



QUALITY MANUAL

ISO 9001:2008

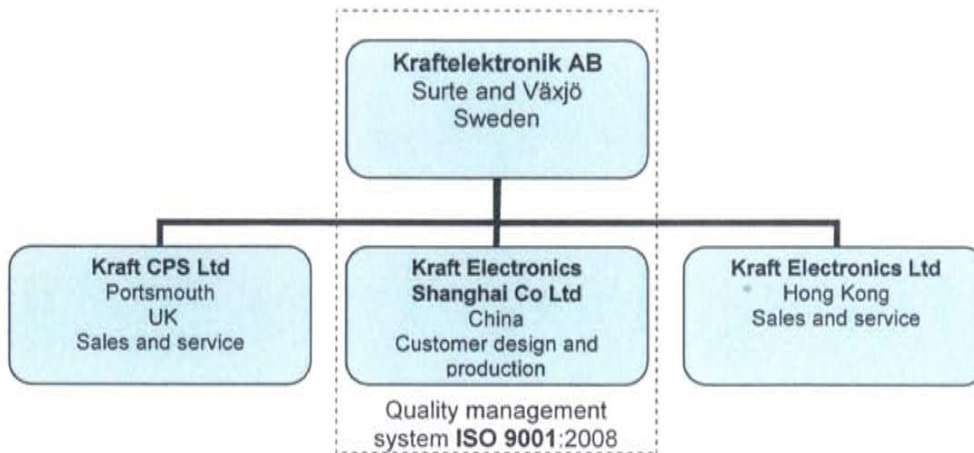
Flap	Chapter	Document number	Revision
	PREFACE	<u>75-135.0000-3</u> GB	Rev E
1	4. QUALITY MANAGEMENT SYSTEM	<u>75-135.0000-4</u> GB	Rev D
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	Enclosures: Index of Enterprise manual,	<u>75-135.0078</u> GB	Rev B
	Structure of quality management system	<u>75-135.0028</u> GB	Rev G
	Cross-reference between routines on Kraftelektronik AB	<u>Annex 1</u>	Rev B
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	5.1 Management commitment		
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PREFACE

The Quality Manual is the over all description of Kraftelektronik AB's (Kraft) quality management system (QMS) which is made in conformity with the standard SS-EN ISO 9001:2008.

Organization

Kraft is a privately owned company with its head office in Surte, Sweden. Business is done in Surte and Växjö and by subsidiaries in England, Hong Kong and Shanghai. The business in Sweden and Shanghai embraces design, manufacturing and service of products and control systems for power conversion in DC systems, rail vehicles, electrostatic precipitators and electrochemical processes.



4. QUALITY MANAGEMENT SYSTEM

4.1 General requirements

Kraft has identified and established the sequences and interactions of processes needed for the QMS. This is documented in the Enterprise manual (EM) No 75-135.0078, which is assessable on the company's Intranet.

The QMS has established criteria and methods ensuring that the processes are efficient and are controlled effectively. It also ensures the availability of information necessary to supporting operation and monitoring of these processes. Applicable processes are being measured, monitored and analysed to enable achievement of planned objectives.

If Kraft chooses to outsource any process that affects product conformity to requirements, will the type and extent of control of that process be defined in the QMS.

4.2 Documentation requirements

4.2.1 General

Kraft's QMS fulfils all requirements in the standard SS-EN ISO 9001:2008. The quality assurance work is controlled by procedures and instructions. The document No 75-135.0028 describes the structure of the QMS.

Customer demands exceeding the content of the QMS may be accepted separate order. Such demands must be clear and fully identified, and they can only be accepted if all affected departments of Kraft have been consulted and give their consent.

4.2.3 Quality manual

This manual gives the over all description of the processes included in the QMS by referring to documented procedures and instructions. The sequence and interaction of the processes included in the system are described briefly in the EM whilst detailed descriptions are included in documents for underlying procedures.

4.2.3 Control of documents

All documents in the QMS affecting the products and their production have revision statuses. The documents are controlled and approved by qualified persons prior to distribution.

