



# **DUCAST FACTORY L.L.C**

## **ABU DHABI**

### **Quality Manual**

### **For manufacturing of Ductile, Grey and steel castings**

Revision 03 - [08.11.2021]

Conforms to ISO 9001:2015  
Quality management system requirements

Prepared by

Head-QHSE

Approved by

Chief Executive Officer

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## 0.0 Revision History and Approval

Rev.	Nature of changes	Approval	Date
00	QML 01 as per ISO 9001:2008 requirements	MD/GM	15.06.2009
01	QML 01 as per ISO 9001:2015 requirements	MD/GM	01.08.2017
02	QML 01 as per ISO 9001:2015 requirements Changes based on pre-cert audit by BSI Sep4 /Nov27 2017	MD/GM	01.12.2017
03	Existing Manual updated to change the Factory location from Dubai to KIZAD, Abu Dhabi & Quality Policy Revised	MD/CEO	08.11.2021

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## **1.0 Welcome to DUCAST FACTORY LLC , Abu Dhabi**

## **2.0 INTRODUCTION**

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Ducast Factory LLC was set up in the year 1996 by Taurani Group of Companies. It is a modern ferrous foundry with a current installed capacity of 12, 000 Tons per annum. The company specializes in Ductile Iron, Grey Iron and Alloy Steel Castings. The products include manhole covers, scaffolding castings and castings for other general and industrial applications as per the customer's requirements.

The Abu Dhabi facility was commissioned and operational in April 2021 with an installed capacity of 18, 000 Tons per annum with state of the art fully/semi-automatic moulding lines and induction furnaces. The factory is strategically located in the upcoming industrial area of Abu Dhabi very close to the ports.

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## **3.0 DUCAST FACTORY LLC, Abu Dhabi**

### **2.1 Determining Our Strategic Direction**

Ducast LLC has reviewed and analyzed key aspects of itself and its stakeholders to determine the strategic direction of the company. This involves:

- Understanding our core products and scope of management system (see 2.2 below).
- Identifying "interested parties" (stakeholders) who receive our Products or who may be impacted by them, or those parties who may otherwise have a significant interest in our company.
- Understanding internal and external issues that are of concern to Ducast LLC and its interested parties. Many such issues are identified through an analysis of risks facing either Ducast LLC or the interested parties. Such issues are monitored and updated as appropriate, and discussed as part of management reviews.

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

### **Ducast Factory L.L.C Strategic direction is...**

To be the leading manufacturer of high quality manhole covers & engineering castings in the Middle East along with best possible technical support & services. Ducast intends to achieve these & grow in a sustainable way.

Ducast' s core values it outstands for:

- Technology
- Durability



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- Integrity
  - Mutual trust and respect
  - Customer satisfaction and performance orientation.

## **Ducast Vision**

Ducast's vision is to lead change using new technology & strive to achieve the best; our focus is to expand the limits of our work by improved methods & new solutions.

Increase the value of our company by exceeding customers' expectations, achieving market leadership and operating excellence in every segment of our company.

## **Ducast Mission**

- To be known as a Customer friendly and service oriented company.
- To improve our technology & leadership position
- Using our broad capabilities in products and services to develop unique, high-value integrated solutions
- To be known for value for money & service provider.
- Build and maintain customer confidence
- Develop economically viable solutions that fit with our customers' needs
- Deliver quality along with quantity in stipulated time
- Maintaining a safe work environment.

## **2.2 Scope of the Management System**

### **2.2.1 Scope Statement**

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

1. Needs to demonstrate its ability to consistently provide products and services that meet the customer and applicable statutory and regulatory requirements.
2. Aims to enhance the customer satisfaction through the effective application of the system, including the processes for improvement of the system and the assurance of the conformity to customer and applicable statutory and regulatory requirements.

Ducast Factory L.L.C Quality management system operates and complies for the following scope,

**Manufacture of Ductile iron and grey iron gully tops, manhole tops for vehicular and Pedestrian area**

**Manufacture of scaffolding casting including jack nuts, prop nuts, wedge plate and Ancillary items.**

### **2.2.2 Facilities within the Scope**

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

DUCAST FACTORY LLC  
Branch of Abu Dhabi 1  
PO BOX 4796  
Plot No KHIA4-19, Sector A4  
Khalifa Industrial Zone Abu Dhabi (KIZAD)  
Abu Dhabi, UAE  
Web: [www.ducast.com](http://www.ducast.com)

### **2.2.3 Permissible Exclusions**

The following clauses of ISO 9001 were determined to be not applicable to Ducast Factory LLC

#### **8.3 Design and Development of products and services**

The above clauses are excluded from the company quality system at this time; in the future, these may be incorporated into the company QMS based on the new product, and this manual will be updated accordingly.

