

Doc. NO. :- KG/QM-00

Issue No. :- 00

Issue Date :- Jan. 2016



دليل نظام الادارة المتكامل

Integrated Management  
System Manual

# QHSE Manual

authorized by		reviewed by		prepared by	
CEO		management representative		integrated management system	
<i>Ammar Abdallah</i>	Name	<i>Muhammad M. Al-Murshid</i>	Name	<i>Kadhim M. Al-Murshid</i>	Name
	Sign		Sign		Sign
<i>7/1/2016</i>	Date	<i>7/1/2016</i>	Date	<i>7/1/2016</i>	Date

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## 1. PURPOSE

This Manual describes the organization, the structure and the activities associated with the Quality, Health, Safety and Environment Integrated Management System, its purpose being to transmit confidence to the clients of KHEBERAT GROUP FOR CONSTRUCTIONS & OIL SERVICES, as to the fulfillment of the contractual requirements and provisions. These activities comply with the requirements set out in the standard ISO 9001: 2008, ISO 14001:2004 and OHSAS 18001:2007

## 2. SCOPE

The content of this manual embraces the whole productive activity of KHEBERAT GROUP FOR CONSTRUCTIONS & OIL SERVICES.

## 3. TERMS AND ACRONYMS/ ABBREVIATIONS

KOS: KHEBERAT GROUP FOR CONSTRUCTIONS & OIL SERVICES,

OGP: Organization General Protocol

TM: Top Management

PM: Project Manager

IMS: Integrated Management System (Quality, Health, Safety and Environment) QHSE: Quality, Health, Safety and Environment

IMSR: Integrated Management System Representatives

## 4. REFERENCE DOCUMENTS

Annex 1: Reference Documents

Annex 2: Table showing the Correspondence between the Standards ISO 9001:2008, ISO 14001: 2004, OHSAS 18001:2007 and KOS's Documents.

## 5. RESPONSIBILITY

The responsibility for writing, revising, diffusing and maintaining the original and successive revisions of this Manual rests with the person in charge of the Quality, Health, Safety and Environment Service of KOS.

The approval of the Quality, Health, Safety and Environment (QHSE) Integrated Management Manual is incumbent on the Company's Top Management, following the issue of the advisory report from the Quality Health, Safety, and Environment Service.

KOS's Top Management delegates the person in charge of the Quality, Health, Safety and Environment Service

to undertake the implementation and the operation of the Integrated Management (Quality, Health, Safety and Environment) System, by investing that person with the required and indispensable authority for such goals to be attained.

## 6. METHODOLOGY

### 6.1. Integrated Management (Quality, Health, Safety and Environment) System

#### 6.1.1 General Introduction

The Integrated Management System (Quality, Health, Safety and Environment) applies to KOS's activity, as a whole, particularly as regards the quality of the services provided, at the different stages of the supply process, from the identification of the customer's requirements and expectations, to the conceptual design, carrying out and delivery of the product (see Annex 3 Diagram), in strict compliance with the Environmental, Health and Safety principles and requirements intrinsic to such activity.

The Quality Management System that has been implemented at KOS was designed taking as a basis the Standards ISO 9001:2008, ISO 14001: 2004 and OHSAS 18001:2007.

A set of documents comprising the items listed below has been established with a view to serve as a support to the Integrated Management System:

- Statement regarding KOS's Integrated Management (Quality, Health, Safety and Environment) System Policy;
- Statement regarding KOS's Objectives and Leading Principles;
- Integrated Management (QHSE) System Manual: Integrated Management (Quality, Health, Safety and Environment) System basic document describing the principles that have been established to achieve the defined objectives;
- Organization General Protocol: Basic document describing the structural organization of the Company, defining the functions and responsibilities of the Company's leading staff members;
- Procedures: set of documents laying down the guidelines and the methodology governing KOS's performance.

The set of these Procedures makes up the Procedures Manual;

- Work Guides: set of documents describing, in detail, the method to be followed for carrying out a technical and functional activity required to guarantors the quality of the product. Furthermore, these documents serve to complement and detail the System Procedures, so as to clarify the manner how these latter shall be applied;
- Integrated Management (Quality, Health, Safety and Environment) System Registers: Documents containing the information that confirms the correctness of the System's performance.

This set of these documents enables KOS to ensure an effective control of its processes (see diagram in Annex 4).

#### 6.1.2 Integrated Management (QHSE) System Manual and Organization General Protocol

#### 6.1.2.1 Extent of Application of both the Integrated Management (QHSE) System Manual and the Organization General Protocol

The Integrated Management (QHSE) System Manual and, consequently, the whole Integrated Management (Quality, Health, Safety and Environment) System applies to a number of activities to be performed, as required to carry out the engineering works, occasionally, within the scope of turnkey contracts, for industrial facilities and other large size, complex construction works.

Its scope shall be adjusted for less extensive contracts.

The Organization General Protocol applies to all the activities performed by the Company, irrespective of being directly or indirectly productive.

#### 6.1.2.2 Issue, Revision and Approval of the Integrated Management (QHSE) System Manual

The responsibilities regarding the issue, revision and approval of the Integrated Management (QHSE) System Manual are defined in Item 5 of this Manual

Revisions will take place:

- whenever the need of evolution of the System itself arises, namely, when modifications occur in the organizational structure of the Company and in the standards incorporating the series ISO 9000, ISO 14001 and OHSAS 18001, or when the results of the audits on the Integrated Management (Quality, Health, Safety and Environment) System so require;
- in result of the Top Management Reviews.

The Procedure KG-IP-01– for modification of both the Integrated Management (QHSE) System Manual and the Procedures defines the methodology to be followed for the updating and controlling the aforesaid Manual.

#### 6.1.2.3 Issue, Revision and Approval of the Organization General Protocol

The approval of the OGP rests with the Top Management. The TM delegates the person in charge of the Quality, Health, Safety and Environment Service to provide for the drawing up, revision, diffusion and keeping of the original and successive revisions of this document.