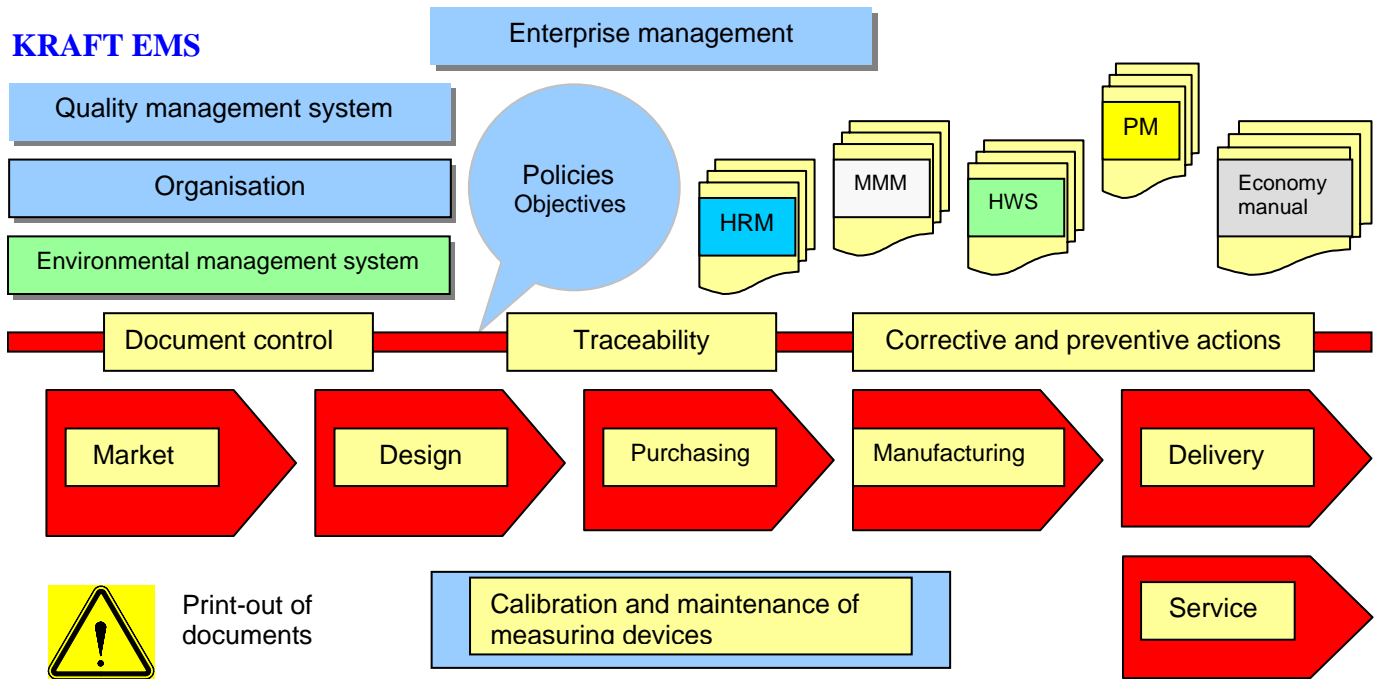
The instruction IM 22:01 "Procedure document control" indicates who is responsible for issuing and recording of the respective document and for how long time. The records are kept in secure places. IM 22:01 also ensures that all documents regarding manufacturing and testing are available in right editions at the working sites where they are being used.

Document revisions are controlled and approved by the same function that originally approved the document.


