer Communication

Formal communication channels are established and maintained between the Interpoint and the customer to ensure that customer requirements are properly addressed.

Internal communication channels are established and maintained between the Program Manager and all of the program employees to ensure that the customer requirements are known and understood at all times, and that cost, schedule, technical performance and quality objectives are being achieved.


7.3 Design and Development

7.3.1 Design and Development Planning

Product/Program Management coordinates the development of project plans with the functional units. These plans may include an Engineering Development Plan, Configuration Management Plan, Software Development Plan and/or Quality Assurance Plan depending on the size and scope of the specific project.

These plans define the organization and responsibility, the resources, the task sequences and all the mandatory steps required by the project. Project plans are reviewed and updated as required during the design and development process. Updates or changes to these plans may require customer approval when defined by the contract. Periodic project design reviews as defined in the project plans and project phase reviews as mandated by the Phase Review Process are conducted by the responsible Product/Program Manager to evaluate the progress of the project.

Other requirements essential for design and development are defined in QA-093 (Quality Systems Procedures Matrix).

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7.3.2 Design and Development Inputs

The design input requirements are defined either by the customer's Statement of Work, the customer's product specification, military and other governing specifications, and internal product specifications in the case of development projects, and/or the contract. The documents identify characteristics such as function, performance, reliability, physical constraints, spare capacity and safety. Requirements are defined so that their achievement can be verified to ensure customer satisfaction. Any conflicting, incomplete, or ambiguous requirements are escalated to the Product/Program Manager for resolution and, where necessary, discussed with the customer.


Other requirements essential for design and development are referenced in QA-093 (Quality Systems Procedures Matrix).

7.3.3 Design and Development Outputs

The design output is a product definition that meets the design input requirements and satisfies the acceptance criteria. This definition is contained in design specifications, drawings, parts lists and test procedures, which are all reviewed before release. As appropriate, the product data package specifies the characteristics that are essential to the safe and proper functioning of the product and identify key characteristics, when applicable, in accordance with the design or contract requirements:

- All pertinent data required to allow the product to be identified, manufactured, inspected, used and maintained are defined;
- Drawings, part lists, specifications;
- A list of those drawings, part lists and specifications necessary to define the configuration and the design feature of the product;
- Information on material, processes, type of manufacturing and assembly of the product necessary to ensure conformity of the product.

Other requirements essential for design and development are referenced in QA-093 (Quality Systems Procedures Matrix)

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7.3.4 Design and Development Review

Project team meetings, peer reviews, and formal design reviews are conducted as defined in the Project Management Plan throughout the design, development, and qualification phases of product development in order to control, coordinate, and track the project status.

Product/Program Management ensures that formal hardware and/or software design reviews are conducted for each program. Reviews are supported by independent design review expertise as required to ensure adequacy of the design to satisfy the contractual, quality and productivity requirements of the end product. The design reviews identify problems and proposed necessary actions, and authorize progression to the next stage.

Other requirements essential for design and development are referenced in QA-093 (Quality Systems Procedures Matrix).

7.3.5 Design and Development Verification

Designs are verified to meet product/program (input) requirements through the design output documents preparation and approval process. The approval and release of the documents is the record that the design meets the requirements of the specification. As an integral part of design verification, designs are verified through analysis, alternative calculations, test, demonstration, and design similarity analysis. Records of the results of the verification are reviewed before being released and are maintained as quality records.

Other requirements essential for design and development are referenced in QA-093 (Quality Systems Procedures Matrix)


7.3.6 Design and Development Validation

Product function and performance are validated in accordance with the customer or internal SOW or product specification. These activities typically include standard and environmental condition tests, reliability and maintainability demonstrations, formal qualification testing and acceptance testing.

Design and/or development validation follows successful design and/or verification:

- Validation is normally performed under defined operating conditions.
- Validation is normally performed on the final product, but may be necessary in earlier stages prior to production completion.
- Multiple validations may be performed if there are different intended uses.

Other requirements essential for design and development are referenced in QA-093 (Quality Systems Procedures Matrix)

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7.3.6.1 Documentation of Design and/or Development Verification and Validation

Interpoint shall ensure that reports, calculations, test results, etc., demonstrate that the product definition meets the specification requirements for all identified operational conditions.

7.3.6.2 Design and/or Development Verification and Validation Testing

Where tests are necessary for verification and validation, these tests are planned, controlled, reviewed, and documented to ensure and prove the following:

- Test plans or specifications identify the product being tested and the resources being used defined test objectives and conditions, parameters to be recorded, and relevant acceptance criteria;
- Test procedures describe the method of operation, the performance of the test, and the recording of the results;
- The correct configuration standard of the product is submitted for the test;
- The requirement of the test plan and the test procedures are observed;
- The acceptance criteria are met.

7.3.7 Control of Design and Development Changes

Design changes can result in a change to existing documentation or the generation of new documentation. Design change documentation is reviewed, approved, controlled, recorded and issued in accordance with established configuration management procedures by the same functions involved in the original issue. Controlled documents, which include drawings, test procedures, engineering change orders (ECOs), etc., are reviewed and approved prior to their initial release or revision.


Changes to controlled documents are approved by the same authorized functions/organizations that reviewed and approved the original document, unless specifically authorized otherwise by those functions/organizations.

The change control process provides for customer and/or regulatory authority approval of changes, when required by contract or regulatory requirement.

7.4 Purchasing

7.4.1 Purchasing Process:

Interpoint has established a documented set of procedures and work instructions to insure that purchased products conform to specified requirements including conformance to: print specifications, established quality standards and any applicable customer requirement.

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7.4.2 Purchasing Information:

Interpoint shall evaluate and select suppliers on the basis of their ability to: meet Interpoint's contract requirements, supply desired products, meet quality requirements, and adhere to delivery schedules. The extent of control exercised by Interpoint over suppliers shall include subsequent quality audits and monitoring of supplier's facility. This control shall be dependent upon the type of product, the impact of the suppliers product on Interpoint's customers and, where applicable, on the quality audit reports and/or records of previous supplier performance. Both Interpoint and its suppliers shall provide "right of access" during normal business hours to customers/regulatory authorities for the purposes of verifying product and/or order records.