The revisions will arise from the need of the organizational structure of the Company to evolve or will be a consequence of the outcome of either the Audits or the Revisions of the Integrated Management (Quality, Health, Safety and Environment) System by the Top Management

#### 6.1.2.4 Management and Filing

The obsolete originals of both the Integrated Management (Quality, Health, Safety and Environment) System Manual and the Organization General Protocol shall be stamp identified as “obsolete” and kept in archive by the Quality Health, Safety and Environment Service, for a minimum period of 1 year.

The management and filing of the controlled copies is a concern of the holders. Therefore, the holders are responsible for keeping their file updated, superseding and destroying the issues of both the Integrated Management (QHSE) System Manual and the Organization General Protocol, every time that these become obsolete.

The Procedure MP-00-03, for Control and Distribution of the Integrated Management (QHSE) System Manual, of the Organization General Protocol and of the Procedures, defines the methodology to be followed for controlling the distribution and the access to both the Integrated Management (QHSE) System Manual and the Organization General Protocol.

### 6.1.3 Procedures and Work Guides

#### 6.1.3.1 Issue, Revision and Approval of the Procedures and Work Guides

These documents shall be prepared and issued in compliance with the Procedure for drawing up Procedures (MP-00-01). Their approval is incumbent on the Top Management, following the advisory report from the Quality, Health, Safety and Environment Service which is the entity responsible for checking the compliance of these documents with the requirements of the Integrated Management System.

The Procedure for Modifications on the Integrated Management (QHSE) System Manual and on the Procedures

(KG-IP-01) defines the methodology to be followed to revise and update these documents.

The diffusion of these documents rests with the person in charge of the Quality Health Safety and Environment Service.

#### 6.1.3.2 Management and Filing

The management and filing of these documents shall be performed as described in 6.1.2.4 hereof.

### 6.1.4 Documentation General Control

The documents that are essential or important to the Integrated Management (Quality, Health, Safety and Environment) System shall be univocally identified; their forms and contents shall be defined and made known to all the intervening persons and/or parties whom such documents or data concern.

The documentation control responsibilities are defined, namely, as regards:

- Preparation and respective codification,
- checking,
- approval,
- diffusion,
- management and filing,
- revision.



The modifications on the documents, as a rule, are reviewed and approved by the same entities that undertook the review and approval of the originals.

The originals of the obsolete documents shall be identified as “obsolete”, their use to be prevented. The copies of the obsolete documents shall be either destroyed or identified as obsolete.

The aforementioned requirement is laid down in the following System Procedures: MP-00-02 – for documentation Control  
KG-QP-14– for Identification, Codification and Traceability

In so far as the documents mentioned in 6.1.2 and 6.1.3 are concerned, the under mentioned Procedures shall be, additionally, considered

KG-QP-19 – for Control and Distribution of the Organization General Protocol, Integrated Management (QHSE) System Manual and Procedures

KG-IP-01 – for Changes of the Quality Manual and of the Procedures

The documents proceeding from an external source shall be controlled in compliance with the provisions laid down in the Procedures KG-IP-02 and KG-IP-09.

### **6.1.5 Registers of the Integrated Management (Quality, Health, Safety and Environment) System**

KOS ensures the existence and availability of such Integrated Management (Quality, Health, Safety and Environment) System registers necessary to prove the conformity with the requirements and to confirm the effective operational condition of the Integrated Management (Quality, Health, Safety and Environment) System. The registers are defined in the procedures of the Integrated Management (Quality, Health, Safety and Environment) System. When the registers are made on paper, the formats on which they are documented are referenced on the “Related Documents” field.

Each Service or Department is responsible for filling in, reviewing, distributing and filing its own Integrated Management (Quality, Health, Safety and Environment) System registers.

The method to be followed for identifying, maintaining, protecting, retrieving, as well as for establishing the filing time and deciding on the records to be eliminated, is set out in the Procedure MP-00-16 concerning Integrated Management System registers.

## **6.2. Management Responsibility**

### **6.2.1 Description of the Company**

#### **6.2.1.1 KHEBERAT GROUP FOR CONSTRUCTIONS & OIL SERVICES,**

KHEBERAT GROUP FOR CONSTRUCTIONS & OIL SERVICES, is a Iraqi multidisciplinary Company specialized in engineering design studies, particularly, for industrial facilities and large size, complex civil



works, oil services, transportation and Manpower supply, Electromechanical activities and Pipeline construction & maintenance services.

#### 6.2.1.2 Overall Organization

The overall organization of KOS is schematically represented on the General Organization Chart incorporated as Annex 5.

The organization of KOS is based on the areas of activity shown on the Organization Chart, the relevant competences and responsibilities being described in the Organization General Protocol.

#### 6.2.2 Management Commitment

Basra, March 2010

The compliance with the Clients' requirements and needs, for a fair remuneration and within the best execution/delivery terms, in strict observance of the principles regarding the Environmental Protection and the Safety, Hygiene and Health at Work is the main target of the policy of the Integrated Management (Quality, Health, Safety and Environment System of KHEBERAT GROUP FOR CONSTRUCTIONS & OIL SERVICES).

The Integrated Management (Quality, Health, Safety and Environment) System that has been implemented within our company as a means to pursue the a forementioned policy constitutes our response to the imperative need for an engineering organization like ours to adapt its organizational structure to the demands of a permanently evolving environment.

The Managing Board, in the person of its chairman, undertakes:

- To provide for the establishment, implementation and maintenance of the Integrated Management (Quality, Health, Safety and Environment) System and for the achievement of the relevant purposes,
- to provide for a continuous improvement process to be established, implemented and maintained,
- to provide for a periodic revision of both the Integrated Management (Quality, Health, Safety and Environment) System and relevant objectives,
- to propose measures that enable supervising the Integrated Management (Quality, Health, Safety and Environment) System at every level, by conferring on the person in charge of the Quality, Health, Safety and Environment Service the required and indispensable authority to have the aforementioned actions taken.