4.2.4 Control of records

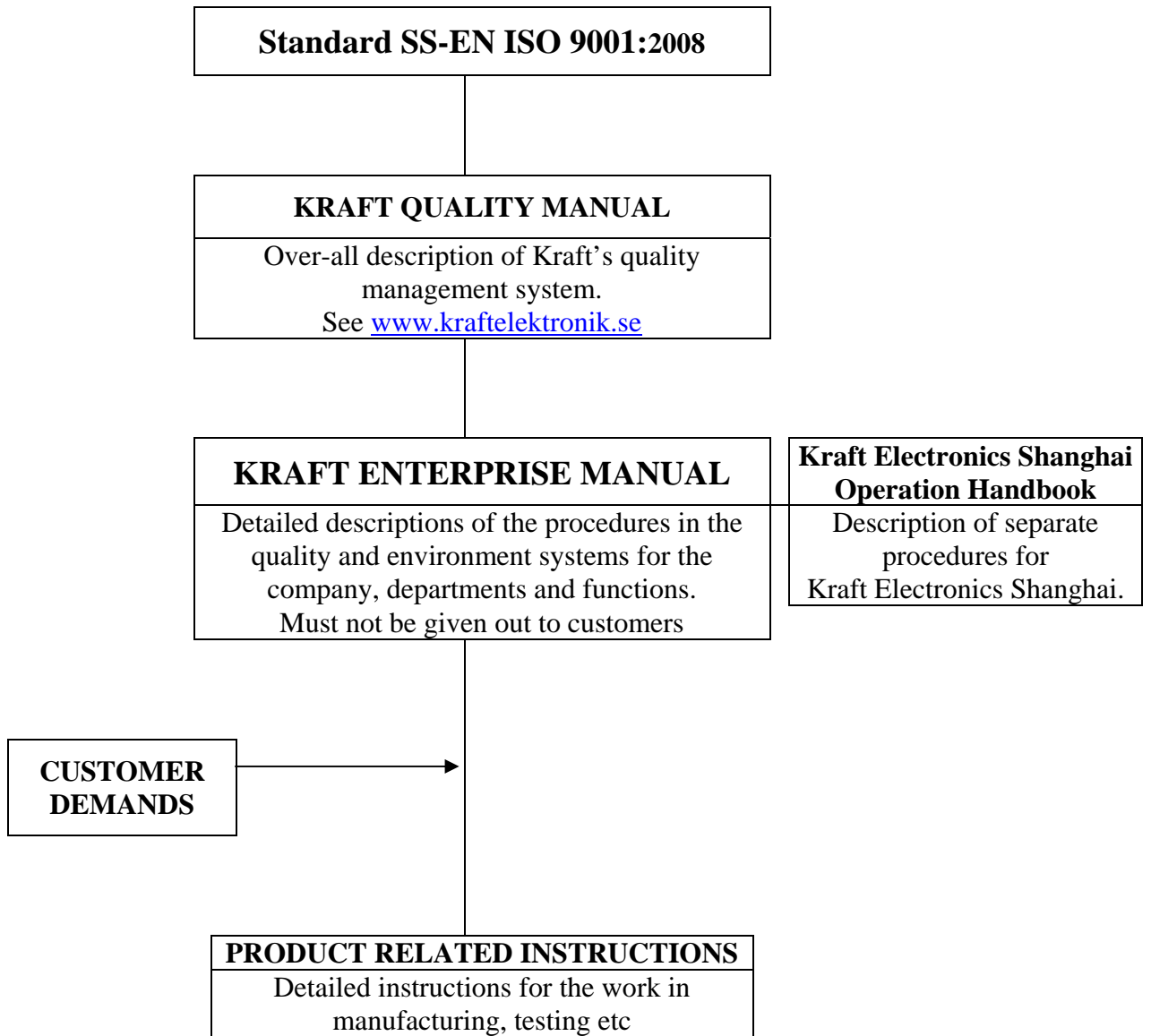
Records are established to provide evidence of conformity to the requirements and of the effective operation of the QMS. The control of records is done according to the instruction No 75-135.0059 "Management of records".

KRAFT EMS



- HRM = Human resources manual
- MMM = Materials management manual
- HWS = Health, work environment, safety manual
- PM = Production manual

 Kraftelektronik AB	STRUCTURE QUALITY MANAGEMENT SYSTEM	75-135.0028GB	Rev G
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Kraftelektronik AB