Products are manufactured according to customer requirements and applicable product standard EN124-1-2015, BS 5834-P2, EN-1433, AS3996 hence the design clause is not applicable.

### **2.2.4 Scope of the Quality Manual**

**Scope: Manufacture of Ductile iron, grey iron and alloy steel castings.**

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

This manual does not follow the numbering structure of ISO 9001. Instead, Appendix B presents a cross reference between the sections of this manual and the clauses of ISO 9001:2015.

This manual presents "Notes" which are used to define how Ducast Factory LLC has tailored its management system to suit its purposes. These are intended to clarify implementation approaches and interpretations for concepts which are not otherwise clearly defined in ISO 9001:2015

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

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## 4.0 Quality Policy

Ducast Factory LLC is committed to create value for customers by offering best in class products and enhance their satisfaction level. We strive to exceed the expectations of our customers, stakeholders and relevant interested parties by;

- ❖ Supplying products in right quality, right time and right price with total employee involvement.
- ❖ Adhering to various national standards, international standards, statutory and regulatory requirements as relevant to our products.
- ❖ Enhancement of technology, people and process to meet the customer expectation through continual improvement.
- ❖ Ensuring effective implementation and continual improvement of our Quality Management System.

Jitendra Sangtani

(Chief Executive Officer)



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## 5.0 Management System Structure and Controls

### 4.1 Process Approach

#### 4.1.1 Process Identification

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

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

The following top-level processes have been identified for Ducast Factory LLC:

- External and Internal issues
- Need and Expectation of Interested parties

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

Each top-level process has a document which defines:

- applicable inputs and outputs
- process owner(s)
- applicable responsibilities and authorities
- applicable risks and opportunities
- critical and supporting resources
- criteria and methods employed to ensure the effectiveness of the process
- quality objectives related to that process

The sequence of interaction of these processes is illustrated in Appendix A.

#### 4.1.2 Process Controls & Objectives

Each process has at least one objective established for it; this is a statement of the intent of the process. Each objective is then supported by at least one “metric” or key performance indicator (KPI) which is then measured to determine the process’ ability to meet the quality objective.

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

The specific quality objectives for each process are defined

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

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

#### **4.1.3 Outsourced Processes**

Any process performed by a third party is considered an “outsourced process” and must be controlled, as well. The company’s outsourced processes, and the control methods implemented for each, are defined in QML-01 Purchasing procedure.

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

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

## **4.2 Documentation & Records**

### **4.2.1 General**

The management system documentation includes both documents and records.

*Note: the ISO 9001:2015 standard uses the term “documented information”; Ducast Factory LLC does not use this term, but instead relies on the terms “document” and “record” to avoid confusion. In this context the terms are defined by Ducast as:*

- *Document – written information used to describe how an activity is done.*
- *Record – captured evidence of an activity having been done.*

*Documents and records undergo different controls as defined herein.*

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

- a) The size of Ducast Factory LLC, Abu Dhabi
- b) Complexity and interaction of the processes
- c) Risks and opportunities
- d) Competence of personnel

### **4.2.2 Control of Documented information**

A documented has been established to define the controls needed for the identification, storage, retrieval, protection, retention time, and disposition of quality records.

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

Refer QML-01 Documented Information Flow chart

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### 4.3 Change Management

When Ducast Factory LLC determines the need for changes to the management system or its processes, these changes planned, implemented, and then verified for effectiveness; see the document DC-MOC-01/2017 REV: 00

### 4.4 Risks and Opportunities

Ducast Factory LLC considers risks and opportunities when taking actions within the management system, as well as when implementing or improving the management system; likewise, these are considered relative to products and services.