Ammar Abdullah Munahey  
CEO

### 6.2.3 Policy of the Integrated Management (Quality, Health, Safety and Environment) System

KOS regards Quality, Environmental Protection and Safety as determining factors of a management procedure involving the joint proactive intervention of all the co-workers and targeted to ensuring the competitiveness of the company and the fair remuneration of the services rendered. The substance of this procedure is a QHSE Policy aimed, first and foremost, at achieving the confidence of the clients and at developing customer loyalty.

This policy is grounded on the following principles:

- Compliance with the legal and regulatory requirements, recourse to the best available techniques and adherence to the provisions of good practice standards, as regards Quality Assurance, Environmental Protection and Safety.
- Meeting the requirements agreed upon with the client, having in view the fulfillment or, preferably, the overstepping of the client's expectations.
- Making a commitment as to the continuous improvement of the various services and as to the effectiveness of the Quality, Health, Safety and Environment Integrated Management System, taken as a tool to ensure the constant progress of KOS's capability and efficiency.
- Providing for the prevention of pollution, bodily injuries and illness.
- Adopting doing well at the first try as performance standard, improving, continuously, the quality of the products and services provided, preventing the accidents and the negative environmental impacts, in general, and the pollution, in particular.
- Creating conditions conducive to a proactive involvement of all the persons intervening in the organization, having in view the increase of motivation and the increasing proficiency of performances, both collective and individual.

### 6.2.4 Objectives of the Quality Management System

The objectives are defined according to goals, commitments and responsibilities within the scope of Quality, Health, Safety and Environment.

The Quality, Health, Safety and Environment objectives reflect the Policy of the Company's Integrated Management (Quality, Health, Safety and Environment) System. Such objectives are achieved through both the implementation of the Integrated Management (Quality, Health, Safety and Environment) System and continuous improvement actions and are monitored by means of both internal audits and feed-back from the Clients. They are proposed by the Departments and the Quality, Health, Safety and Environment Service and approved by the Top Management.

These objectives, which are fully in line with the Company's general objectives, are, yearly, defined by the Top Management which, likewise, establishes the objectives to be achieved by the other Managers, namely, the Technical Manager, the Means Manager, the Sales and Marketing Manager, the Implementation Manager, the Project Managers, the Department Managers and the Service Heads.

The follow up of these objectives takes place at meetings to be held between each one of the aforementioned Managers and the Top Management.

## 6.2.5 Planning of the Integrated Management (Quality, Health, Safety and Environment) System

### 6.2.5.1 within the Company

The Planning of the Integrated Management (Quality, Health, Safety and Environment) System is the responsibility of the Top Management and is aimed at:

- defining the objectives of the Integrated Management (Quality, Health, Safety and Environment) System;
- defining the Company's Overall Strategies;
- identifying the resources deemed necessary to achieve the proposed objectives;
- the continuous improvement of the Integrated Management (Quality, Health, Safety and Environment) System.

The performance of the following activities is the responsibility of the Quality, Health, Safety and Environment Service:

- providing for the acquisition of all the required resources
- handling of the changes made on the Integrated Management (Quality, Health, Safety and Environment) System.
- controlling of the previously defined objectives;
- implementing of the Improvement Plans;
- following up of the results and taking of Corrective/Preventive actions, as necessary;
- Updating, whenever necessary, the Risk/Impacts Assessment;
- preparing of the Personnel Training Plans
- preparing of the Auditing Plans

The results of the planning are recorded and documented by means of official reports or notes.

### 6.2.5.2 within the Framework of the Projects

In so far as the Studies, the Basic Engineering, the Detail Engineering and the remainder of the productive activities are concerned, the Quality Planning is the responsibility of the respective Project Manager. The Quality Planning methodology is described either in the Procedure MP-00-08, or in Procedure MP-0012, according to the type of project.

## 6.2.6 Responsibility, Authority and Communication

At Company-level, the Management of the Integrated Management (Quality, Health, Safety and Environment) System is undertaken by the person in charge of the Quality, Health, Safety and Environment Service.

This management is performed within the framework of the Projects and within the Directorates and the Departments, through the network of Integrated Management (Quality, Health, Safety and Environment) System

Representatives.

#### 6.2.6.1 Description of functions

The following organization chart shows the hierarchic and functional connections of the persons performing duties within the framework of the Integrated Management (Quality, Health, Safety and Environment) System.

##### 6.2.6.1.1 Person in Charge of the Integrated Management (Quality, Health, Safety and Environment) System

The person in charge of the Quality, Health, Safety and Environment Service is entrusted with the management of the Integrated Management (Quality, Health, Safety and Environment) System, his/her duties, listed below, being described in the Organization General Protocol:

- Maintain the operability of the Integrated Management (Quality, Health, Safety and Environment) System, in order to ensure the quality of the services provided by the Company, in accordance with the company's certification granted on the basis of the referential standards NP EN ISO-9001:2008, NP EN ISO 14001:2004 and OHSAS 18001:2007.
- Keep updated and improve continuously the several design disciplines work methods and procedures. In particular, develop and maintain the Quality Assurance, Safety and Environment methods and procedures.
- Ensure the diffusion of the methods and procedures and provide for personnel training and control actions, as deemed necessary to guarantors the effective operability of the Integrated Management (Quality, Health, Safety and Environment) System.
- Provide for the implementation of the procedures and corresponding methods and watch over their correct application.
- Keep the external contacts in the domain of the Quality, Health, Safety and Environment (clients, organisms, QHSE consultants, etc.);
- Inform, periodically, the Top Management as to the results, the problems and the progress of the Integrated Management (Quality, Health, Safety and Environment) System;
- Propose improvements as deemed required and opportune, at all levels, in order to ensure the achieving of the desired levels of quality.
- Control the costs associated with the Integrated Management (Quality, Health, Safety and Environment) System, so as to enable maintaining them within the limits considered reasonable and permitted to KOS.