7.4.3 Verification of Purchased Product

Sources selected by the purchasing authority for procurement of materials or services shall be evaluated and approved by Quality Assurance, prior to including them on the list of approved sources. The Quality Assurance Manager shall have the right to remove any supplier from the approved supplier list, based on its failure to meet Interpoint's order requirements or for any other reason that could adversely affect the quality of the product Interpoint supplies to its customers. The purchasing authority will be the final authority on which bidder shall receive a purchase order.


Interpoint shall only purchase materials from original equipment manufacturers or reputable distributors who's quality system meet or exceed Interpoint's and/or customer specified requirements. When applicable, procured materials shall be accepted if accompanied by documentation clearly tracing the material lots to the original manufacturer (e.g., test reports/certificates of conformity). When applicable, all materials upon receipt shall be inspected to verify conformance with issued purchase order requirements; using in house or manufacturer supplied print specifications.

A list shall be maintained by Quality Assurance of suppliers who, based on quality performance, have been approved to supply Interpoint with goods and services. The list shall include the scope of the approval and relevant contact information.

The Quality Department maintains quality reports on all primary product suppliers and provides copies to suppliers informing them of their quality status and if applicable corrective actions need to be taken to address deficiencies. These documents shall serve as the basis for determining the continued suitability of suppliers.

Records demonstrating supplier performance and product conformance shall be maintained on file. In addition, a random sample from each of the manufactures Interpoint is an authorized distributor for, shall be sent out for independent raw materials test report validation. Interpoint shall, as part of its audit of suppliers, provide them with copies of standard terms and conditions clauses that are applicable to all orders, unless specifically stated otherwise on submitted purchase orders.

Other requirements are referenced in QA-093 (Quality Systems Procedures Matrix)

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7.5 Production and service provisions

7.5.1 Control of Production and Service Provision

Processes for the manufacturing, inspection and testing of products are identified, planned and carried out under controlled conditions, in order to ensure the quality of those products.

Documented procedures defining those processes are provided by means of drawings, specifications, workmanship standards and work instructions. Workmanship, including accept and reject criteria, is specified in written standards or by means of representative samples. Planned inspections and tests are performed at specific points during the manufacturing cycle.

Manufacturing travelers are used as evidence that all manufacturing and inspection operations have been completed as planned or otherwise documented and authorized. Where key characteristics have been identified, appropriated process control is planned to ensure that all necessary tools are available to perform the controls. The manufacturing, inspection and testing, of the products are performed in a suitable working environment, with the use of suitable production equipment. The precision of the equipment selected is consistent with the process capability. A schedule for preventive maintenance is maintained to provide evidence of the maintenance performed on the equipment.


Controlled conditions also include as applicable:

- The implementation of release, delivery and post-delivery activities;
- Accountability for all product during manufacturing (e.g., parts quantities, split orders, non-conforming product);
- Provision for the prevention, detection, and removal of foreign objects;
- Monitoring and control of utilities and supplies and chemical products to the extent they affect product quality; and
- The requirements for the control of processes are as prescribed in contracts and as defined in the applicable manufacturing, inspection, and test work instructions.

7.5.1.1 Production Documentation

Production operations are carried out using approved data. This data contains as necessary:

- Drawing, parts list, traveler, work instructions, test specifications, etc.
- A list of tools, ATP, and associated software with the applicable revision, etc.

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7.5.1.2 Control of Production Process Changes

Production process changes are documented and approved by the Quality and Manufacturing Engineering departments, and when applicable by the regulatory authority or the customer.

Results of these changes are assessed to confirm that the desired effect has been achieved without adverse effect to product quality.

7.5.1.3 Control of Production Equipment


Documented procedures are established and maintained to assure adequate control of Production Equipment used in the manufacture of product. The procedures address the design, production, release for production, identification and control, verification of accuracy, revisions and modifications, storage, maintenance and required records. Production Equipment and programs are validated prior to use, maintained and inspected periodically according to documented procedures. Validation prior to production use includes verification of the first article produced to the design data/specification. .

7.5.1.4 Control of Work Transferred Outside the Organizations Facilities

Interpoint routinely transfers work outside the company, and has defined the process to control the quality of work.

7.5.1.5 Control of Servicing Operations

This section is not applicable as Interpoint contracts do not require servicing (not provided).

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7.5.2 Validation of Processes for Production and Service Provision

Where the results of processes cannot be fully verified by subsequent inspection and testing of the product, the processes are carried out by certified operators and/or require continuous monitoring and control of process parameters to assure that the specified requirements are met. This includes any processes where deficiencies become apparent only after the product is in use or the service has been delivered. Special processes to be implemented are identified and qualified and/or validated and approved prior to use.

The qualification and/or validation demonstrates the ability of these processes to achieve the planned results. Interpoint has defined criteria for the review and approval of these processes. Applicable aspects of special processes are controlled, as defined by the process specification, including special process changes. The significant process operations and parameters to be controlled during production are defined in documented procedures. Documented procedures are established and maintained to assure the requirements for qualification and/or validation of process operations, including associated equipment and personnel are specified. Records are maintained for qualified processes, equipment, and personnel, as appropriate. Personnel responsible for the performance and control of special processes are trained and certified. Interpoint has established provisions for the revalidation of these processes, as applicable.

7.5.3 Identification and Traceability

Documented procedures are established and maintained to identify product undergoing fabrication or assembly from receipt and during all stages of production and delivery to the extent required by contract. Product status is identified with respect to monitoring and measurement requirements. A procedure establishes and controls acceptance authority media used (e.g., stamps, electronic signatures, passwords). When specified by requirement, the procedures allow for unique identification of individual product or batches for traceability, which is recorded. When traceability is required, loss of traceability is considered a nonconformance. When required by contract, regulatory or other established requirement, provisions are made for identification to be maintained throughout the product life, for traceability of all product manufactured from the same batch of raw material or from the same manufacturing batch to destination (delivery, scrap, etc.), for traceability of an assembly to its components and to the next higher assembly, for retrieval of the sequential production record (manufacture, assembly, inspection) of a given product, and for maintenance of identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed configuration.

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7.5.4 Customer Property

Customer furnished property is processed in the same manner as other products within Interpoint. When specified in a contract, special handling instructions for Customer furnished property shall take precedent over Interpoint's standard procedures. Loss, damage, or unsuitability of a customer's material is documented and reported to the customer. Verification by Interpoint does not, however, absolve the customer of the responsibility to provide an acceptable product.