Risks and opportunities are managed in accordance with the document DC-RO-01/2017 Rev: 00

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## 6.0 Management & Leadership

### 5.1 Management Leadership and Commitment

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

- a) taking accountability of the effectiveness of the management system;
- b) ensuring that the **Quality Policy** and quality objectives are established for the management system and are compatible with the strategic direction and the context of the organization;
- c) ensuring that the quality policy is communicated, understood and applied within the organization;
- d) ensuring the integration of the management system requirements into the organization's other business processes, as deemed appropriate (see note);
- e) promoting awareness of the process approach;
- f) ensuring that the resources needed for the management system are available;
- g) communicating the importance of effective quality management and of conforming to the management system requirements;
- h) ensuring that the management system achieves its intended results;
- i) engaging, directing and supporting persons to contribute to the effectiveness of the management system;
- j) promoting continual improvement;
- k) Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

## 5.2 Customer Focus

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

This is accomplished by assuring:

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

## 5.3 Quality Policy

Top Management has developed the **Quality Policy**, defined in section 3.0 above, that governs day-to-day operations to ensure quality.

The **Quality Policy** is released as a standalone document as well, and is communicated and implemented throughout the organization.

## 5.4 Organizational Roles Responsibilities & Authorities

Top Management has assigned responsibilities and authorities for all relevant roles in the company. These are communicated through the combination of the Organization Chart / Roles, Responsibility.

The Top Management accepts responsibility and authority for:

- a) ensuring that the management system conforms to applicable standards;
- b) ensuring that the processes are delivering their intended outputs;
- c) reporting on the performance of the management system;
- d) providing opportunities for improvement for the management system;
- e) ensuring the promotion of customer focus throughout the organization;
- f) ensuring that the integrity of the management system is maintained when changes are planned and implemented.

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## 5.5 Internal Communication

Top Management of Ducast Factory LLC ensures internal communication takes place regarding the effectiveness of the management system. Internal communication methods include

- a) use of corrective and preventive action processes to report nonconformities or suggestions for improvement
- b) use of the results of analysis of data
- c) meetings (periodic, scheduled and/or unscheduled) to discuss aspects of the QMS
- d) use of the results of the internal audit process
- e) regular company meetings with all employees
- f) internal emails
- g) memos to employees
- h) Top Management's "open door" policy which allows any employee access to Top Management for discussions on improving the quality system

## 5.6 Management Review

The top Management reviews the management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. The review includes assessing opportunities for improvement, and the need for changes to the management system, including the **Quality Policy** and quality objectives.

Management review frequency, agenda (inputs), outputs, required members, actions taken and other review requirements are defined in the MRM document.

Records from management reviews are maintained.

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## 7.0 Resources

### 6.1 Provision of Resources

Ducast Factory LLC determines and provides the resources needed:

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

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

Resources and resource allocation are assessed during management reviews.

### 6.2 Human Resources

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

Staff members performing work affecting product quality are competent on the basis of appropriate

education, training, skills and experience.

Training and subsequent communication ensure that staff are aware of:

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

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

### 6.3 Infrastructure

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

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

Equipment is maintained per the procedure

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

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

### 6.4 Work Environment

Ducast Factory LLC provides a clean, safe and well lit working environment. The Top Management of Ducast Factory manages the work environment needed to achieve conformity to product requirements. Specific environmental requirements for products are determined during quality planning and are documented in subordinate procedures, work instructions, or job documentation. Where special work environments have been implemented, these shall also be maintained per 6.3 above.

Human factors are considered to the extent that they directly impact on the quality of Products

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

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## 6.5 Organizational Knowledge

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

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

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

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

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## 8.0 Operation

### 7.1 Operational Planning and Control

Ducast Factory LLC plans and develops the processes needed for product realization. Planning of product realization is consistent with the requirements of the other processes of the management system. Such planning considers the information related to the context of the organization (see section 2.0 above), current resources and capabilities, as well as product and service requirements.

Changes to operational processes are done in accordance with the document DC-MOC-01/2017

### 7.2 Customer-Related Activities

#### 7.2.1 *Capture of Customer Requirements*

During the intake of new business Ducast Factory LLC captures:

- a) requirements specified by the customer, including the requirements for delivery and post-delivery activities;
- b) requirements not stated by the customer but necessary for specified or intended use, where known
- c) statutory and regulatory requirements related to the product;
- d) any additional requirements determined by Ducast Factory LLC

These activities are defined in greater detail in the procedure QML-01 General sales procedure (GSP)

#### 7.2.2 *Review of Customer Requirements*

Once requirements are captured, Ducast Factory LLC reviews the requirements prior to its commitment to supply the Product This review ensures that:

- a) product requirements are defined,
- b) contract or order requirements differing from those previously expressed are resolved,

- 
- c) the organization has the ability to meet the defined requirements, and/or the claims for the products and services it offers, and
  - d) risks have been identified and considered.