The person in charge of the management of the Integrated Management (Quality, Health, Safety and Environment) System of KOS is independent from the Operational Departments and renders account of his/her activity to the Top Management, by providing information as to the preventive and corrective actions to be taken to ensure the efficacy of the Integrated Management (Quality, Health, Safety and Environment) System. The person in charge of the management of Integrated Management (Quality, Health, Safety and

Environment) System acts within the framework of the responsibility and authority delegating defined in the commitment letter issued from the Chairman of the Managing Board.

#### 6.2.6.1.2 Integrated Management System (IMSR) Representatives

The IMSRs perform their functions at the Department where they belong to or incorporated in Design Teams, their duties being, namely, the following:

At the Department where they belong to:

- .. make sure that the provisions of the Integrated Management (Quality, Health, Safety and Environment) System Manual are known to everybody and observed;
- .. make sure that the Procedures of the Integrated Management (Quality, Health, Safety and Environment) System are applied;
- .. Make their sectors aware of the Quality, Health, Safety and Environment notions, with a view to improve the quality of the services rendered;
- .. Conduct periodic in-house audits on the Integrated Management (Quality, Health, Safety and Environment) System;
- .. Notify his hierarchic superior as to the deviations that have been detected, propose corrective or preventive actions and follow up and confirm their implementation;
- .. Notify the person in charge of the Quality, Health, Safety and Environment Service as to eventual difficulties in settling Quality non-compliances;
- .. Be present at the in-house audits to be made on the Department;
- .. control the implementation of the corrective actions resulting from deviations that be detected in regard to their Departments/Directorates (namely, deviations detected through the audits, complaints from clients, etc.) and inform the person in charge of the Quality, Health, Safety and Environment Service of their closure.

Within the framework of the Projects:

- .. Assist the Project Manager in drawing up the Quality Plan specific to each Project;
- .. Watch over the application of the Project Quality Plan;
- .. Be present at the audits to be made on the Projects;
- .. Notify the Project Manager of the deviations that have been detected;
- .. Follow up the corrective actions arising from the aforementioned audits;
- .. Notify the person in charge of the Integrated Management (Quality, Health, Safety and Environment) System, whenever difficulties occur in implementing the preventive or corrective actions.

#### 6.2.6.2 Communication

All the information of significance to the Integrated Management (Quality, Health, Safety and Environment) System shall be made known through the following means:

- In-house placarding;
- LCDs installed on the several floors of the company's head-office;
- Electronic mail;
- On job awareness actions.

By means of an in-house note addressed to the hierarchic superior, to the person in charge of the Quality, Health, Safety and Environment Service or to the Top Management, any co-worker or interested party may Communicate the need to have a document modified, as well as to have a new procedure identified.

### 6.2.7 Management Review

The reviews of the Integrated Management (Quality, Health, Safety and Environment) System by the Top Management are performed with a view to ensure the permanent conformity, adequacy and efficacy of the aforesaid system in complying with the requirements of the standards ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007. Such reviews shall also permit an assessment of the need to have modifications made on the Integrated Management (Quality, Health, Safety and Environment) System, including, consequently, the Policy of the Integrated Management (Quality, Health, Safety and Environment) System and the objectives in terms of Quality, Health, Safety and Environment.

Every year, at least, a review of the Integrated Management (Quality, Health, Safety and Environment) System is carried out by the Top Management.

The reviews are carried out taking as a basis the information contained in reports issued from the several departments and/or services and relevant analysis, namely:

- Analysis of the follow up actions resulting from the preceding Reviews by the Top Management,
- results from the QHSE audits, both in-house and external and from the assessments of compliance with the legal requirements and other statutory provisions that the organization is required to observe as regards the Environment and the Safety,
- Analysis of the most significant non-conformities,
- Analysis of Clients' satisfaction, of complaints, of notifications and reports from concerned external parties and of the results of employees' participation and inquiry,
- Analysis of the preventive and corrective actions and of the stage of incident investigation,
- Assessment of the attainment of the Quality, Health, Safety and Environment objectives, as well as:
- need to introduce modifications in the organization, in the processes (namely those regarding environmental aspects/safety risks) or in the Policy of the Integrated Management (Quality, Health, Safety and Environment) System of the Company
- recommendations for improvement.

The results of the reviews are recorded in relevant reports, which are to include:



- registering of the partakers,
- matters that were dealt with,
- plan of actions to be taken
- objectives in terms of Quality, Health, Safety and Environment. The plans of actions to be taken shall be

aimed at:

- improving the efficacy of the Integrated Management (Quality, Health, Safety and Environment) System
- improving the product and need of resources

### 6.3. Resource Management

#### 6.3.1 Resource Allocation

KOS determines and makes available the resources deemed necessary to implement, keep and continuously improve the Integrated Management (Quality, Health, Safety and Environment) System, in such a way as to meet the requirements of both its Clients and the concerned external parties.

In this context, resources shall be understood to be any means either human or material (equipment, hardware, software, information technologies, etc) that enables the attainment of the Quality, Health, Safety and Environment objectives and ensures the satisfaction of both the Clients and the concerned external parties.

#### 6.3.2 Human Resources

The work position is characterized by a function assignment sheet. The responsibilities associated with the main functions are described in the Organization General Protocol. The functions that are not described within this Protocol are defined by the Service Heads and by the Means Directorate.

Every year or twice a year, the Person in Charge of the Personnel Training Service sends to the heads of the other services an inquiry aimed at surveying and identifying the needs in terms of personnel training. The Personnel Training Plan is, subsequently, drawn up taking also in consideration the personnel training budget and directives defined by the upper hierarchic levels, including the needs in terms of training in matters dealing with Quality, Health, Safety and Environment.

The setting up of the Annual Personnel Training Plan and its follow up are ensured by the Head of the Personnel Training Service, who co-ordinates the needs in liaison with the heads of the other services and Directorates.