Cross-reference between routines on

Kraftelektronik AB and
Kraft Electronics Shanghai Co LTD

Annex 1
75-135.0000-4

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Kraftelektronik AB		Kraft Electronics Shanghai Co LTD	
Document No.	Title	Document No.	Title/ Comment
75-135.0024	Internal audit	-	<i>Controlled by Kraftelektronik AB</i>
75-135.0027	Quality policy	75-135.0027	Same as Kraftelektronik AB, GB/Cn
75-135.0028	Structure of quality management system	75-135.0028	Same as Kraft
75-135.0029	Responsibilities and authorities	R 002	Every branch's responsibility
75-135.0032	Competence and training	Q 003	Resource management
75-135.0033	Product identification and traceability	Q 005	Product identification and Traceability
75-135.0034	Production process control	Q 011	Production
75-135.0035	Inspection, testing and control	Q 012	Monitoring and measurement of processes and products
75-135.0036	Handling, storage and protection	Q 031	Handling, storage and protection
75-135.0037	Procedure design control	Q 009	Custom Design
75-135.0040	Service routine	-	-
75-135.0041	Design manual	-	-
75-135.0045	Packing instructions	Q 014	Delivery
75-135.0050	Products supplied by the customer	-	<i>Not applicable at the moment. Will be done if required by customer</i>
75-135.0051	Management review	-	<i>Controlled by Kraftelektronik AB</i>
75-135.0059	Management of records	Appendix 1 Q 004	Storage of quality documents
75-135.0069	Enterprise management	-	<i>Controlled by Kraftelektronik AB</i>
75-135.0072	Communication policy	-	-
75-135.0073	Competence support	Q 003	Resource management
75-135.0075	Continual improvement	-	<i>Controlled by Kraftelektronik AB</i>
75-135.0078	Enterprise manual	Q 001	Operation handbook
75-135.0079	Measurement of customer satisfaction	-	<i>Will be done by Kraftelektronik AB</i>
75-135.0100	Production manual	-	Detailed assembly instructions for each product
75-135.0104	Calibration of measuring devises	Q 013	Control of measuring & test equipment