These activities are defined in greater detail in the procedure **QML-01** General sales procedure (GSP)

### **7.2.3 Customer Communication**

Ducast Factory LLC has implemented effective communication with customers in relation to:

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

## **7.3 Design and Development**

### **Exclusion**

At Present Design is not in our scope of operation as the products are manufactured as per customer requirements and the product standard EN124-1-2015, EN 1433, BS 5834 P-2, AS3996

However, if the company chooses to take up design activities in future the same will be incorporated in the quality manual.

## **7.4 Purchasing**

Ducast Factory LLC ensures that purchased Product conform to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product is dependent on the effect on subsequent product realization or the final product.

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

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

These activities are further defined in the documents QML-01 Purchasing procedure.

## **7.5 Provision of Products**

### **7.5.1 Control of Provision of Products**

To control its provision of Products Ducast Factory LLC considers, as applicable, the following:

- a) the availability of documents or records that define the characteristics of the Products as well as the results to be achieved;





- 
- b) the availability and use of suitable monitoring and measuring resources;
  - c) the implementation of monitoring and measurement activities;
  - d) the use of suitable infrastructure and environment;
  - e) the appointment of competent persons, including any required qualifications;
  - f) the implementation of actions to prevent human error;
  - g) the implementation of release, delivery and post-delivery activities.

At this time, Ducast Factory LLC does not utilize any in-house “special processes” where the result of the process cannot be verified by subsequent monitoring or measurement.

### **7.5.2 Identification and Traceability**

Where appropriate, Ducast Factory LLC identifies its Product or other critical process outputs by suitable means. Such identification includes the status of the Product with respect to monitoring and measurement requirements. Unless otherwise indicated as nonconforming, pending inspection or disposition, or some other similar identifier, all product shall be considered conforming and suitable for use.

If unique traceability is required by contract, regulatory, or other established requirement, Ducast Factory LLC controls and records the unique identification of the Product Batch Code/Date code.

### **7.5.3 Property Belonging to Third Parties**

Ducast Factory LLC exercises care with customer or supplier property while it is under the organization's control or being used by the organization. Upon receipt, such property is identified, verified, protected and safeguarded. If any such property is lost, damaged or otherwise found to be unsuitable for use, this is reported to the customer or supplier and records maintained.

For customer intellectual property, including customer furnished data used for design, production and / or inspection, this is identified by customer and maintained and preserved to prevent accidental loss, damage or inappropriate use.

### **7.5.4 Preservation**

Ducast Factory LLC preserves conformity of product or other process outputs during internal processing and delivery. This preservation includes identification, handling, packaging, storage, and protection. Preservation also applies to the constituent parts of a product.

The documented information **DF: WI :P : 11** defines the methods for preservation of product.

### **7.5.5 Post-Delivery Activities**

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

- Warranty coverage
- Product technical support

- 
- Product Installation service some extend

Post-delivery activities are conducted in compliance with the management system defined herein.

#### **7.5.6 Process Change Control**

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

Process change management is defined in the document **DC –MOC-01/2017 REV:00**

#### **7.5.7 Measurement and Release of Products**

Acceptance criteria for Products are defined in appropriate subordinate documentation. Reviews, inspections and tests are conducted at appropriate stages to verify that the product and service requirements have been met. This is done before Products are released or services are delivered.

Each process utilizes different methods for measuring and releasing Products These methods are defined in **DF:F:QC:09 documented information**.

#### **7.5.8 Control of Nonconforming Outputs**

Ducast Factory LLC ensures that Products or other process outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

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## **9.0 Improvement**

### **8.1 General**

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

Improvement shall be driven by an analysis of data related to:

The results of analysis shall be used to evaluate:

- a) conformity of products and services;
- b) the degree of customer satisfaction;
- c) the performance and effectiveness of the management system;
- d) the effectiveness of planning;
- e) the effectiveness of actions taken to address risks and opportunities;
- f) the performance of external providers;
- g) other improvements to the management system.