The training courses take place either at the Company's offices or at the offices of external specialized organizations. The selection of the training organizations shall be object of a previous evaluation.



The evaluation of the efficacy of each training course is the responsibility of the Technical Directorate (in the case of the various disciplines training) and of the respective hierarchic superiors (in the other cases).

Each of KOS's employees has his own *Curriculum Vitae*, which is inserted in an individual file kept by the Human Resources Service. In this CV, mention is made of the school education and professional qualifications of the employee.

The Procedure MP 00.18 defines the Personnel Training Actions management process to be carried out by KOS.

### 6.3.3 Infrastructures and Work Environment

KOS disposes of suitable facilities, office space and associated means, as necessary to attain the conformity with the product requirements.

To work out this product, KOS is equipped with adequate means, namely computer software adapted to the accomplishment of its activities.

A member of the Company's staff has been appointed as responsible for maintaining the operability of the information processing network, in compliance with the guidelines set out in the Work Guides GT-00-06 for Back up Saving of Data from the Information Processing Network and GT-00-09 for Computerized Data Processing Systems Management.

The KOS's supporting services guarantors:

- the rendering of technical assistance to the other services of the Company
- the fulfillment of the general obligations of the Company
- the overall functioning of the Company.

As regards the activities to be performed outside the Company's premises, the work environment is the responsibility of either KOS or the Client, as may be contractually established.

### 6.4. Product and/or Service Implementation

The Diagram in Annex 3 describes the product and/or service overall implementation process.

#### 6.4.1 Planning

The product and/or service implementation planning embraces the following aspects:

- Quality, Health, Safety and Environment Objectives.
- Contractual terms and applicable legislation.

- Characteristics of the projects, including the identification of the most significant specifications.
- the tasks to be carried out, including, as deemed appropriate, activities, such as verification, validation, monitoring, inspection and testing.
- the necessary human resources and material means.
- the records required for providing evidence to prove that the processes and the product and/or service meet the requirements of the Client.
- the communication procedure within the framework of the project.

The aforementioned requirements are referred to in the following Procedures:

- KG-QP-10 for Control of Projects
- KG-QP-12 for Control of the Conceptual Design of the Project

#### 6.4.2 Customer-related Processes

The purpose of these processes is to ensure that within KOS:

- the contractual requirements are clearly and correctly defined and documented;
- these requirements are correctly construed by each one of the parties intervening in the Project;
- all the resources required for fulfilling the contractual requirements are made available.

The review of the contractual conditions is performed:

- during the bid preparation phase;
- upon the receipt of the order;
- in the course of the development of the engineering design studies, in the event of modifications.

The foresaid requirements are set out in the following Procedures:

- KG-QP-11 for Issue and Revision of Bid Documents
- KG-QP-11 for Receipt and Review of Contracts

##### 6.4.2.1 Bid Preparation Phase

The review of the contractual terms takes place at in-house meetings, to be held during the Bid preparation phase, more precisely:

- upon receipt of the Inquiry, the Chairman of the Managing Board and the Sales and Marketing Manager being present, for the purpose of assessing the capacity of the Company to carry out the Project under the required conditions;

- during the preparation of the Bid, for the purpose of ensuring that the requirements of the Inquiry will be complied with;
- prior to the issue of the Bid, when fixing the selling price, together with the Chairman of the Managing Board and the Sales and Marketing Manager or anyone appointed by this latter, normally, the proposal manager.

The final Bid price is recorded, in detail, in the respective Price Sheet.

#### 6.4.2.2 upon Receipt of the Purchase Order

The Sales and Marketing Manager reviews the contents of the Purchase Order and clauses thereof, in order to ascertain the conformity of this latter with the Bid. In the event of discrepancy, KOS will start the respective negotiation.

#### 6.4.2.3 Engineering Design Phase

The amendment of the contract will be carried out under the form of Contract *addendum*, or similar form. The treatment and the revision methodology shall be established by the Project Management which, whenever deemed necessary, shall resort to the assistance of both the Sales and Marketing Manager and the Top Management.

### 6.4.3 Engineering Design Studies Organization – Design and Development

The provision of the means required to carry out the engineering design studies carrying out is ensured by the Project Management, design teams led by a Project Manager to be, purposely, formed to undertake such studies.

The Engineering Design Team is constituted and structured in such a way as to ensure:

- the management of the Project, on the whole, (cost control, time scheduling control, quality control, administrative and financial management, etc.);
- the carrying out and the coordination of all the engineering design studies.

If contractually provided for, the Design Team will incorporate additional specialists, in order to ensure the performance of the following activities:

- the procurement and the purchasing of services, materials and equipment;
- the potential suppliers inquiring and the contract works awarding;
- the coordination and the supply, on the work-site, of all means required for carrying out the construction/erection works (setting up of the work-site, mobilization of the supervision personnel, etc.);
- the co-ordination of the construction and erection works and of the activities associated with the commissioning of the facilities;
- the technical assistance for the starting up of the facilities.

The various tasks required for carrying out the Project will be undertaken by the design teams purposely formed by the Project Management which, according to the Project needs, will be reinforced, through the Means Directorate, with specialists of the several engineering disciplines.

See the Project General Organization Chart (typical) in the OGP and the Procedure for Control of Projects KG-QP-10

#### 6.4.3.1 Design and Development Planning a) Detail Engineering

The number of activities making up the Project and their interconnection and time scheduling are defined in the Project Planning.

For each specific Project, the works to be carried out by each Department/Discipline, as well as the intervention times of these latter are defined, organized and established, under the responsibility of the respective Project Manager.

Vis-à-vis the Project Planning, the Project Manager establishes the workload estimate, i.e., the human resources to be allocated as required for fully carrying out the Project, including the technical design, reviews, verifications and validations.

Once the review of the contractual clauses is concluded and following the clarification of residual ambiguities, each Discipline Leader, Engineer or Technician responsible, within the Department, for the Project, prepares the List of the Documents to be issued, taking into consideration the time scheduling and the estimate of the man-hours required for the work to be carried out.