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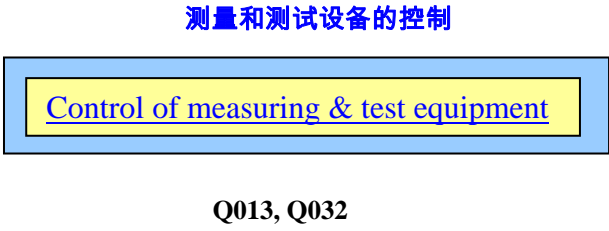
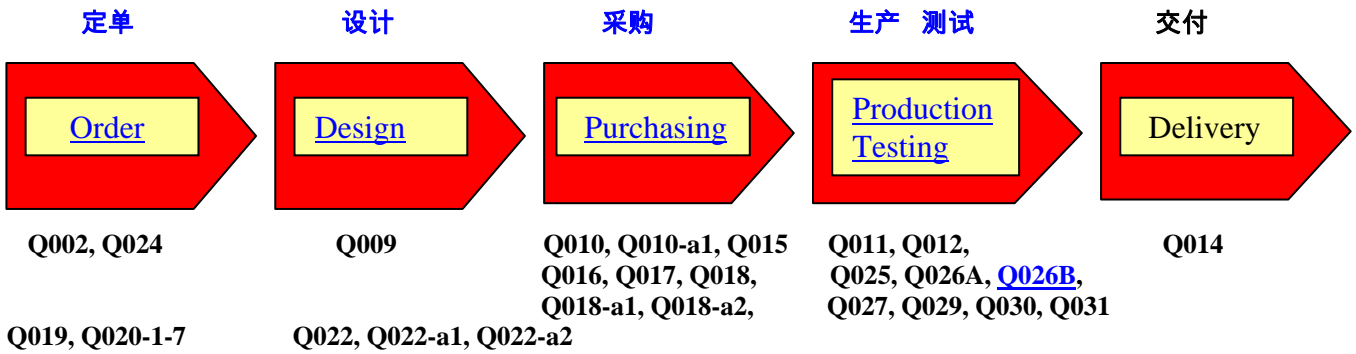
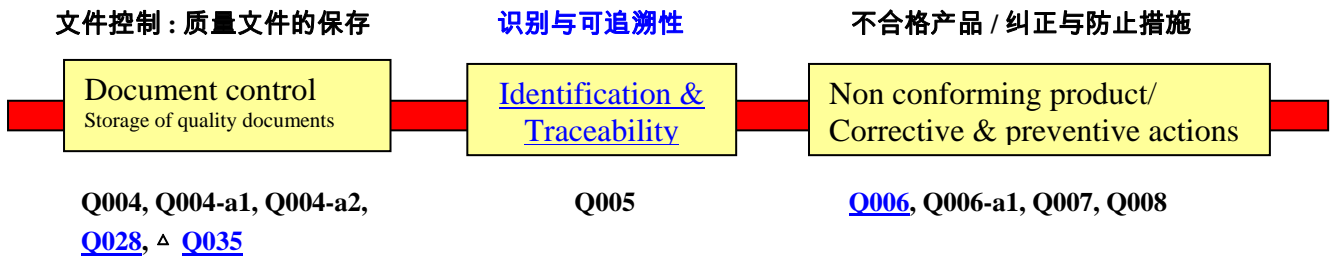
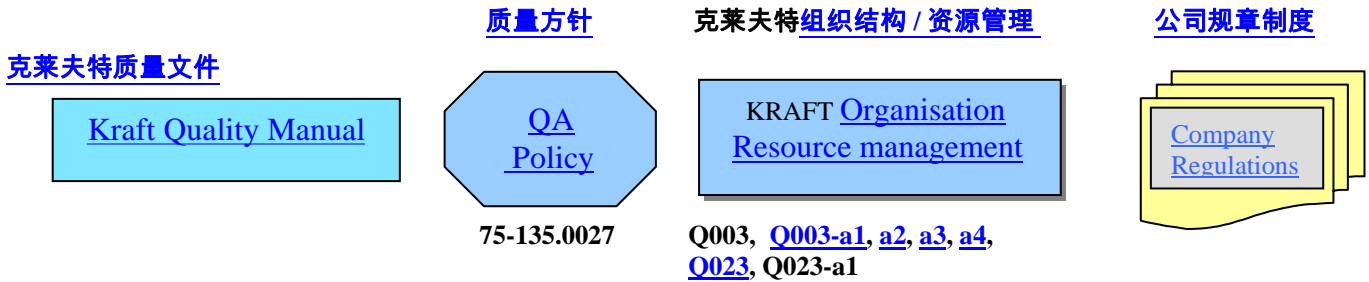
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75-135.0105	ESD routine	Q 022	ESD Directives
75-135.0148	Maintenance schedule	Q 013 Q032	Control of measuring & test equipment Maintenance of equipments
75-136.001	Policy for work environment	Q 030	Work environment and safety
75-136.0023	Emergency readiness	Q 030	Work environment and safety
75-138.001	MPS manual	-	-
E 02:00	Organisation chart	Q 023	Organisation chart KES
E 02:01	Instruction of authorisation	75-135.0088	Definitions of a subsidiary's authority in acting on behalf of the Kraftelektronik Group
E 15:00	ADB safety	-	-
IM 17:09	Sales procedure	Q 002 Q037	Order Handling Process Map Sales routine
IM 19:00	Purchasing procedure	Q 010	Purchasing
IM 19:04	Choice of supplier	Q 015 Q016 Q019	Selection of suppliers Suppliers classification Suppliers evaluation
IM 19:05	Purchasing data	Q 010	Purchasing
IM 19:06	Procedure for incoming inspection	Q 018 Q020	Material receiving inspection Inspection instructions received goods
IM 22:01	Procedure document control	Q 004	Document Control
IM 24:03	Documents for manufacturing	-	Work order specification for each production Detailed assembly and test-instructions for each product
IM 24:04	Design and development records	-	-
IM 24:09	Design review	-	-
IM 29:03	Handling of nonconforming product	Q 006	Control of non conforming product
IM 29:04	Corrective and preventive actions	Q 007	Corrective & preventive actions

 克莱夫特电子(上海)有限公司	管理手册 Operation handbook 克莱夫特 (上海) KRAFT ELECTRONICS SH (KES)	Q 001	Rev E
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5. MANAGEMENT RESPONSIBILITY

5.1 Management commitment

The management has the final responsibility for the quality of the products and services supplied by Kraft.

Kraft's products shall conform to the relevant standards existing in different market areas. The product quality shall at least fulfil the demands of the standard authorities.

Guidelines for the quality work

All employees at Kraft are responsible for maintaining good quality in products and services. Everyone shall have full competence for his/hers work. This is ensured by all:

- Knowing the requirements on their work
- Having know-how and tools to make the work fault-free
- Aiming at only hand over work in compliance with put up demands
- Making sure faults get analysed and that corrective measures are implemented to ensure that the faults not reoccur.