7.5.5 Preservation of product

Interpoint preserves the conformity of product during internal processing and delivery to the intended destination. This preservation includes identification, handling, packaging, storage and protection. Preservation also applies to the constituent parts of a product.


Preservation of product includes, where applicable in accordance with product specifications and/or applicable regulations, provisions for:

- Cleaning;
- Prevention, detection and removal of foreign objects;
- Special handling for sensitive products;
- Marking and labeling including safety warnings;
- Shelf life and stock rotation;
- Special handling for hazardous materials.

Interpoint ensures that documents required by the contract/order to accompany the product are present at delivery and are protected against loss and deterioration.

Products, including incoming materials, materials in process, and finished goods (deliverable/returned), are handled in a manner that prevents abuse, misuse, damage or deterioration. This includes protection from Electrostatic Discharge (ESD) and physical damage and exercising safety precautions in labeling hazardous materials in accordance with regulations. Secure storage facilities or stock rooms are provided as necessary for storage of material and products pending use or shipment, to prevent damage or deterioration. Those areas are limited to authorized personnel only. An ESD control program is established for storing of ESD sensitive material.

Hazardous material is stored in accordance with its specific handling requirement in accordance with regulations. Shelf life expiration dates are recorded and monitored. Where applicable, special preservation methods are used to protect material during storage.

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7.5.5 Preservation of product (continued)

Packaging methods are documented to ensure the protection of the product for delivery and transportation. These documents shall include specified packing, preservation and marking (including materials used) in accordance with contractual requirements.

Delivery methods and carriers are selected to ensure damage free shipments and on-time delivery per contract specifications.

7.6 Control of Monitoring and Measurement Devices

Inspection, measurement, and test equipment is selected which assures sufficient accuracy and precision to determine product compliance. All equipment covered by the calibration program is calibrated or verified at defined intervals against standards that are traceable to an internationally recognized standard. Where no such standards exist, the basis used is documented.

A list of all monitoring and measuring equipment used for acceptance of product is maintained, and a process is defined for the calibration of this equipment.


The following are defined for each piece of equipment:

- Equipment type and unique identification
- Location
- Calibration method
- Calibration frequency
- Acceptance criteria

The calibration process defines action to be taken when results are unsatisfactory, including assessing and documenting the validity of previous inspection and test results.

Inspection, measurement, and test equipment storage, usage, and calibration is in a controlled in-door environment, where there is no exposure to adverse environmental conditions that would affect accuracy and fitness for use.

A system is defined to recall equipment when required. Calibrations are rechecked if equipment is dropped, damaged, or otherwise suspected of no longer being within calibration.

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8.0 Measurement, Analysis and Improvement

8.1 General

Interpoint has established and maintains detailed, documented procedures and work instructions for the performance and monitoring of inspection and testing activities, in order to verify that the specified requirements for products, customers and the QMS are met. Where appropriate, Interpoint shall identify the need for statistical techniques required for establishing and verifying product characteristics. The types of techniques chosen for use shall be such that they fulfill the customer's and/or Interpoint's requirements for product specification verification.

The QMS itself shall be audited at scheduled intervals to verify its effectiveness and ability to meet the needs of our customers achieve established quality objectives and adhere to the requirements of AS9100. Based on auditing results, areas of improvement will be explored and enhancements to the system implemented, where appropriate.

8.2 Monitoring and Measurement of Product

8.2.1 Customer Satisfaction


Interpoint shall review: customer complaints, returns, feedback and performance evaluation reports, to try and obtain a sense of the perceived quality and satisfaction levels it is providing to its customers as a whole.

When possible, Interpoint will take appropriate measures to enhance its operations where actual or perceived customer satisfaction levels could be improved upon (e.g., have customer requirements been fully met and if not what measures can be implemented to ensure future compliance).

8.2.2 Internal audits

Interpoint has established and maintains documented procedures governing the planning and implementation of internal quality audits. These audits are designed to determine the effectiveness of Interpoint's quality system and to verify its ability to meet the needs of our customers, adhere to company quality objectives and satisfy the requirements of ISO 9001:2008, AS9100, and MIL-PRF-38534.

To satisfy auditing requirements, Interpoint conducts periodic audits of its activities to verify their effectiveness to the quality system. Activities found to be of greater importance to the quality system shall be audited on a more frequent basis, if deemed necessary by the QA Manager. Qualified personnel, who are not directly responsible for the activity being audited, shall conduct internal audits to ensure an objective evaluation.

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8.2.2 Internal audits (continued)

The listing below defines elements that, at a minimum, shall be included in the auditing program:

- The functions, procedures and work instructions to be audited
- The personnel qualified to perform the audit.
- The frequency of the audits.
- The methods for reporting audits.
- The methods for reporting the findings.
- The means for having corrective actions agreed upon and implemented.
- The means for monitoring the effectiveness of implemented actions.

During the course of auditing activities, auditors shall utilize checklists and obtain objective evidence, where appropriate, in order to verify compliance. Checklists shall be developed for department audits and will be based on the QMS, customer and/or regulatory requirements that are carried out within the department or are applicable to the entire organization.


The results of quality audits shall be recorded and brought to the attention of the management personnel in the area being audited as well as to senior management (as part of QMS review meetings). Management shall review the audit and work to take timely and definitive measures to develop corrective actions addressing any audit deficiencies. These corrective actions shall be documented, initiated, and followed up with additional documented audits, in order to verify their effectiveness in resolving the deficiencies.

The results of internal audits shall be used to provide important information to management as to the operational effectiveness of Interpoint's quality system and also will form an integral part of the input to overall QMS review activities.

Specific procedures related to the above QMS elements are referenced in QA-093 (Quality Systems Procedures Matrix).

8.2.3 Monitoring and Measurement of Processes

Interpoint monitors and measures various processes used within the quality system using suitable methods. These performance measurements ensure that our processes are sufficient to meet the quality requirements. If a process is deemed to be in an out of control situation we will take action as appropriate in order to ensure product quality.

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8.2.4 Monitoring and Measurement of Product

Interpoint inspects and tests products to ensure all requirements are in accordance with the applicable specifications at various points in the process. When key characteristics are called out for the product (via SCD, assembly drawing, traveler, test procedure), the characteristic is inspected and/or tested and is documented.