The connections between the several parties intervening in the Project are defined in the Organization General Protocol, in the Procedures and Work Guides of the Integrated Management (Quality, Health, Safety and Environment) System and in the Study Guides of the Departments/Directorates. This definition is complemented, if required, by documents issued from the Directorates, Departments or Services.

The aforementioned activities and the activities described hereafter are considered in the Procedure KG-QP-10 for Control of the Technical Design of the Project and, if contractually laid down, in the Procedure KG-QP-10 for Control of Quality of Projects.

#### a) Technical Studies and Basic Engineering

In view of the nature of these works, the definition of the times of delivery and key dates will be sufficient.

#### 6.4.3.2 Design and Development Inputs

Every Detail Design Study/Technical Study/Basic Engineering Design Study is carried out based on a set of information items - the design and development inputs. The persons in charge of the drawing up of the

design documents shall make sure that these latter will be prepared taking into account the aforesaid inputs, which are, namely, the under-mentioned:

- the applicable legislation and regulations;
- the documents provided by the Client;
- the data required for the carrying out of the work, as defined in the Study Guides and in the Design Technical Specifications;
- The Project applicable codes and standards.

#### 6.4.3.3 Design and Development Outputs

The documents making up a Detail Design Study/Technical Study/Basic Engineering Study - the outputs - , in general, are presented, under the form of project briefs, drawings, specifications, reports, calculation notes, material take-offs and cost estimates.

#### 6.4.3.4 Design and Development Review

Whenever deemed necessary, reviews will be carried out to make sure that the Detail Design Studies/Technical Studies/Basic Engineering Studies comply with the established functional and operational requirements. These reviews are programmed by the Project Manager and shall be object of a report, or other proving means

#### 6.4.3.5 Design and Development Verification

The Design Documents shall be verified by the Directorates, Departments or Services responsible for their issue, with a view to ascertain their conformity with the specified requirements.

#### 6.4.3.6 Design and Development Validation

During the different Detail Design Study/Technical Study/Basic Engineering Study phases, meetings will be held with the several parties intervening in the Project, for a joint review of the documentation issued, in order to check its conformity with the contractual requirements and ensure the respective approval.

This confirmation may take place at the final stage of the Construction/Erection works or at the Start-up of the facilities and is formalized through the signature, by the Client, of the Final Acceptance Report, through the acceptance of the invoice, by releasing of the respective Bank Guarantors or by means of any other document confirming the acceptance, by the Client, of the carried out work.

#### 6.4.3.7 Design and Development Changes

The changes occasionally arising in the course of the Detail Design Study/Technical Study/Basic Engineering are recorded by the Project Manager, who ensures their implementation by the Directorates, Departments or Services.

#### 6.4.4 Purchasing

##### 6.4.4.1 Purchasing Process

The responsibilities and requirements regarding the Procurement and Purchasing activities are defined in the following documents:

- General Protocol
- Procedure for Procurement Activities ( KG-QP-11).

##### 6.4.4.2 Evaluation of Suppliers and Contractors

The Suppliers and the Contractors are, regularly, evaluated by the Procurement and Purchasing Department, this evaluation leading to the drawing up, by the same department, of a “List of Suppliers”.

The selection of the Suppliers and Contractors to be inquired by KOS is made on the basis of data collected from an established data base, considering, among other aspects, the results of preceding supplies or services.

The new Suppliers and Contractors are, likewise, evaluated prior to being incorporated in KOS’s “List of Suppliers”.

When, in the framework of the carrying out of a Project, a material or an item of equipment is to be purchased, the Suppliers and Contractors to be inquired shall be selected from the List of Suppliers of KOS and/or from the Client’s List of Suppliers. The list of proposed Suppliers or Contractors shall be approved by the Project Manager and, occasionally, by the Client.

The inquiries shall be sent only to the Suppliers and Contractors that, in this way, have been approved.

The Suppliers and Contractors are selected by the Directorates, Departments or Services of the respective engineering specialty. Subsequently, these will follow up the activity of the aforesaid suppliers and contractors.

##### 6.4.4.3 Purchasing Information

The documentation concerning the Inquiry and the Purchase Order, whenever applicable, shall include the following items:

- Commercial Conditions;
- Time Schedule;
- Technical Specifications comprising:
  - Clauses regarding Inspection and Testing,
  - List of the documents to be submitted by the Supplier or Contractor,
  - Clauses regarding the Integrated Management (Quality, Health, Safety and Environment) System and the applicable standards and codes.



Following the receipt of the bids from the Suppliers or Contractors, the next step is proceeding to their evaluation, as described below:

- The technical evaluation of the Bids is carried out by an engineer of the particular speciality, member of the design team, appointed by the respective Project Management;
- the proposed delivery time scheduling is checked;
- The evaluation of the Quality Health, Safety and Environment System is carried out by the appointed specialist, member of the design team and/or by the Quality, Health, Safety and Environment Service;
- the commercial evaluation is undertaken by a specialized technician from the Procurement and Purchasing Department, or by a specialist designated for this specific purpose and approved by the Project Manager.

Prior to taking any decision in regard to placing an order for complex equipment items or services, meetings shall be held with the Supplier or Contractor, in order to make sure that all contractual clauses have been fully understood and accepted by this latter.

#### 6.4.4.4 Verification of the Purchased Product

In addition to the inspection to be performed on acceptance, whenever contractually laid down, the purchased product is to be inspected at the facilities of the Supplier or be object of on-site supervision, in compliance with the Inspection Plan and taking into account the Quality Plan of the Supplier/Contractor.

Should the Client wish to inspect the product at the facilities of the Supplier or have it supervised on site, this requirement shall be stipulated in the Bid documentation.

