PROCESS MANAGEMENT SYSTEM
1. GENERAL

1.1 Purpose

This Process Management System manual establishes the performance requirements R&M Materials Handling, Inc. (R&M) incorporates throughout the product manufacturing supply chain and allows R&M to share these performance requirements with the product user and product purchaser.

1.2 Scope

R&M, a wholly owned subsidiary of the world’s largest supplier of overhead material handling equipment, KCI Konecranes Plc. (KCI), markets, sells and supports the R&M brand of the corporation’s global product platform throughout the Americas. R&M, KCI Hoists Americas (KHA), KCI Hoists Finland* (KHF), KCI Hoists China* (KHS) and KCI Hoists France* (KHK) are all part of KCI’s Standard Lifting Equipment Division (SLEQ). Together, these five units are responsible for the development, technical support and manufacturing of the corporate platform that includes wire rope hoists, electric chain hoists, crane components and spare parts.

SLEQ’s Proces Management System is built and maintained to meet the requirements of the ISO9001:2000 standard. KCI’s main manufacturing plants are ISO9001:2000 certified.

1.3 Management of Manual


*Main KCI manufacturing plants.

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2. MANAGEMENT’S DECLARATION

KCI Hoists Americas is an important part of KCI’s global organization and R&M’s manufacturing supply chain. With its operations, KCI Hoists Americas ensures the development, manufacturing and delivery of high-performance, safe and reliable products. A normal day’s work for us includes continuous development of product technology, customer service and efficiency. Our customers have the right to expect faultless products and high-quality service as well as immediate reaction if any deviations occur. We achieve this with an organization which is committed to our quality objectives.

2.1 Quality Strategy

Quality Policy:
Our principle is to work immaculately in order to fulfil the needs of our customers. Our reliable products and services are always supplied as agreed and scheduled. We define our tasks clearly, pass correct information to each other and do the job right the first time. The key of all our products and actions is: Reliability comes first! We continuously improve our actions to increase customer satisfaction.

Quality Management:
We develop our processes according to KCI’s objectives using the “SLEQ Process Management System” to continually improve, prevent and eliminate problems. Plans and actions are made, based on customer claims and surveys, to improve customer satisfaction.

We define and review our own Quality Targets and Objectives based on the schedule based in the Process Management System manual. As Director of Manufacturing, I am in charge of applying and monitoring this Process Management System.

I have communicated our Quality Strategy to the unit’s personnel.

Troy Post
Director of Manufacturing
3. CUSTOMER FOCUS

In order to fulfill our customers' expectations, needs and requirements, we monitor product and service supply definitions, offer definitions, order reviews, customer satisfaction surveys, customer claim handling, corrective actions, unit actions, processes when collecting customer feedback and exchanging related information between units.

3.1 Product and service supply definitions

Products produced include electric wire rope hoists, electric chain hoists, crane components and spare parts. The product range is wide and consists of both standard as well as specially designed products. Service supply is verifying in detail the product specifications to the order before acknowledging the order to the customers.

3.2 Offer definitions and order reviews

Customer needs, expectations and requirements must be taken into consideration when preparing and making the offer. Each order must be compared to the customer's requirements. Any deviations from these requirements and expectations must be clarified and communicated to the customer.

3.3 Customer satisfaction surveys and customer feedback

Management initiates the customer satisfaction surveys. Mainly sales personnel or customer claim processors collect customer feedback. The Warranty Administrator and the person in charge of the department always handles the feedback in question.

3.4 Customer claim handling, corrective actions and warranty repairs

Key requirements are that each customer claim must be handled and each problem has to be solved quickly in order to cause as little trouble as possible. The problem is analyzed by the Warranty Administrator and the person in charge of the department that caused the problem. That department will also be in charge of the actions that will eliminate the problem permanently.

R&M aims for quick resolution and to minimize the costs. Minimizing the costs can not happen at the expense of the customer or by delaying the solution, but with efficient and planned actions.
4. BUSINESS OPERATIONS AND ORGANIZATION

4.1 Business operations

R&M Materials Handling, Inc. offers a comprehensive branded product line in the Americas based on standardized components and product platforms supplied by KCI Hoists Americas that includes electric wire rope hoists, electric chain hoists, crane components and spare parts.

