NEAR EAST UNIVERSITY

Faculty of Economics and Administrative Sciences Department of Business Administration

MAN 400 (GRADUATION PROJECT)

"ISO 9000 FAMILY, THEORY & PRACTICE"

Submitted to Ali MALEK

Submitted by Fatih KORUCU / 980285

Nicosia – June 13th, 2003

LIBRARY TURINERS

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ACKNOWLEDGEMENT

I would like to thanks to my supervisor MBA, Mr. Ali Malek and appreciate all the efforts of my valuable lecturers who guided me through these years in order to be able to graduate.

Also I would like to thanks Mr. Fikret Unutmaz who is the manager of Cemsa Boya. Appreciation also goes to my parents for all their supports to my training.

ABSTRACT

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose.

The ISO (International Organization for Standardization) is a worldwide federation of national standards bodies from more than 140 countries, one from each country. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity.

The aim of this project is to explain what are the benefits of ISO certificate for any organization. What is its positions before and after to have ISO certificate for any organization? In this project, I will try to examine that how is it applied by Cemsa Boya in Lefkosa.

INTRODUCTION

Aims of The Study :

ISO is the one of the most famous non governmental organization all over the world that determines the standards for every sector. Because of the important position of ISO, I have decided to study on this subject. Today, in our developing and globalizing world, there are visible improvements in goods and service sectors. Competition is not only provided by production but it's also provided by standardization. So, in this point, ISO has a very important mission. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. The aim of this stuy is to examine that how is applied ISO in Cemsa Boya.

Methodology Used :

In this Project interview, literature and internet research will be used.

Structure of The Study :

This study divided into three main parts.

What are ISO and Standards?

In this part, we will define ISO and standards. Also this part will cover international standardization needed, ISO's achievements, ISO standards development and ISO's work financing.

I. WHAT ARE ISO AND STANDARDS?

1.1. Definition of the Quality

Quality is a customer determination not engineer's determination, not a marketing determination or a general management determination. It is based upon the customer's actual experience with the productor service, measured against his or her requirements. People deal with the issue of quality continually in their daily lives. We concern our selves with quality when grocery shoping, eating in a restaurant, and marketing a major purchase such as an automobile, a home, a television, or a furniture. Perceived quality is major factor by which people make distinctions in the market place.

Quality involves meeting or exceeding customer expectation

Quality applies to products, service, people, process and environments

Quality is an ever-changing state (i.e., what is considered quality today may not be good enough to be concidered quality tomorrow)

Quality has been defined in a number of different ways by a number of different people and organizations.

Consider following definitions :

Fred Smith, CEO of Federal Express, defines quality as "performance to the Standard expected by the customer."

The General Services Administration (GSA) defines quality, as "meeting the customer's needs the first time and every time."

Boing defines quality as "providin our customers with products and services that consistently meet their needs and expectations."

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The U.S. Department of Defence (DOD) defines quality as "doing the right thing right the first time, always striving for improvement, and always satisfying the customer."

W. Edwards Deming has this tos tay about quality "quality can be defined only in the terms of the agent. Who is the judge of quality? In the mind of the production worker, he produces quality if he can take pride in his work. Poor quality, to him, means loss of business, and perhaps of his job. Good quality, he thinks, will keep the company in business. Quality to the plant manager means to get the numbers out and to meet specifications. His job is also, whether he knows it or not, continual improvement of leadership¹.

1.2. Definition and Historical Background of ISO

48,49.

The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies from more than 140 countries, one from each country. It is not a part of the United Nations.

ISO is a non-governmental organization established in 1947. ISO head quartered in Geneva, Switzeland, has its members the national standards organizations. The ISO member for the United States is in the American National Standards Intitude (ANSI). The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods ¹ David L. Goetsch, Stanley B. Davis, Quality Management, Third adition, Prentice Hall, 2000, p.p.47,

and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity.

During the 1970s it was generally acknowledged that the word quality and different meanings within and among industries and countries and around the world. In 1979 the ISO member representing the United Kingdom, the Biritish Standard Institute (BSI), recognizing the need for standardization for quality management and assurance, submitted a formal proposal to ISO to develop international standards for quality assurance techniques and practices. Using standards that already existed in the United Kingdom and Canada as a basis, ISO established generic quality standards primarily for manufacturing firms that could be used worldwide.

The ISO 9000 series of quality management and assurance standarts was first published in 1978. ISO 9000, the first standard in the series, titled Quality Management Quality Assurance Standards for Selections and Use, is a guide for using four other standards which are ISO 9001, ISO 9002, ISO 9003 and ISO 9004.²

ISO's work results in international agreements which are published as International Standards.