### 6.4.5 Service Production and Supply (Supply and Construction)

#### 6.4.5.1 Control of Service Production and Supply

##### **Control of the Project Implementation Process**

Creating documents is the main producing activity of KOS. The activities to be performed to control this production are described in the preceding paragraphs, namely, § 6.1.4 (Documentation Control), including the availability of the required information and the availability of work instructions, § 6.4.2 (Customer-related Processes) and § 6.4.3 (Engineering Design Studies Organization – Design and Development), as well as availability of appropriate equipment (such as computers), § 6.3.3 (Infrastructures and Work Environment).



As regards the equipment ordering and/or work sub-contracting processes associated with the engineering design studies process, in addition to the paragraphs of section 6.4.4 (Purchasing), the following paragraphs provide a description of the control of the purchase order executing and work sub-contracting processes carried out by the Suppliers/Contractors.

#### **Control of the purchase orders execution process**

The technical documents (Procurement Requisition) associated with the Goods or Services Supply Orders define, if justifiable, the requirements in terms of:

- materials, equipment or services acceptance conditions;
- modalities of inspection by KOS's competent services;
- documental evidence of attainment of the required guarantee.

The Supplier, if required, establishes a Quality Plan to govern the manufacturing, execution control and testing activities.

#### **Control of the works carried out by the Contractors**

The Works Execution Contracts define the services to be rendered by the Contractors and the requirements regarding the quality of the works.

The inspection agents, in so far as the works are concerned, or the Directorates, heads of the Departments or Services, as regards the supply of services, ensure the conformity of the executed works and/or services.

#### **Activities to be performed subsequently to the delivery (Acceptance)**

Following and in consequence of the technical activity performed by KOS, it is habitual its Clients requesting technical advisory services, subsequently to the delivery and acceptance of a product.

All technical advisory services shall be handled in compliance with the contractual provisions.

In view of the nature of the product and because it is not applicable, KOS has not set up a technical assistance system. When the contract includes the supply of equipment and materials, the technical assistance is always transferred to the manufacturers or agents of such equipment and materials, upon the acceptance of the facilities (in accordance with the contractual document)

#### **6.4.5.2 Validation of the Service Production and Supply Processes**

In the case of turnkey contracts, the company follows procedures of which the results are checked by subsequent measuring and monitoring, by resorting to duly qualified external entities.

#### **6.4.5.3 Identification and Traceability**

These requirements are dealt with in the following Procedures of the Integrated Management (Quality, Health, Safety and Environment) System:

KG-IP-01 – Procedure for Documentation Control;

KG-QP-14 – Procedure for Identification, Coding and Traceability; Work Guide for Coding and Numbering;

KG-QP-12 – Work Guide for Control of Drawings.

#### 6.4.5.3.1 Documents

See paragraph 6.1.4 for Documentation General Control.

#### 6.4.5.3.2 Equipment and Materials

Work Guide KG-QP-17 describes the identifying and numbering system applicable to equipment items and materials. If contractually required, the Project particular specifications are to define:

- the identification to be used by type of equipment;
- the method to be followed to ascribe such identification.

As regards the bulk materials, which are not identifiable by means of a numbering system, the identification and traceability requirements are laid down in the specifications of those materials.

#### 6.4.5.4 Customer's Property

The documents and other informative items supplied by the Client shall be treated as provided for in KG-QP-15 – Procedure for Control of the Product Supplied by the Client.

As regards the identification, verification, protection and maintenance, the equipment items and the materials supplied by the Client are object of a treatment similar to the treatment applied to the other items making up the Project to be carried out, unless it is contractually stipulated that KOS has no responsibility as to the quality of those elements.

#### 6.4.5.5 Preservation of the Product

The physical supporting means which incorporates the documents of an Engineering Design Study carried out by KOS and the facilities, with which KOS is equipped, provide an effective protection of the documents against deterioration caused by handling and inclement weather.

This requirement is laid down in the following Procedures of the Integrated Management (Quality, Health, Safety and Environment) System:

KG-QP-12 – Procedure for Handling, Preservation, Delivery and Filing of Design Documents.

The equipment items and materials incorporating a supply by KOS are object of similar treatment.

#### **6.4.6 Control of the Monitoring and Measuring Means**

The 3D digitizing equipment are subject to gauging and checking, in compliance with the manufacturer's specifications

The other monitoring and measuring equipment items are made available by the Suppliers or by the Contractors, who will be required to submit the respective gauging certificates.

#### **6.5. Measurement, Analysis and Improvement**

The diagram incorporated as Annex 3 describes the general process of implementation of the Integrated Management (Quality, Health, Safety and Environment) System.

##### **6.5.1 Monitoring and Measuring**

###### **6.5.1.1 Customer's Satisfaction**

###### **Customer's Satisfaction**

The process of getting information in regard to the Customer's satisfaction is organized at two levels:

- at Project's level
- at Company's level.

At Project's level, the questionnaire concerning the qualification of the services provided by KOS is sent to the Client by the Project Manager.

Another questionnaire having a similar aim is sent, by the Top Management, to the main Customers for the purpose of obtaining a broader view of their perception of the services rendered by KOS.

In addition to the aforementioned questionnaires, the Top Management KOS has setup and keeps a system to handle customers' complaints.

###### **Complaints**

The complaints received by the Top Management, i.e., correspondence concerning:

- non-conformity detected when auditing, by the Client, on the Integrated Management (Quality, Health, Safety and Environment) System,

- dissatisfaction, formally expressed by the Client, regarding malfunctioning of the Integrated

Management (Quality, Health, Safety and Environment) System, are identified as such by the Top Management. Then, the Top Management makes such complaints known to the Head of the Quality, Health, Safety and Environment Service.

The Head of the Quality, Health, Safety and Environment Service analyses the claim and orders an audit, an inspection, an inquiry or any other appropriate action to be taken.

A file regarding the Client's complaint is compiled, the updating, keeping and filing being the responsibility of the Head of the Quality, Health, Safety and Environment Service.

The Procedure KG-QP-18 describes the Client's Complaints handling process.