4.2 Organization

[Diagram of R&M organization structure]

[Diagram showing the hierarchy of R&M's front line management, including titles and roles for Jim Vandegrift, President - R&M; Kim Miller, Marketing Manager; Troy Post, Director of Manufacturing - KHA; Joe Ingle, National Sales Manager - Crane Builder Channel - USA & Canada; Sean Fowler, Business Development Manager - Industrial Distribution - USA & Canada; Jeff Brazwell, Export Manager - Latin America - All Products & Segments; and Steve Graham, Sales Manager - Entertainment Industry - USA & Canada.]

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5. PROCESS MANAGEMENT

Process Management includes:
- KCI Hoists’ Process Management System.
- Quality Planning: development of processes and quality audits.
- Quality measurements, feedback processes and internal quality audits.
- The process of continual improvement: improvement process and fixing-method.

5.1 KCI Hoists Americas’ Process Management System

KCI Hoists Americas’ Process Management System includes the systematic documentation, supervision and maintenance of Quality actions as defined in this manual and/or related instructions. Emphasis is placed on the prevention of quality problems and increasing customer satisfaction when quality actions are developed. The continual improvement method is applied to our Quality actions.

![Diagram of Process Management System]

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Semi-annual meetings
- Define objectives and monitor the operation of the Process Management System and Continual Improvement Processes.
- Report the effectiveness of the Process Management System and Improvement Processes to SLEQ Management Team.

Monthly meetings
- Monitor and guide the operations of the Process Management System
- Publish the local quality measurements

5.1.1 Quality Responsibilities

Recognizing the factors affecting quality, taking initiative to solve and prevent problems, ensuring that suggestions and approved solutions are carried out are the responsibility of every SLEQ employee.

Regardless of other responsibilities the Warranty Administrator has the authority to ensure that the Quality System is defined, carried out and maintained according to ISO 9001 standard. The Warranty Administrator participates in the development work of Quality Processes and monitors that the customer perspective will be taken into account.

5.1.2 KHA Management Team’s Responsibilities

The KHA management team is in charge of making the proposals defining the unit’s Quality Objectives. The KHA management team is also responsible for defining the processes based on business requirements.

The SLEQ management team is responsible for co-ordinating the Process Management System and conducting audits. In addition, the KHA management team develops the processes together with the rest of the manufacturing supply chain as well as monitors and supports the implementation of processes.

5.1.3 KCI Hoists Americas’ responsibility in SLEQ Process Management System

The Director of Manufacturing is responsible for the implementation of the Process Management System and related processes. He also defines KHA’s Quality Objectives and the plans to achieve them. He works together and communicates with R&M, the KHA Management Team and the rest of the manufacturing supply chain.
5.2 Quality Planning

The purpose of Quality Objectives is to prevent problems, reduce the amount of actions that have no added value and accelerate the implementation of Quality Processes. A Quality Objective is always measurable and time related.

The KHA Management Team plans Quality Processes, and corrective actions. Quality Audits and indicators such as punctuality and the number of claims are a few of the metrics used to monitor the success of implementation.

5.2.1 Planning of Processes

The objective of Process Planning is to improve the ability of the business’ processes in order to fulfil the requirements of customers and other interested parties. Performance indicators accompany all created processes.

5.2.2 Planning of corrective actions

The planning of corrective actions includes objectives and targets of measurements. SLEQ defines mutual Quality Objectives to the units for the next year in accordance with budget instructions. Based on this, KHA’s Director of Manufacturing defines a detailed corrective action plan to implement these.

5.3 Quality Audits

The SLEQ Quality Audit, concerning all units, is held two times a year. In this meeting the General Managers present reports on the following issues: results of previous Quality Audit, Quality Objectives and Measurements, Customer Claims and Surveys, Internal and External Audits, Feedback Processes and lists of Corrective Actions.

The KHA & R&M Management Team reviews the Process Management System two times a year, before the SLEQ Quality Audit. In monthly meetings, 11 times a year, the KHA & R&M Management Team also handle matters related to Quality Management such as claims and improvement processes.
5.4 Measuring

Measurements are tools for management to monitor the processes and implementation of objectives. In addition the requirements of customers, suppliers and other interested parties must be taken into consideration when defining measurements. Measurements grade the performance of processes and non-conformities.

Key Process Indicators (KPI) measure the performance of key processes.

In addition to measurements and KPI’s, R&M always measures customer satisfaction with customer satisfaction surveys and by following the amount of external claims.

5.5 Quality Feedback Process

Feedback can be a non-conformance related to products, delivery, or process. Feedback can be a proposal for improvement. Feedback must include specific information on the problem so that it can be studied and solved quickly and permanently.