### **8.2 Customer Satisfaction**

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

- 
- recording customer complaints
  - product rejections or returns
  - repeat orders for product
  - changing volume of orders for product
  - submittal of customer satisfaction surveys

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

### **8.3 Internal Audit**

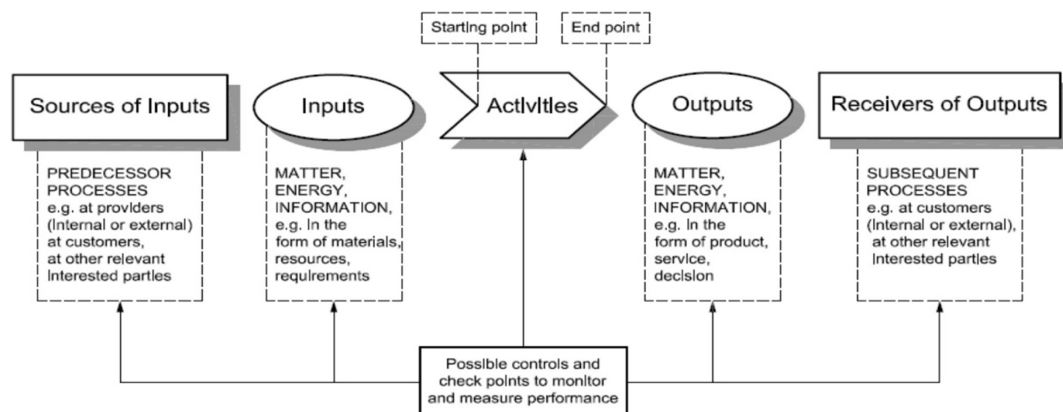
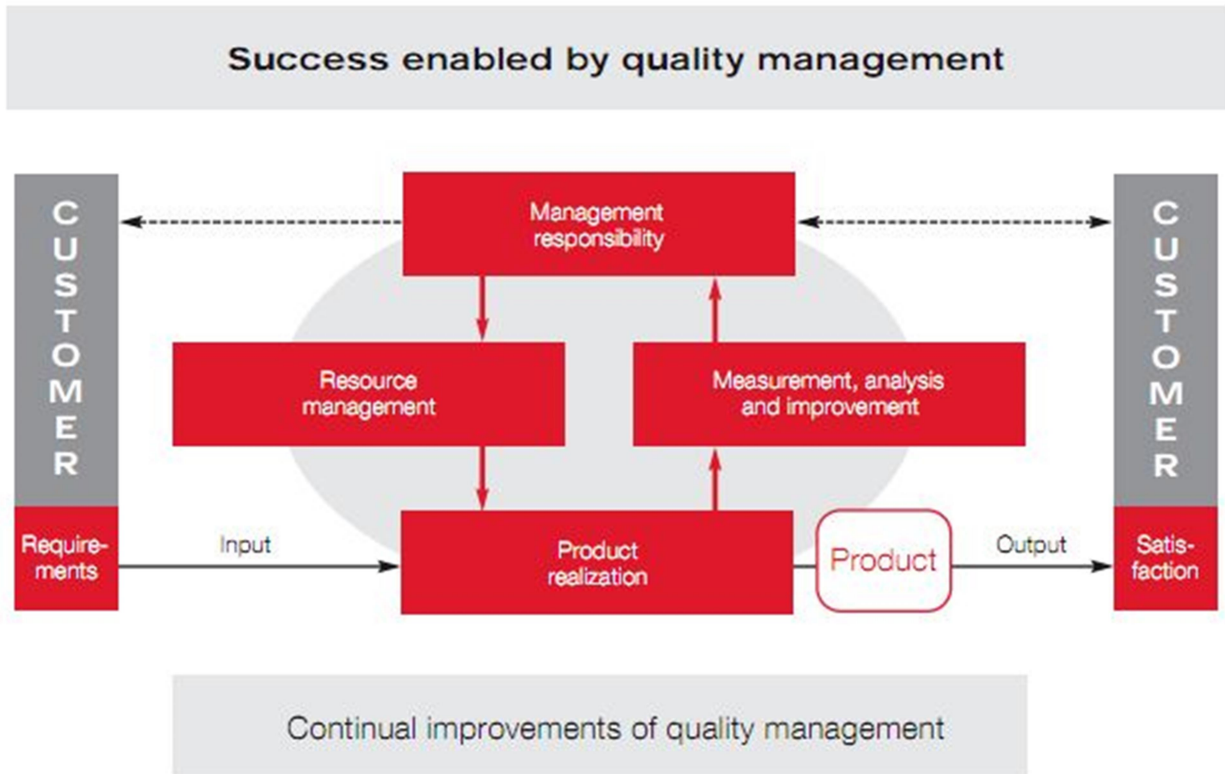
Ducast Factory LLC conducts internal audits at planned intervals to determine whether the management system conforms to contractual and regulatory requirements, to the requirements of ISO 9001, and to management system requirements. Audits also seek to ensure that the management system has been effectively implemented and is maintained.