5.2 Customer focus

The management ensures that customer demands are determined and are met with the aim of enhancing customer satisfaction. The demands are transferred to internal requirements that are communicated to all people involved. Strategic plans are made according to the Enterprise management procedure No 75-135.0069 and activities in sections 7.2.1 and 8.2.1 in this manual.

Customer demands must always be evaluated as to Kraft's capabilities. Customer orders with conditions that Kraft may not be able to meet must not be accepted.

5.3 Quality Policy

The management has taken a quality policy relevant to Kraft's business, document No 75-135.0027.

The management ensures that the policy is communicated, understood, applied and maintained by everyone at Kraft by following-up in internal quality audits.

5.4 Planning

5.4.1 Quality objectives

The management annually sets up measurable quality objectives in accordance with the quality policy and relevant to fulfilment of product requirements. The objectives are followed-up at the management reviews. In the minutes from these meetings it is recorded that the objectives have been followed-up and that the actual values have been analysed and decisions taken to improve deviations.

Each manager informs his staff about Kraft's quality objectives and of the actual situation included decisions for improvement.

5.4.2 Quality management system planning

Plans shall exist to ensure those activities and resources needed are provided for achieving the quality objectives. Plans shall be made for all functions concerned and include their processes and resources necessary. This is described in the Enterprise management document No 75-135.0069.

The quality manager is responsible for maintaining the properties of the QMS when changes has been made in it.

5.5 Responsibility, authority and communication

5.5.1 Responsibility and authority

Kraft is organised with clearly defined areas of responsibility and ways of communication as described in E 02:00 Organisation chart. Responsibilities and authorities are documented in jobdescriptions for the staff and in matrixes of competence for workers according to procedure No 75-135.0029.

5.5.2 Management representative

The quality manager has the responsibility and authority to make and maintain Kraft's QMS. In this work he has full support from the managing director.

The quality manager follows-up the efficiency of the QMS and the awareness of customer demands in respective function at Kraft by means of internal audits and analyses of customer complaints. The results from the audits are presented to the management.

5.5.3 Internal communication

Instructions for the internal communication are given in document No 75-135.0072, "communication policy"

The policy, objectives, processes and procedures in the QMS are entered, as originals, on the Intranet. Everybody has access to it and is informed how to find the information. The quality manager is responsible to inform people concerned at system revisions.

5.6 Management review

The management meets biannually, according to routine 75-135.0051, to study and analyse the adequateness and efficiency of the QMS. The reviews are documented by written minutes from the meetings.



Kraftelektronik AB

QUALITY POLICY

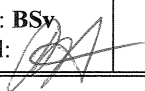
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Approved: 

1. **QUALITY POLICY**

Kraft shall offer solutions on needs for voltage conversion and control in the customers' production processes. Kraft's supply will consequently play an important role for their operation.

Therefore Kraft must only supply products with the right quality. Quality, function, reliability, efficiency and prompt delivery in combination shall constitute Kraft's competitiveness.

Right quality means that products delivered shall be in compliance with documented requirements in technical specifications and commercial agreements.

All employees at Kraft contribute to the total quality of the products, and each individual is responsible for the quality of his/hers work.

The business shall continuously be improved by systematic development work.

2. **Information on the quality policy**

All employees shall be informed about the quality policy, which is the responsibility of each manager.

3. **Guidelines for the quality work**

The quality is everyone's responsibility. In order to be able to undertake this responsibility the employees shall have full competence for their work. This shall be accomplished by means that all employees;