External Quality feedback (customer claims) is always delivered to the R&M Technical Support & Warranty team and internal feedback to the work supervisor or KHA Warranty Administrator. The one processing the feedback defines the person who will be in charge of studying the matter as well as making corrective actions (if the feedback requires them).

The feedback process includes the handling of customer claims, vendor quality claims.

5.6 Internal Quality Audits

The purpose of Internal Quality Audits are to enable the management of SLEQ to review that the quality of work is efficient and in compliance with requirements, develop work processes, and to check that methods and requirements for Quality Assurance are followed. Audits help find new ways to improve customer satisfaction, product and service quality and co-operation between SLEQ units.

Audit reports are used in Quality Meetings and in monitoring and developing Quality Operations.
5.7 Continual Improvement Method

The Continual Improvement Method is a customer-oriented Quality Improvement Process.

Organization and method:

Organize regular meetings where quality issues are handled
Agree to the method to bring quality issues to these meetings (claims, problems, mistakes, changes, proposals for improvement)
Use Fixing-method or similar to solve problems:
List all details of the problem.
What impacts (safety, scope, costs, customers)
Serial mistake, random, the same failure in other products
Customer, customer requirements/needs/expectations
Describe process, investigate details, be sure, don’t draw conclusions without facts.
Identify the root cause of the problem.
List outputs of sub-processes for correct actions.
Define actions to make the process function correctly.
Carry out the actions.
Make sure that the problem is solved permanently.
Make a memo where corrective actions are described.
Write down the persons in charge and schedule.
Distribute the memo. Share the results with others.

Under the Director of Manufacturing
Based on reports
Practice, training
Measurement, Quality tools

Communication and monitoring

<table>
<thead>
<tr>
<th>Reports of Customer Claims</th>
<th>Feedback Process</th>
<th>Feedback Process</th>
<th>Quality Measurements</th>
<th>Proposals for Improvement Initiatives</th>
<th>Quality Objectives</th>
<th>Risk Analyses</th>
<th>Handling of Audit Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Claims</td>
<td>Product defects</td>
<td>Defects in Actions</td>
<td>Unwanted Outcome</td>
<td>Budget</td>
<td>Internal Audits</td>
<td></td>
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</tr>
</tbody>
</table>
6. VENDOR QUALITY MANAGEMENT

KHA follows KCI’s purchasing policy where vendor Quality related matters are defined. The principle is to constantly pay attention to vendor evaluation, selection, follow-up and to process development to ensure vendor compliance with our requirements.

Approved vendors are listed in a vendor register. Vendor performance is evaluated by collecting information on punctuality and product quality. Vendors that supply stock parts are also evaluated on shortages that stop production and stock levels that fall below the agreed amounts. Any performance below the agreed requirements is immediately clarified with the vendor.

KCI Hoists Americas is responsible for vendor quality even if the vendor is doing his own quality assurance at their premises.

7. QUALITY DOCUMENTS

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SLEQ Quality Policy

SLEQ Quality Manual and Processes

KHA Quality Manual

KHA Instructions and Processes

R&M Materials Handling, Inc. Process Management System
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Picture 3: Structure of quality documents

All quality documents, both our own and those supplied by vendors, that are relevant to quality, are gathered, listed and archived in order to document the achieved quality and the efficient operation of our Quality System.

Quality archives are maintained so that the loss of files is prevented and the customer has access to the quality files related to him.

The storage time of quality documents is ten years unless otherwise ordered.

*Innovation...Performance...Reliability*
8. R&M’S KEY PROCESSES

The order - delivery process is monitored, evaluated and improved with the help of the following indicators:

- productivity
- order volume
- punctuality
- order backlog
- number of claims
- claim ratio (in relation to deliveries)
- costs of claims
- sales amount

The Continual Improvement Method defined in this Process Management System’s chapter 5.7 is applied by every SLEQ unit during weekly Fixing meetings. During these meetings claims, problems, faults, changes, improvement proposals and other factors affecting quality are reviewed. The manager of the department / factory in question is in charge of the documentation and reporting of the Fixing meetings.

The results of Fixing meetings are discussed in the management’s monthly meetings.