Interpoint performs sampling and 100% inspection based on the critical nature of the test in accordance with regulatory specifications. If sampling inspections or tests exhibit non-conformance, then increase sampling and/or 100% inspection/test will be performed. When a 100% inspection or test is reduced to a sample plan, the plan shall be submitted to customer or regulatory agency for approval (e.g. alternate method).


All products are inspected and tested to meet all requirements prior to ship. If product requires additional testing upon completion of the production process then the product may be held or released with customer approval under positive recall.

Interpoint records the results of the inspection and the identity of the person authorizing release of product. Product is not released until it has passed all required inspections, unless allowed by Interpoint's procedures with positive recall traceability (i.e. Interpoint may ship product prior to completion of Life Test with customer approval per MIL-PRF-38534 allowances).

8.2.4.1 Inspection Documentation

Documented procedures are established and maintained for inspection and testing activities in order to verify that the specified requirements for the product are met and to require that records be maintained. The inspection and test procedures specify the resources and methods to be used and the methods of recording the results. Personnel authorized to perform inspection and test are identified, the limits of authorization are defined, and training and qualification requirements are specified.

Conformance Criteria - Quality Assurance assures that adequate inspection instructions and acceptance criteria, as applicable, are available at each point of inspection and test. These documents provide workmanship standards and conformance criteria, as required, to determine the acceptance or rejection of all articles, as defined by individual contract requirements. Inspection and Test Procedures - Quality Engineering initiates and/or approve inspection and test procedures for all areas of Quality Assurance. These procedures are readily available to all inspection and test personnel and include reference to the applicable drawings or specifications.

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8.2.4.1 Inspection Documentation (continued)

Inspection and test procedures include, as applicable:

- Identification of the article to be inspected or tested.
- Inspection, measuring and test equipment to be used.
- Preliminary operations to be performed such as calibration, operational checks, adjustments, etc.
- Conditions to be maintained during the inspection or test such as cleanliness, temperature, humidity and any special precautions.
- Step by step method of performing each inspection and test operation, including magnification conditions, input characteristics and test sequences.
- Criteria for determining acceptance or rejection of the article, such as test limits, tolerance conditions and workmanship standards.
- Details of any sampling plans to be used.
- Workmanship Inspection Standards - Samples of acceptable workmanship are provided by Quality Assurance in areas where workmanship standards are necessary, and where such standards cannot be properly defined pictorially or verbally. Quality Assurance and the customer when required by contract jointly select such samples.

8.2.4.2 First Article Inspection

When required by customer or regulatory agency, first article inspection is performed to verify all documentation, testing, engineering, production, qualification and quality meets all aspects of the customer and regulatory agency documentation (i.e. PO, SOW, SCD, Regulatory Specifications). First Article Inspection is performed initially and after subsequent changes provided by the customer.

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8.3 Control of nonconforming product

All product – whether production materials, components, assemblies, final product, or other types of work – detected or suspected as not conforming to requirements shall become the responsibility of the Quality function for:

- Controlling further movement of the material to prevent material from unintended use or delivery;
- Documenting and reviewing material;
- Coordinating the disposition action;
- Notifying appropriate personnel;
- Initiating and verifying corrective action and effectiveness;
- Establishing and tracking a prioritized defect reduction plan;
- Trend analysis and providing input for corrective and preventive action.


Nonconforming or suspect nonconforming material, including unidentified material, shall immediately be visually identified as nonconforming, and shall be prevented from inadvertent further processing, where practicable, by storage in an area that is visually identified and segregated for this purpose.

Review and disposition of nonconforming or suspect nonconforming material shall be coordinated by Quality with the appropriate operations / manufacturing and engineering functions. The material may be sorted, reworked, returned to the supplier, scrapped, or deviated.

Nonconforming product may be released for use when a deviation has been processed and approved. All deviations shall clearly specify the temporary limits of acceptability, state the definitive corrective action and be approved by the appropriate engineering functions. If the affected dimension, feature, or characteristic is a specified customer requirement; no deviation shall be issued unless the customer approval has been granted. This applies equally to product or services purchased from suppliers.

The Business Unit shall concur with any requests by a supplier before submission to the customer. The Business Unit shall also ensure compliance with the original or superseding specification and requirements when the deviation expires.

If the nonconforming material is accepted for rework / repair, rework instructions shall be provided and the material shall be reinspected to an approved quality plan before it returns to the process.

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8.4 Analysis of data

Interpoint has a continuous focus on quality and maintains an operational excellence program. The OPEX program utilizes numeric metrics of operations and materials to drive continued improvement in quality and financial performance.

8.5 Improvement

8.5.1 Continual Improvement

Interpoint is committed to continuous improvement. At Interpoint continuous improvement is:


- A part of the quality policy
- Reflected in the quality objective
- A part of the actions taken upon audit results
- Driven by opportunities surfacing from data analysis
- A result of corrective action when the action taken corrects a new problem
- Always a result of preventive action
- A required output from management review

8.5.2 Corrective Action

Interpoint has established and maintains documented procedures that define who will be responsible and have the authority for initiating corrective and preventive actions. The degree to which corrective and preventive actions will be taken shall be appropriate to the magnitude of the problem. When these actions are initiated, controls shall be used to ensure that the specified actions have been taken and are effective.

Interpoint has developed documented procedures, which define the process of initiating corrective action measures and subsequent effectiveness verification. Elements of the Interpoint corrective action program include:

- Documenting and processing customer complaints and/or reports of product non - conformities.
- Investigating the root causes of non -conformities relating to: the product, process, quality system, and recording the findings.
- Preparing and implementing a list of corrective actions designed to eliminate the non –conformity problems, based on the findings from the root cause analysis.
- Establishing procedures for the review of initiated corrective actions to ensure that the non conformity issues have been effectively dealt with.

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8.5.2 Corrective Action (continued)



- Provisions for relaying corrective action requests to our suppliers; in those cases where non-conformity root causes have been determined to come from the supplier or original material manufacturer.
- Procedures to be followed if corrective action requests have not been addressed in a timely manner and/or have been found to not have adequately resolved the source of the non-conformity.