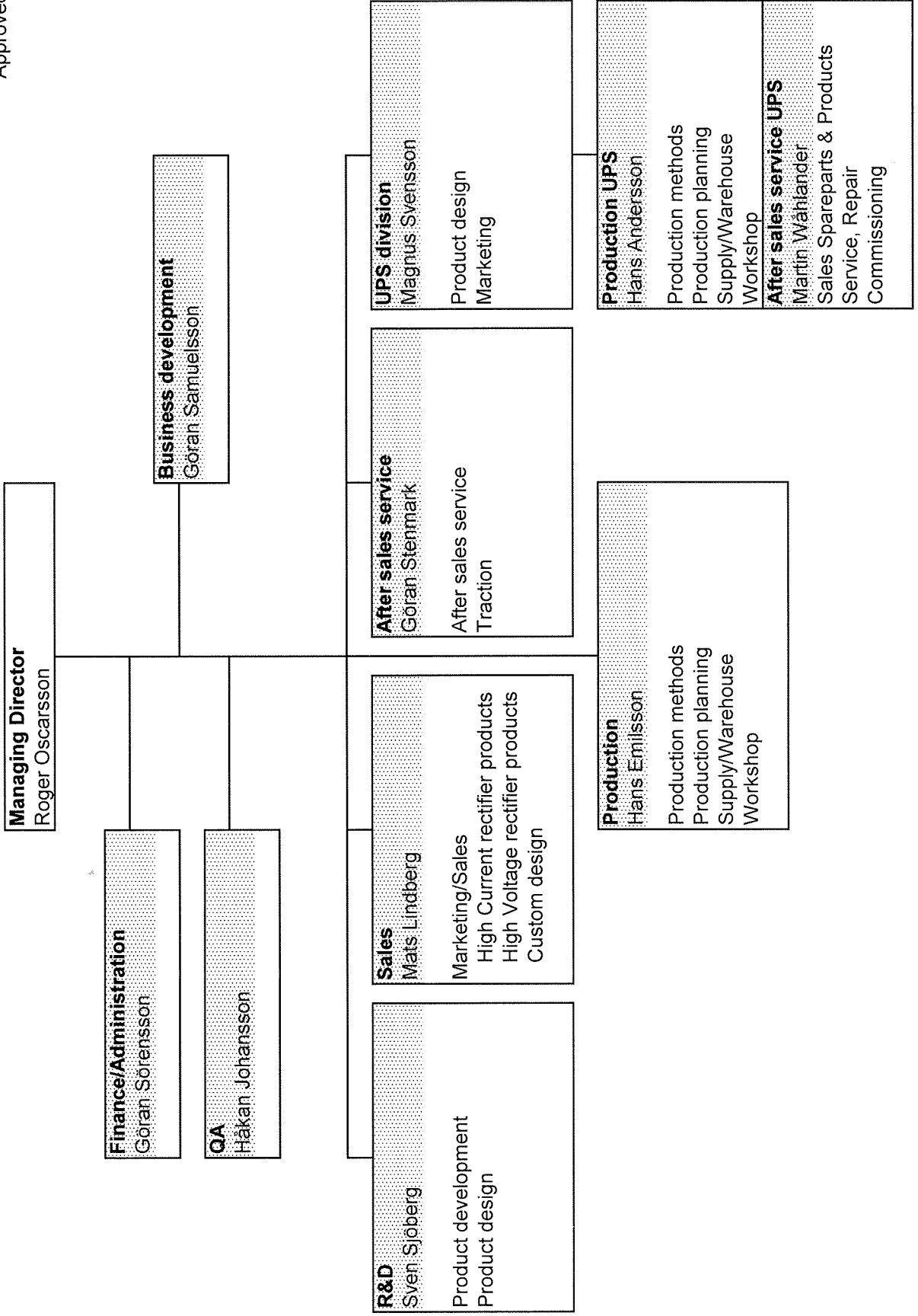
- understand the requirements of qualifications for their jobs
- have sufficient knowledge and tools to make the jobs faultless
- only hand over pieces of work that meet the requirements
- make sure that faults occurring will be analysed and that corrective measures will be taken to prevent the faults to reoccur.

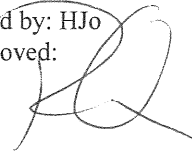
Customer orders that may include requirements beyond Kraft's capabilities must not be accepted. Otherwise there is a risk it will generate bad-will. Therefore customer demands must be evaluated in each case prior to order acknowledgment.

Kraft's products must be in conformance with relevant standards existing in different market areas. The quality shall at least be of the level that is stipulated by the authorities.

Generally Kraft shall comply with the standard ISO 9001. This includes most of the demands existing in most markets at present.