6.5.1.2 In-house Audits and Checking by the IMSRs (Integrated Management (Quality, Health, Safety and Environment) System Representatives.

The In-house Audits are carried out by members of the staff of the Company or acting on the Company's behalf. These audits are focused on the activities performed by the Directorates, Departments and Services of the Company, their aim being to check the compliance with the contractual commitments.

The In-house audits comprise:

- the audits scheduled by the Head of the Quality, Health, Safety and Environment Service of the Company, within the Annual Planning approved by the Top Management.
- The audits scheduled by the Project Manager, within the Quality Plan of the Project.
- The audits requested by the Top Management, including the Heads of the Directorates, Departments and/or Services.

The In-house Audits are scheduled by the Head of the Quality, Health, Safety and Environment Service of the Company and are carried out by qualified and independent auditors. The relevant Auditing Report may give rise to a Corrective Action, the follow up of this latter being ensured by the aforementioned Head of the Quality, Health, Safety and Environment Service of the Company.

This process is described in Procedure KG-IP-03 for Internal Audits.

The In-house audits (see § 6.2.6.1.2) to be carried out by the IMSRs are one of the means for the Head of the Directorate or Department to make sure that the services being rendered by his Directorate or Department comply with the Quality requirements laid down in the Integrated Management (Quality, Health, Safety and Environment) System Manual and in the reference documents in force.

The audit and the subsequent actions will enable the Directorates and the Departments to detect their deviations from the Quality requirements and to take adequate steps to prevent their recurrence.

It is the IMSRs or the Directorate or Department Heads who take the initiative of having the In-house audits performed.

#### 6.5.1.3 Monitoring and Measuring of Processes/Sub-processes

The monitoring of KOS's leading processes/sub-processes is performed as described in the procedures and as schematically represented in Annex 4.

<input type="checkbox"/> Integrated Management (Quality, Health, Safety and Environment) System	KG/IM
<input type="checkbox"/> Commercial Process	
<input type="checkbox"/> Preparation of Bids	KG-QP-11
<input type="checkbox"/> Product Implementation Process	
<input type="checkbox"/> Product Implementation Sub-process:	
<input type="checkbox"/> Acceptance/Review of Contract	KG-QP-11
<input type="checkbox"/> Project Control	KG-QP-10
<input type="checkbox"/> Technical Design	KG-QP-12
<input type="checkbox"/> Purchasing Sub-process	KG-QP-11
<input type="checkbox"/>	
<input type="checkbox"/>	

Whenever applicable, these processes are measured, with a view to control their development.

Namely, the Project execution process is monitored and measured by means of the under mentioned activities:

- planning and follow up of the work to be carried out,
- planning and follow up of the resources,
- charging of man-hours,
- control of subcontracted works,
- cost control report, progress and Project physical advance report,
- meetings.

This process is described in the Procedure KG-QP-10 for Project Control.

#### 6.5.1.4 Monitoring and Measuring of the Product

The execution of a contract gives rise to a number of control operations to be performed in the course of the equipment design and manufacturing phases and during the construction and erection phase. The conditions for performing these control operations and their frequency are defined, if necessary, in the technical specifications, in the inspection plans, in the control plans, as well as in the reference documents of the involved design disciplines and are established taking into consideration previously carried out contracts.

#### 6.5.2 Nonconformity Handling

An element incorporating a product and/or service provided by KOS shall be identified as Non-Compliant, when a nonconformity as to the contractually or in-house (KOS) laid down requirements is detected on acceptance of subcontracted works, equipment, material and/or service supplies, or in the process of delivery to or from the Client.

The aforementioned identification shall be made by issuing Nonconformity Sheets.

At the project development phase, all deviations from the laid down requirements being detected in a document issued with the note "Issue for Detailing" "Good for Construction", "Good for Purchasing" or "Good for Manufacturing" shall be dealt with as a Nonconformity.

The Procedure KG-IP-04 defines the Nonconformity Handling Process.

### 6.5.3 Analysis of Data

The System data correspond to the whole of the results from:

- the follow up of previous Management Reviews;
- the audits on the Integrated Management (Quality, Health, Safety and Environment) System;
- the follow up of the suppliers;
- the satisfaction of or complaints from the Clients;
- the corrective and/or preventive actions;
- the measurements of the objectives.

The System data are analyzed by the Head of the Quality, Health, Safety and Environment Service.

### 6.5.4 Corrective Actions

The corrective actions may result from:

- Deviations detected in the course of Quality, Health, Safety and Environment Audits or Quality.
  - Checking actions;
- nonconformities or incidents;
- complaints from the Client.

The Corrective Action may lead to a revision of the documents specific to a Project or of Company's reference documents. The carrying out of the Corrective Action is documented and its efficacy is object of verification in the course of subsequent audits.

The Corrective Actions Process is described in the Procedure KG-IP-05.

### 6.5.5 Preventive Actions

The Preventive Actions may arise from:

- The feedback sheet;
- The Contract or Construction Work closing up report;
- The identification of a potential problem.

The Preventive Actions Process is described in the Procedure KG-IP-06.

### 6.5.6 Improvement Process

The continuous improvement process takes place:

- firstly, in the framework of the Project, by means of scheduled Design Work reviews and through the analysis, by the Project Leader, of the results of the in-house and/or external audits, for defining the necessary actions;
- Then, within the Company, through the actions defined during the Management Reviews.

At the Integrated Management (Quality, Health, Safety and Environment) System Review meetings, the results of the Quality, Health, Safety and Environment System data analysis will be dealt with (see §§ 6.5.3 and 6.2.7). These results may lead to:

- A revision of part or of the whole Integrated Management (Quality, Health, Safety and Environment) System;
- Proposals for changing documents of the Integrated Management (Quality, Health, Safety and Environment) System;
- The setting up of new objectives in terms of Quality, Health, Safety and Environment.

## 7. DISTRIBUTION

See Procedure for Control and Distribution of the KG/IM and Procedures (KG-IP-00).