8.5.3 Preventive Action

Interpoint has developed documented procedures, which define measures taken within the company, as part of a preventative action initiative, to identify potential problem areas that could result in non-conformities. Interpoint's preventative action initiative shall:

- Analyze information derived from product documentation (e.g., test reports, inspection results), customer complaints and product audits to join with our suppliers in developing effective preventive actions designed to address potential causes of non-conformities.
- Conduct periodic reviews of our procedures to help identify potential problems, which could impact on the quality of the products and services we provide our customers.
- Upon the identification of a potential problem area, it shall be submitted to management for review and consideration for corrective action initiation.
- Analyze customer feedback either from direct comments or through performance reports to determine areas where improvements could be made to improve our ratings with the customer or where overall customer satisfaction could be enhanced.

Specific procedures related to the above QMS elements are referenced in QA-093 (Quality Systems Procedures Matrix).

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Crane Electronics Group

Legal Entity: Interpoint Corporation

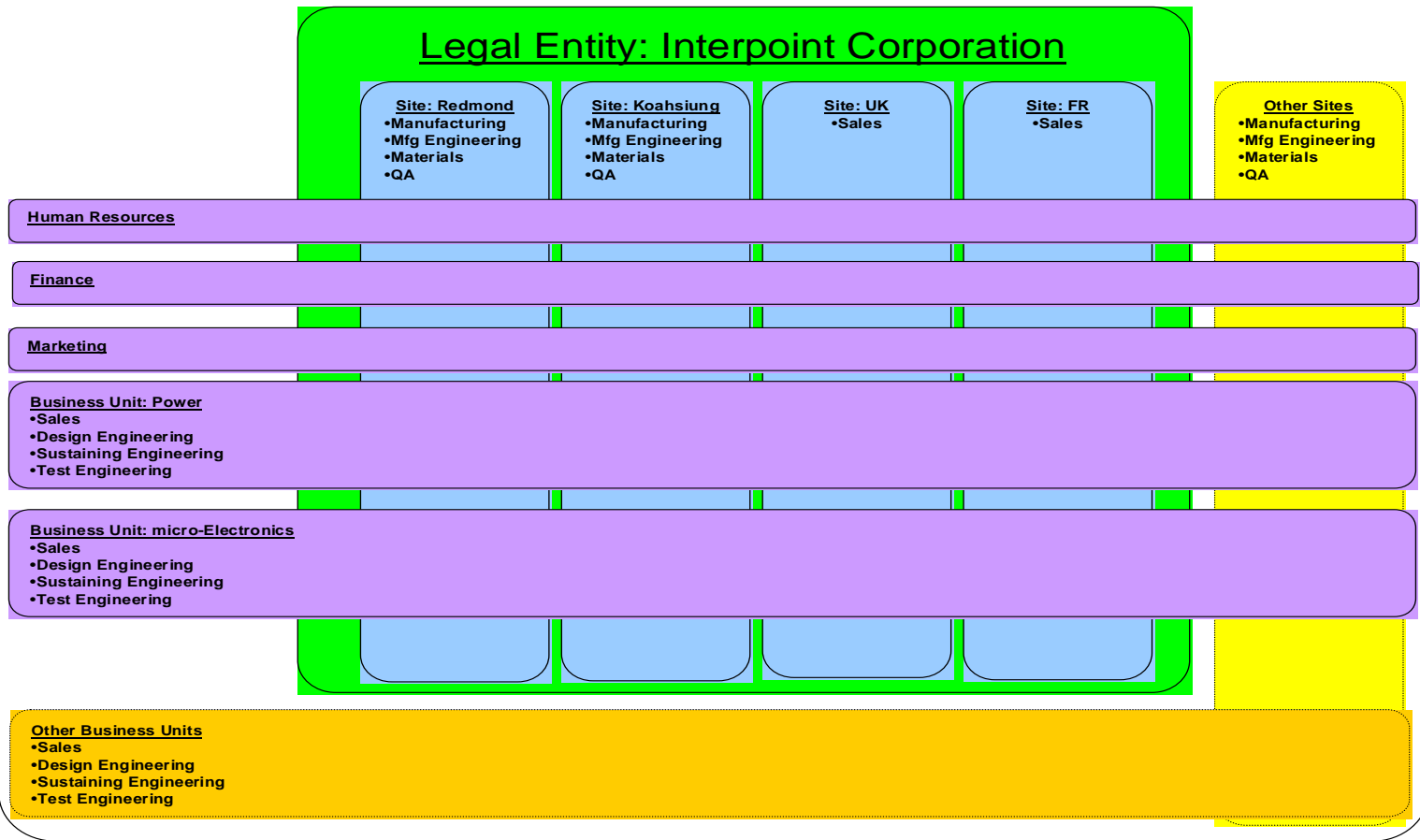


FIGURE 1

CRANE AEROSPACE & ELECTRONICS INTERPOINT <small>A CRANE CO. COMPANY</small> 10301 WILLOWS ROAD, REDMOND, WA 98052	SIZE A	CAGE NO. 50821	DRAWING NO QA-040	REV AP
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Interpoint Sequence and Interaction Of Processes