**Innovation...Performance...Reliability**
8.1 Customer Related Processes

8.1.1 Sales

Sales are divided into two parts, the R&M sales to the R&M customer base and the factory sales of KHA to R&M. R&M Materials Handling, Inc. is in charge of maintaining and developing customer relations, creating new customer contacts, offer creation, order handling and sales invoicing for R&M brand customers. KHA is in charge of the sales, customer relations and order handling of R&M Branded Products to R&M and R&M brand customers.

Picture 5: Sales Process

8.1.2 Marketing

R&M’s marketing is the responsibility of R&M and includes development, production and distribution of brochures, product videos, advertisements and other material and equipment used in marketing. Both new and the existing marketing material is developed and produced under the lead of the R&M Marketing Manager, in co-operation with the team of experts that the target the product/service in question. The R&M Marketing Manager handles the material requests or re-directs the request to the person in charge of shipping the material.

8.1.3 After-market services

If inspection, service or spare parts assistance is needed, from initial installation and start-up through full-scale operation, the R&M network of independently owned and operated R&M Master Distributors℠ is available to provide the support needed to ensure successful results. R&M Master Distributors℠ have real-time online access to our vast inventory, documentation library, quotation software and electronic bills of material to ensure a rapid response with accurate information. R&M supports its Master Distributors with a dedicated customer service team of technical experts. Customer satisfaction and fulfillment of defined requirements is guaranteed.

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8.2 Manuals for Installation, Use and Maintenance

Manuals for installation, use and maintenance are always delivered with the product. In addition to these manuals, R&M gives technical support related to these matters. KHA & R&M is responsible for making, updating and delivering the installation instructions, operation and maintenance manuals to the KHA & R&M customer.

The manuals include spare part specifications, drawings and lists which enable easy ordering of spare parts.

8.3 Processes Related to the Manufacturing of the Product

8.3.1 Manufacturing of the Product

Manufacturing processes are applied from the customer’s order to the delivery of a finished product. For production, the input is the order confirmation sent by R&M and the output is the finished product delivered to the customer. The processes are divided into three groups:
- A processes
  Product is totally pre-designed, configured and all its parts are in stock.
- B processes
  Product is totally pre-designed and configured but includes standard options that might have to be purchased.
- C processes
  Products other than A or B.

Typical C process products require contract review or at least an approval of the order signed by the customer to ensure that production understands the customer’s specification correctly in all respects.

Picture 6: The key production processes of KHA.
8.3.2 Inspection and Testing

The purpose of inspection and testing is to remove defective products in the manufacturing supply chain as early as possible and to ensure that the products delivered to the customer meet requirements. The methods, circumstances and the inspector’s qualifications are described in inspection instructions, provided that they are essential to the correct result.

8.3.3 Inspection, Testing and Measuring Equipment

The principle is that all the equipment affecting the reliability of inspections, testing and measuring are supervised, serviced and calibrated regularly. Service and calibration are mainly subcontracted according to the agreed methods and criteria. The Measuring equipment inspector of each factory is responsible for the frequency of calibrations and is in charge of the book keeping.

8.3.4 Identification and Traceability of Product

The purpose of product identification is to ensure that correct raw material and parts that meet the requirements are used in production and assembly. A finished product is traceable with the help of the Production Management System (iLM) by using either a serial number of the hoist, customer order number, R&M’s job number or serial numbers of key components (e.g. motor).

8.3.5 Supervision of Non-conforming Product

Products that do not meet the requirements are marked, reported and isolated from production in order not to be used unintentionally.

8.4 Shipping

The purpose of handling, storing, packaging and shipping activities is to deliver equipment and material to the customer that does not lose its features, is easily handled and does not mix with other equipment or materials.
8.5 R&D, Change Management Process and Application Design

8.5.1 R&D

The task of R&D is designing, development and verification of manufacturing plans of new electric wire rope hoists, electric chain hoists and crane components as well as producing the documents needed in production and maintenance. The actual hoist and crane research and development is concentrated in KCI’s Group R&D department and do not belong to this Manual.

8.5.2 Maintenance of the Crane and Hoist Platform

The maintenance of the product platform i.e. platform design is work that is carried out through the whole life cycle of the product. This work is done to ensure the quality of the product, development according to the needs of the market and cost-efficiency. The material for making improvements is received from the normal communication within SLEQ, between SLEQ and other KCI companies and end customers. We use the following processes in the maintenance of the product platform:

- Study customer feedback, proposals for improvement and Fixing-methods.
- Follow the reliability of the product.
- Constantly work to reduce the costs.
- Supervised Change Management.