ORGANIZATION CHART





6 RESOURCE MANAGEMENT

6.1 Provision of resources

Needs for resources in form of people, know-how and equipment are identified in Kraft's strategic plan. Each manager has to ensure, within his area of command, that there is correspondence between objectives taken on and need of resources. This is normally done in the budgeting process. The procedure "Enterprise management" 75-135.0069 gives the basis for the strategic planning and the budgeting process.

6.2.1 General

All persons making work that affect conformity to product requirements shall be properly trained and possess the necessary skills and experience.

Persons executing tasks with special requirement on skill or authority shall be qualified. It is up to managers to ensure this. The qualification shall be based on necessary training and experience. Records shall be kept documenting the training.

The quality manager initiates audits of the QMS system as well as processes and products. As support, qualified people can assist him.

6.2.2 Competence, awareness and training

All personnel performing work affecting conformity to product requirements shall have training to achieve the necessary competence. The instruction No 75-135.0032 "Competence and training" gives the procedure.

Each manager shall provide for that all subordinated personnel shall possess necessary competence for the work they carry out. The need for training and the planning for it shall be done in connection with the planning talks. These talks between manager and co-workers shall be kept at regular intervals. It is also up to the manager to follow-up that the training has had adequate result.

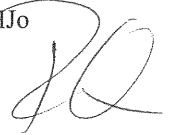
All employees have been informed on Kraft's quality policy and they are trained on the parts of the quality system relevant to their work. Each manager shall provide newly employed persons with pertinent information and training.

6.3.1 Infrastructure

Kraft has a well-developed infrastructure to achieve conformity with product requirements.

Manufacturing and testing are done under controlled conditions in premises suitable for Kraft's business. The areas are in Surte 4680 sqm and in Växjö 800. The premises are being supervised by automatic fire and burglar alarms linked to the fire department and security company. Measures to prevent the risk of fire are described in the procedure No 75-136.0023, "Emergency readiness".

In order to maintain a well working infrastructure regular inspections are made as well as calibrations and preventive maintenance on equipment and the building. This is described



in several instructions in the Enterprise manual.

At Kraft here is a computerised MPS-system acting as information centre for records of articles, specifications of products, procurement, management of production orders and invoicing. The system is described in the MPS manual, which also contains instructions, how to operate in the system. The host computer for the system has an UPS back up and backups of information are taken regularly according to the instruction No E 15:00 "ADB safety".

When new products are designed attention is given, in the projects, to the manufacturing. The production technique function is responsible for planning how to make the new products and to develop rational work sites.

6.3.2 Work environment

Kraft has a good working environment and has work sites to support accomplishing conformity between the products and existing requirements. The work environment matters are ruled by the management by the "Policy for work environment", No 75-136.0001.



7. PRODUCT REALISATION

7.1 Planning of product realisation

This value adding process is overall described in the Enterprise manual. The process is planned and controlled by underlying procedures for each step. The procedures are described in documents accessible on Kraft's intranet. The management controls and follows-up development of new products in steering committees.

7.2 Customer related processes

7.2.1 Determination of requirements related to the product

Requirements specified by the customer are settled by the sales procedure, IM17:09.

Each product has a documented specification stating technical data, applicable standards, and possible requirements by authorities and customer unique demands etc. This is described in the instruction No 75-135.0037, "Procedure design control".

7.2.2 Review of requirements related to the product

Contract reviews, according to IM 17:09, are made to ensure that agreed terms really can be accomplished.

Kraft reviews every contract draft before acceptance in order to:

- Ensure that the requirements are sufficiently well defined and documented.
- Check that the requirements are in accordance with what has been offered in quotations or similar, possible deviations shall be recorded and discussed with the customer.
- Make clear that Kraft only undertakes requirements possible to fulfil.

The contract reviews are recorded together with the actual C-order in the customer order files.

7.2.3 Customer communication

IM 17: 09 describes Kraft's communications with customers in respect to:

- Product information.
- Questions contracts and alterations.
- Customer response including complaints.

7.3 Design and development

Kraft has well planned and controlled procedures for design and development of products. The document No 75-135.0037 describes the procedure for design control.

The "Design manual" No 75-135.0041 is an aid for design and development.

7.3.1 Design and development planning

There is a documented design plan for every design and development project. The plan is updated at regular intervals during the project.