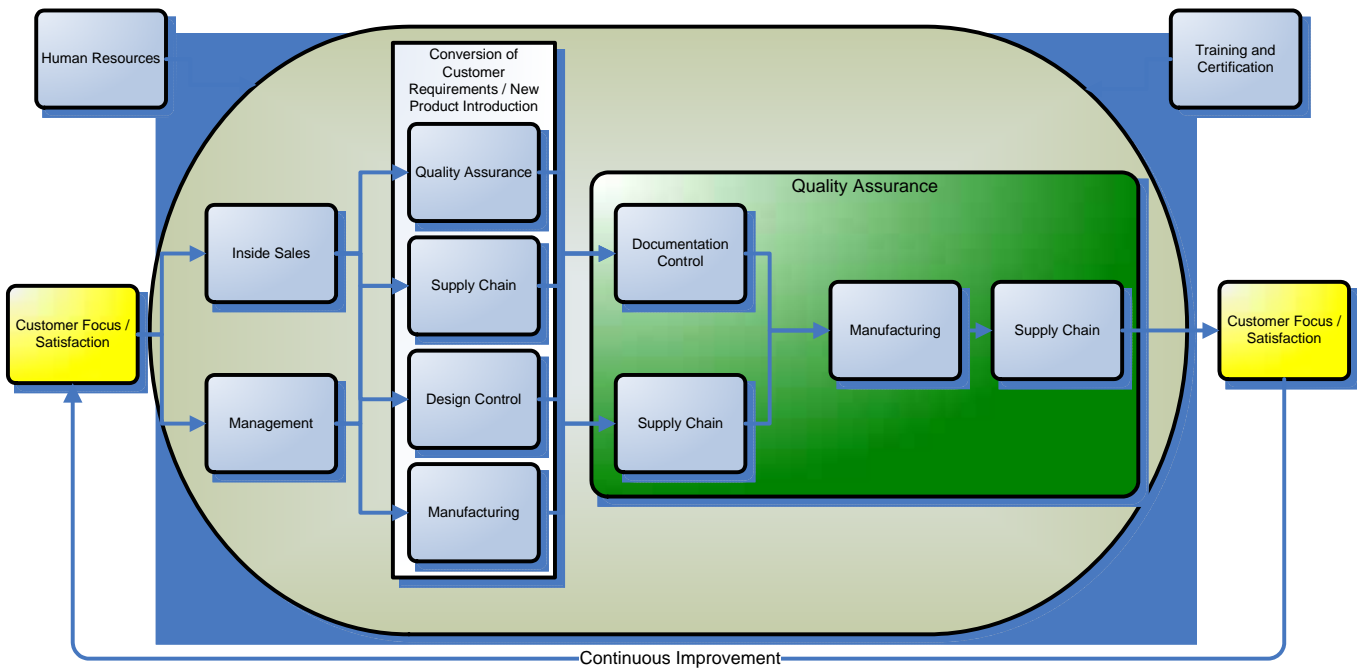




FIGURE 2



 CRANE AEROSPACE & ELECTRONICS  INTERPOINT A CRANE CO. COMPANY	SIZE A	CAGE NO. 50821	DRAWING NO QA-040	REV AP
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AS9100 Element Applicability Matrix (Redmond Site)

<p>Instructions: This matrix is a <u>controlled document</u> and is used to define the specific AS9100 requirements that apply to each QMS Process / Area in the company. It is used to inform each process owner of the requirements that they must comply with. It is also used to guide internal auditors on what should be covered during QMS audits.</p> <p>Enter XX if the element has primary applicability in the process (i.e. this process is directly responsible for / manages conformance to this element). Enter an X if the element has secondary applicability in the process (i.e. requirements somewhat apply here but there is not direct responsibility for conformance). An example is Document Control (4.2.3). Every process has some responsibility but the Quality Assurance department normally manages document control and has primary responsibility.</p>		Processes									
		A	B	C	D	E	F	G	H	I	J
		MANAGEMENT	INSIDE SALES	DESIGN CONTROL	DOCUMENTATION CONTROL	MANUFACTURING	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES	SUPPLY CHAIN	CUSTOMER FOCUS/ SATISFACTION
4.1	General Requirements	XX	X	X	X	X	X	X	X	X	X
4.2	General Documentation Requirements	XX	X	X	X	X	X	X	X	X	X
4.2.2	Quality Manual	X	X	X	X	X	XX	X	X	X	
4.2.3	Control of Documents	X	X	X	XX	X	X	X	X	X	X
4.2.4	Control of Records	X	X	X	XX	X	X	X	X	X	X
5.1	Management Commitment	XX	X	X	X	X	X	X	X	X	X
5.2	Customer Focus	X	XX	X	X	X	X	X	X	X	X
5.3	Quality policy	X	X	X	X		XX	X	X	X	
5.4.1	Quality Objectives (Planning)	XX	X	X	X		X	X	X	X	
5.4.2	Quality Management System Planning	XX		X			X		X		
5.5	Responsibility, Authority and Communication	XX	X	X	X	X	X	X	X	X	X
5.6	Management Review	X	X	X	X	X	XX	X	X	X	X
6.1	Provision of Resources	XX							X		
6.2	Human Resources	X	X	X	X		X	X	XX	X	X
6.2.2	Competence, Awareness and Training	X			X	X	X	X	XX		
6.3	Infrastructure	XX	X	X	X		X	X	X	X	X
6.4	Work environment	X		X		XX		X			
7.1	Planning of Product Realization	X		XX		X	X			X	X
7.2	Customer-Related Processes		XX	X		X	X			X	X
7.3	Design and Development			XX	X	X	X		X		

FIGURE 3



 CRANE AEROSPACE & ELECTRONICS  INTERPOINT A CRANE CO. COMPANY	SIZE A	CAGE NO. 50821	DRAWING NO QA-040	REV AP
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		Processes									
		A	B	C	D	E	F	G	H	I	J
		MANAGEMENT	INSIDE SALES	DESIGN CONTROL	DOCUMENTATION CONTROL	MANUFACTURING	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES	SUPPLY CHAIN	CUSTOMER FOCUS/SATISFACTION
7.4	Purchasing						X		X	XX	X
7.5.1	Control of Production and Service				X	XX	X	X			
7.5.2	Validation of Processes for Production and Service				X	XX	X	X			
7.5.3	Identification and Traceability				X	XX	X	X		X	
7.5.4	Customer Property			X			XX				
7.5.5	Preservation of Product					XX	X	X		X	
7.6	Control of Monitoring and Measuring Devices	X				X	XX	X			
8.1	General	XX					X				X
8.2.1	Customer Satisfaction	X	X				X				XX
8.2.2	Internal Audit	X	X	X	X	X	XX	X	X	X	X
8.2.3	Monitoring and Measurement of Processes	X	X	X	X	XX	X	X	X	X	X
8.2.4	Monitoring and Measurement of Product	X				X	XX	X	X		
8.3	Control of Nonconforming Product				X	X	XX	X	X	X	
8.4	Analysis of Data	X	X	X	X	X	XX	X	X	X	X
8.5.1	Continual Improvement	XX	X	X	X	X	X	X	X	X	X
8.5.2	Corrective Action	X	X	X	X	X	XX	X	X	X	X
8.5.3	Preventive Action	X	X	X	X	X	XX	X	X	X	X

FIGURE 3 continued

AS9100 Element Applicability Matrix (Taiwan Site)											
Instructions: This matrix is a controlled document and is used to define the specific AS9100 elements that apply to the QMS Process (As per AS9100 Rev. 10/17)	Processes										
	A	B	C	D	E	F	G	H	I	J	