8.5.3 Application Design

KHA’s designing activities are mainly application design, the task of which is to change or supplement existing product so that the needs and demands of the customer are fulfilled and the product can be produced economically.

The purpose of designing activities are to produce product plans that meet the customers’ requirements, develop products that are designed for production, and develop new products that give a sufficient financial result.

8.6 Supportive Processes

8.6.1 Document Management

The purpose of document supervision is to keep documents up-to-date, ensure controlled distribution and to prevent the use of documents that have expired or are otherwise invalid.

The documentation is divided according to its nature of production or management as well as according to product generations. The document platform, which is managed in KCI’s Product Information Management System, includes generic product support documentation for the current product platform as well as order-specific documents. The original documents of previous product generations are managed and maintained in a centralized directory. Documentation other than previously defined is managed either in KCI’s Product Information Management System or in the centralized directory.
<table>
<thead>
<tr>
<th>Writer of the document</th>
<th>Drafts the document according to practice, instructions and orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspector and acceptor of the document</td>
<td>Circulates the document for comments, if needed</td>
</tr>
<tr>
<td>Publisher of the document</td>
<td>Checks the correctness and suitability of technical features, procedures, requirements of acceptance etc.</td>
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<td>Gives comments to the writer, if needed</td>
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<td>Is in charge of keeping the documents up-to-date</td>
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<td>Is in charge of the distribution to the correct persons</td>
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<td></td>
<td>Makes sure that the persons possessing the document have sufficient information on how to handle the old document when a new one is distributed</td>
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<td>Makes sure that the original document is stored in a way that it won’t disappear or get damaged</td>
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<td></td>
<td>Makes sure that the documents are easily found with classifications and/or codes</td>
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### 8.6.2 IT

There are two IT systems, KCI’s Production Management System iLM and KCI’s Product Information Management System E2P (Aton), used for operations management. iLM includes order handling, work planning, material supervision and purchasing. There is a separate interface for financial administration. E2P includes the mechanical and electrical design of SX products, quality documents and order-specific documents such as certificates and electrical drawings.

Each user is responsible for the maintenance of the system to his own extent. KCI’ Financial Director has the main responsibility for IT systems.

### 9. HUMAN RESOURCES

The main target of Human Resources Management in KHA and R&M is to ensure a skilful and motivated staff at all levels of the organization. We want to be known for having good people.

Personnel development is based on business line strategies and objectives. The purpose is to support the achievement of business objectives and to ensure that we recognize the fields of know-how critical to the future competitiveness and invest in employee development. Sufficient orientation and work training are important to ensure the know-how. The management of KHA and R&M is responsible for the personnel development.

The purpose of training is to give employees orientation, advanced training and re-education when the tasks or possible changes in tasks require it. It is the superiors’ responsibility to define the personnel's need for training as well the required basic education and qualification for those who will be employed. The superiors also take care of organizing the needed training.

Management monitors the training and makes out a yearly training plan in accordance with budgeting. This plan defines the need, scope and focuses of training.
10. SAFETY AT WORK

Safety is incorporated into everyday work of KCI’s organization. KHA has an industrial safety program, a yearly safety action plan and a safety supervisor.

11. ENVIRONMENT

KCI’s strategy is to develop and provide products and services that have no undue environmental impact, are safe when used as intended, are efficient in their consumption of energy and natural resources and can be reused or disposed of safely.

12. VOCABULARY

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Unit</td>
<td>Profit center</td>
</tr>
<tr>
<td>Quality Target</td>
<td>A specific target value for operational improvement</td>
</tr>
<tr>
<td>Quality Objective</td>
<td>A specific product, service or process, which is examined from a Quality point of view</td>
</tr>
<tr>
<td>Quality Strategy</td>
<td>Strategy defined by SLEQ’s top management</td>
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<tr>
<td>Fixing-method</td>
<td>Problem solving method</td>
</tr>
<tr>
<td>SLEQ Management Team</td>
<td>SLEQ Business Line Executive, Unit Managers and SLEQ Quality Manager</td>
</tr>
<tr>
<td>KHA Management Team</td>
<td>Production Managers, KHA Warranty Administrator</td>
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<tr>
<td>KHA</td>
<td>Component factory, Springfield, OH</td>
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<td>KHF</td>
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<td>KHS</td>
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<td>KCI</td>
<td>KCI Konecranes Plc., Hyvinkaa, Finland</td>
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