### **8.4 Corrective Action**

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

These activities are done through the use of the formal Corrective Action ([CAR Form Abbreviation]) system, and are defined in the document **DC- NCCA-01/2017 Rev: 00**

## Appendix A: Overall Process Sequence & Interaction



## Appendix B: ISO 9001:2015 Cross Reference

ISO 9001:2015 Clause	Section in Manual
4.0 Context of the Organization (all)	
4.1 Understanding the Organization & Its Context	2.1 Determining Our Strategic Direction
4.2 Understanding the needs & expectations of interested parties	2.0 Who We Are
4.3 Determining the scope of the QMS	2.2 Scope of the Management System
4.4 Management system and its processes	4.1 Process Approach
5.0 Leadership	
5.1 Leadership & Commitment	5.1 Management Leadership and Commitment
5.1.1 General	5.1 Management Leadership and Commitment
5.1.2 Customer focus	5.2 Customer Focus
5.2 Policy	3.0 Quality Policy 5.3 Quality Policy
5.3 Organizational Roles Responsibilities and Authorities	5.4 Organizational Roles and Responsibilities and Authorities
6.0 Planning	
6.1 Actions to address risks and opportunities	4.4 Risks and Opportunities
6.2 Quality objectives and planning to achieve them	4.1.2 Process Controls & Objectives
6.3 Planning of changes	4.3 Change Management
7.0 Support	
7.1 Resources	
7.1.1 General	6.1 Provision of Resources
7.1.2 People	6.2 Human Resources
7.1.3 Infrastructure	6.3 Infrastructure
7.1.4 Environment for the operation of processes	6.4 Work Environment
7.1.5 Monitoring and measuring resources	6.3 Infrastructure
7.1.6 Organizational knowledge	6.5 Organizational Knowledge
7.2 Competence	6.2 Human Resources
7.3 Awareness	5.5 Internal Communication
7.4 Communication	5.5 Internal Communication
7.5 Documented information	4.2 Documentation & Records
8.0 Operation	
8.1 Operational planning and control	7.1 Operational Planning and Control
8.2 Requirements for products and services	
8.2.1 Customer communication	7.2.3 Customer Communication
8.2.2 Determining the requirements related to products & services	7.2.1 Capture of Customer Requirements
8.2.3 Review of requirements related to products & services	7.2.2 Review of Customer Requirements
8.2.4 Changes to requirements for products and services	7.2.2 Review of Customer Requirements
8.3 Design and development of products and services	7.3 Design and Development
8.4 Control of externally provided processes, products & services	7.4 Purchasing



ISO 9001:2015 Clause	Section in Manual
8.5 Production and service provision	
8.5.1 Control of production and service provision	7.5.1 Control of Provision of [Products or Services .]
8.5.2 Identification and traceability	7.5.2 Identification and Traceability
8.5.3 Property belonging to customers or external providers	7.5.3 Property Belonging to Third Parties
8.5.4 Preservation	7.5.4 Preservation
8.5.5 Post-delivery activities	7.5.5 Post-Delivery Activities
8.5.6 Control of changes	7.5.6 Process Change Control
8.6 Release of products and services	7.5.7 Measurement and Release of [Products or Services.]
8.7 Control of nonconforming outputs	7.5.8 Control of Nonconforming Outputs
9.0 Performance evaluation	
9.1 Monitoring, measurement, analysis and evaluation	
9.1.1 General	8.1 Improvement: General
9.1.2 Customer satisfaction	8.2 Customer Satisfaction
9.1.3 Analysis and evaluation	8.1 Improvement: General
9.2 Internal audit	8.3 Internal Audit
9.3 Management review	5.6 Management Review
10.0 Improvement	
10.1 General	8.1 Improvement: General
10.2 Nonconformity and corrective action	8.4 Corrective and Preventive Action
10.3 Continual improvement	8.1 Improvement: General