 CRANE AEROSPACE & ELECTRONICS  INTERPOINT A CRANE CO. COMPANY	SIZE A	CAGE NO. 50821	DRAWING NO QA-040	REV AP
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		MANAGEMENT	INSIDE SALES**	DESIGN CONTROL**	DOCUMENTATION CONTROL	MANUFACTURING	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES	SUPPLY CHAIN	CUSTOMER FOCUS/ SATISFACTION
4.1	General Requirements	X			X	X	X	X	X	X	X
4.2	General Documentation Requirements	X			X	X	X	X	X	X	X
4.2.2	Quality Manual	X			X	X	X	X	X	X	
4.2.3	Control of Documents	X			X	X	X	X	X	X	X
4.2.4	Control of Records	X			X	X	X	X	X	X	X
5.1	Management Commitment	X			X	X	X	X	X	X	X
5.2	Customer Focus	X			X	X	X	X	X	X	X
5.3	Quality policy	X			X		X	X	X	X	
5.4.1	Quality Objectives (Planning)	X			X		X	X	X		
5.4.2	Quality Management System Planning	X							X		
5.5	Responsibility, Authority and Communication	X			X	X	X	X	X	X	X
5.6	Management Review	X			X	X	X	X	X	X	X
6.1	Provision of Resources	X							X		
6.2	Human Resources	X			X		X	X	X	X	X
6.2.2	Competence, Awareness and Training	X			X	X	X	X	X		
6.3	Infrastructure	X			X		X	X	X	X	X
6.4	Work environment	X				X		X			
7.1	Planning of Product Realization					X	X			X	X
7.2	Customer-Related Processes					X	X			X	X
7.3	Design and Development (N/A)*										

*Note: Clause 7.3 Design and Development is a process centralized out of the Redmond Site. It is not applicable to the Taiwan site.

**Note: These process areas are not applicable to this site.

FIGURE 4

 CRANE AEROSPACE & ELECTRONICS  INTERPOINT A CRANE CO. COMPANY	SIZE A	CAGE NO. 50821	DRAWING NO QA-040	REV AP
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10301 WILLOWS ROAD, REDMOND, WA 98052

		Processes									
		A	B	C	D	E	F	G	H	I	J
		MANAGEMENT	INSIDE SALES**	DESIGN CONTROL**	DOCUMENTATION CONTROL	MANUFACTURING	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES	SUPPLY CHAIN	CUSTOMER FOCUS/ SATISFACTION
7.4	Purchasing (N/A)*										
7.4.3	Verification of Purchased Products				X	X	X	X			
7.5.1	Control of Production and Service				X	X	X	X			
7.5.2	Validation of Processes for Production and Service				X	X	X	X			
7.5.3	Identification and Traceability				X	X	X	X		X	
7.5.4	Customer Property						X				
7.5.5	Preservation of Product					X	X	X		X	
7.6	Control of Monitoring and Measuring Devices	X			X	X	X	X			
8.1	General	X					X				X
8.2.1	Customer Satisfaction	X					X				X
8.2.2	Internal Audit	X			X	X	X	X	X	X	X
8.2.3	Monitoring and Measurement of Processes	X			X	X	X	X	X	X	X
8.2.4	Monitoring and Measurement of Product	X				X	X	X	X		
8.3	Control of Nonconforming Product	X			X	X	X	X	X	X	
8.4	Analysis of Data	X			X	X	X	X	X	X	X
8.5.1	Continual Improvement	X			X	X	X	X	X	X	X
8.5.2	Corrective Action	X			X	X	X	X	X	X	X
8.5.3	Preventive Action	X			X	X	X	X	X	X	X

*Note: With the exception of Clause 7.4.3, Clause 7.4 Purchasing is a process centralized out of the Redmond Site. It is not applicable to the Taiwan site.

**Note: These process areas are not applicable to this site.

FIGURE 4 continued

 CRANE AEROSPACE & ELECTRONICS	INTERPOINT A CRANE CO. COMPANY	SIZE	CAGE NO.	DRAWING NO	REV
		A	50821	QA-040	AP
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ISO9001 Element Applicability Matrix (France Site)

Instructions: This matrix is a controlled document and is used to define the specific AS9100 requirements that apply to each QMS Process / Area in the company. It is used to inform each process owner of the requirements that they must comply with. It is also used to guide internal auditors on what should be covered during QMS audits. Enter XX if the element has primary applicability in the process (i.e. this process is directly responsible for / manages conformance to this element). Enter an X if the element has secondary applicability in the process (i.e. requirements somewhat apply here but there is not direct responsibility for conformance). An example is Document Control (4.2.3). Every process has some responsibility but the Quality Assurance department normally manages document control and has primary responsibility.		Processes									
		A	B	C	D	E	F	G	H	I	J
		MANAGEMENT	INSIDE SALES	DESIGN CONTROL**	DOCUMENTATION CONTROL**	MANUFACTURING**	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES**	SUPPLY CHAIN	CUSTOMER FOCUS/ SATISFACTION
4.1	General Requirements	X	X				X	X		X	X
4.2	General Documentation Requirements	X	X				X	X		X	X
4.2.2	Quality Manual	X	X				X	X		X	
4.2.3	Control of Documents	X	X				X	X		X	X
4.2.4	Control of Records	X	X				X	X		X	X
5.1	Management Commitment	X	X				X	X		X	X
5.2	Customer Focus	X	X				X	X		X	X
5.3	Quality policy	X	X				X	X		X	
5.4.1	Quality Objectives (Planning)	X	X				X	X		X	
5.4.2	Quality Management System Planning	X					X				
5.5	Responsibility, Authority and Communication	X	X				X	X		X	X
5.6	Management Review	X	X				X	X		X	X
6.1	Provision of Resources	X									
6.2	Human Resources	X	X				X	X		X	X
6.2.2	Competence, Awareness and Training	X					X	X			
6.3	Infrastructure	X	X				X	X		X	X
6.4	Work environment	X					X	X			
7.1	Planning of Product Realization	X					X			X	X
7.2	Customer-Related Processes		X				X			X	X
7.3	Design and Development (N/A)*										

*Note: Clause 7.3 Design and Development is a process centralized out of the Redmond Site. It is not applicable to the France site.

**Note: These processes areas are not applicable to this site.

FIGURE 5


 CRANE AEROSPACE & ELECTRONICS	INTERPOINT <small>A CRANE CO. COMPANY</small>	SIZE	CAGE NO.	DRAWING NO	REV
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		Processes									
		A	B	C	D	E	F	G	H	I	J
		MANAGEMENT	INSIDE SALES	DESIGN CONTROL**	DOCUMENTATION CONTROL**	MANUFACTURING**	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES**	SUPPLY CHAIN	CUSTOMER FOCUS/ SATISFACTION
7.4	Purchasing (N/A)*										
7.5.1	Control of Production and Service						X	X			
7.5.2	Validation of Processes for Production and Service						X	X			
7.5.3	Identification and Traceability						X	X		X	
7.5.4	Customer Property						X				
7.5.5	Preservation of Product						X	X		X	
7.6	Control of Monitoring and Measuring Devices	X					X	X			
8.1	General	X					X				X
8.2.1	Customer Satisfaction	X	X				X				X
8.2.2	Internal Audit	X	X				X	X		X	X
8.2.3	Monitoring and Measurement of Processes	X	X				X	X		X	X
8.2.4	Monitoring and Measurement of Product	X					X	X			
8.3	Control of Nonconforming Product	X	X				X	X		X	
8.4	Analysis of Data	X					X	X		X	X
8.5.1	Continual Improvement	X	X				X	X		X	X
8.5.2	Corrective Action	X	X				X	X		X	X
8.5.3	Preventive Action	X	X				X	X		X	X

*Note: Clause 7.4 Purchasing is a process centralized out of the Redmond Site. It is not applicable to the France site.

**Note: These process areas are not applicable to this site.

FIGURE 5 continued

 CRANE AEROSPACE & ELECTRONICS	INTERPOINT A CRANE CO. COMPANY	SIZE	CAGE NO.	DRAWING NO	REV
		A	50821	QA-040	AP
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ISO9001 Element Applicability Matrix (UK Site)

Instructions: This matrix is a <u>controlled document</u> and is used to define the specific AS9100 requirements that apply to each QMS Process / Area in the company. It is used to inform each process owner of the requirements that they must comply with. It is also used to guide internal auditors on what should be covered during QMS audits. Enter XX if the element has primary applicability in the process (i.e. this process is directly responsible for / manages conformance to this element). Enter an X if the element has secondary applicability in the process (i.e. requirements somewhat apply here but there is not direct responsibility for conformance). An example is Document Control (4.2.3). Every process has some responsibility but the Quality Assurance department normally manages document control and has primary responsibility.		Processes									
		A	B	C	D	E	F	G	H	I	J
		MANAGEMENT	INSIDE SALES	DESIGN CONTROL**	DOCUMENTATION CONTROL**	MANUFACTURING**	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES**	SUPPLY CHAIN	CUSTOMER FOCUS/ SATISFACTION
4.1	General Requirements	X	X				X	X		X	X
4.2	General Documentation Requirements	X	X				X	X		X	X
4.2.2	Quality Manual	X	X				X	X		X	
4.2.3	Control of Documents	X	X				X	X		X	X
4.2.4	Control of Records	X	X				X	X		X	X
5.1	Management Commitment	X	X				X	X		X	X
5.2	Customer Focus	X	X				X	X		X	X
5.3	Quality policy	X	X				X	X		X	
5.4.1	Quality Objectives (Planning)	X	X				X	X		X	
5.4.2	Quality Management System Planning	X					X				
5.5	Responsibility, Authority and Communication	X	X				X	X		X	X
5.6	Management Review	X	X				X	X		X	X
6.1	Provision of Resources	X									
6.2	Human Resources	X	X				X	X		X	X
6.2.2	Competence, Awareness and Training	X					X	X			
6.3	Infrastructure	X	X				X	X		X	X
6.4	Work environment	X					X	X			
7.1	Planning of Product Realization	X					X			X	X
7.2	Customer-Related Processes		X				X			X	X
7.3	Design and Development (N/A)*										

*Note: Clause 7.3 Design and Development is a process centralized out of the Redmond Site. It is not applicable to the UK site.

**Note: These process areas are not applicable to this site.

FIGURE 6


 CRANE AEROSPACE & ELECTRONICS	INTERPOINT <small>A CRANE CO. COMPANY</small>	SIZE	CAGE NO.	DRAWING NO	REV
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		Processes									
		A	B	C	D	E	F	G	H	I	J
		MANAGEMENT	INSIDE SALES	DESIGN CONTROL**	DOCUMENTATION CONTROL**	MANUFACTURING**	QUALITY ASSURANCE	TRAINING AND CERTIFICATION	HUMAN RESOURCES**	SUPPLY CHAIN	CUSTOMER FOCUS/ SATISFACTION
7.4	Purchasing (N/A)*										
7.5.1	Control of Production and Service						X	X			
7.5.2	Validation of Processes for Production and Service						X	X			
7.5.3	Identification and Traceability						X	X		X	
7.5.4	Customer Property						X				
7.5.5	Preservation of Product						X	X		X	
7.6	Control of Monitoring and Measuring Devices	X					X	X			
8.1	General	X					X				X
8.2.1	Customer Satisfaction	X	X				X				X
8.2.2	Internal Audit	X	X				X	X		X	X
8.2.3	Monitoring and Measurement of Processes	X	X				X	X		X	X
8.2.4	Monitoring and Measurement of Product	X					X	X			
8.3	Control of Nonconforming Product	X	X				X	X		X	
8.4	Analysis of Data	X					X	X		X	X
8.5.1	Continual Improvement	X	X				X	X		X	X
8.5.2	Corrective Action	X	X				X	X		X	X
8.5.3	Preventive Action	X	X				X	X		X	X

*Note: Clause 7.4 Purchasing is a process centralized out of the Redmond Site. It is not applicable to the UK site.

**Note: These process areas are not applicable to this site.

FIGURE 6 continued

 CRANE AEROSPACE & ELECTRONICS	INTERPOINT A CRANE CO. COMPANY	SIZE	CAGE NO.	DRAWING NO	REV
		A	50821	QA-040	AP
10301 WILLOWS ROAD, REDMOND, WA 98052		SCALE		SHEET	44 OF 44