² Roberta S. Russel, Bernard W. Taylor, Operation Management, third edition, p.p.117

1.2.1. ISO's Name

Many people will have noticed a seeming lack of correspondence between the official title when used in full, International Organization for Standardization, and the short form, ISO. Shouldn't the acronym be "IOS"? Yes, if it were an acronym – which it is not.

In fact, "ISO" is a word, derived from the Greek isos, meaning "equal", which is the root of the prefix "iso-" that occurs in a host of terms, such as "isometric" (of equal measure or dimensions) and "isonomy" (equality of laws, or of people before the law).

From "equal" to "standard", the line of thinking that led to the choice of "ISO" as the name of the organization is easy to follow. In addition, the name ISO is used around the world to denote the organization, thus avoiding the plethora of acronyms resulting from the translation of "International Organization for Standardization" into the different national languages of members, e.g. IOS in English, OIN in French (from Organisation internationale de normalisation). Whatever the country, the short form of the Organization's name is always ISO.³

1.3. Definition of Standarts

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of

³ http://www.iso.ch/iso/en/aboutiso/introduction

characteristics, to ensure that materials, products, processes and services are fit for their purpose.

For example, the format of the credit cards, phone cards, and "smart" cards that have become commonplace is derived from an ISO International Standard. Adhering to the standard, which defines such features as an optimal thickness (0,76 mm), means that the cards can be used worldwide.

International Standards thus contribute to making life simpler, and to increasing the reliability and effectiveness of the goods and services we use.

1.4. Why is Internetional Standardization Needed?

Industry-wide standardization is a condition existing within a particular industrial sector when the large majority of products or services conform to the same standards. It results from consensus agreements reached between all economic players in that industrial sector - suppliers, users, and often governments. They agree on specifications and criteria to be applied consistently in the choice and classification of materials, the manufacture of products, and the provision of services. The aim is to facilitate trade, exchange and technology transfer through:

enhanced product quality and reliability at a reasonable price;

improved health, safety and environmental protection, and reduction of waste; greater compatibility and interoperability of goods and services; simplification for improved usability; reduction in the number of models, and thus reduction in costs; increased distribution efficiency, and ease of maintenance.

Users have more confidence in products and services that conform to international standards. Assurance of conformity can be provided by manufacturers' declarations, or by audits carried out by independent bodies.

The existence of non-harmonized standards for similar technologies in different countries or regions can contribute to so-called "technical barriers to trade". Exportminded industries have long sensed the need to agree on world standards to help rationalize the international trading process. This was the origin of the establishment of ISO.

International standardization is well-established for many technologies in such diverse fields as information processing and communications, textiles, packaging, distribution of goods, energy production and utilization, shipbuilding, banking and financial services. It will continue to grow in importance for all sectors of industrial activity for the foreseeable future.

There five main reasons that international standarts needed.

1.4.1. Worldwide Progress in Trade Liberalization

Today's free-market economies increasingly encourage diverse sources of supply and provide opportunities for expanding markets. On the technology side, fair competition needs to be based on identifiable, clearly defined common references that are

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recognized from one country to the next, and from one region to the other. An industrywide standard, internationally recognized, developed by consensus among trading partners, serves as the language of trade.

1.4.2. Interpenetration of Sectors

No industry in today's world can truly claim to be completely independent of components, products, rules of application, etc., that have been developed in other sectors. Bolts are used in aviation and for agricultural machinery; welding plays a role in mechanical and nuclear engineering, and electronic data processing has penetrated all industries. Environmentally friendly products and processes, and recyclable or biodegradable packaging are pervasive concerns.

1.4.3. Worldwide Communications Systems

The computer industry offers a good example of technology that needs quickly and progressively to be standardized at a global level. Full compatibility among open systems fosters healthy competition among producers, and offers real options to users since it is a powerful catalyst for innovation, improved productivity and cost-cutting.

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1.4.4. Global Standards for Emerging Technologies

Standardization programmes in completely new fields are now being developed. Such fields include advanced materials, the environment, life sciences, urbanization and construction. In the very early stages of new technology development, applications can be imagined but functional prototypes do not exist. Here, the need for standardization is in defining terminology and accumulating databases of quantitative information.

1.4.5. Developing Countries

Development agencies are increasingly recognizing that a standardization infrastructure is a basic condition for the success of economic policies aimed at achieving sustainable development. Creating such an infrastructure in developing countries is essential for improving productivity, market competitiveness, and export capability.

1.5. ISO's Achievements

Below are some examples of ISO standards that have been widely adopted, giving clear benefits to industry, trade and consumers.

The *ISO film speed code*, among many other photographic equipment standards, has been adopted worldwide making things simpler for the general user.

Standardization of the format of *telephone and banking cards* means the cards can be used worldwide.

Tens of thousands of businesses are implementing *ISO 9000* which provides a framework for quality management and quality assurance. The *ISO 14000* series provides a similar framework for environmental management.

The *internationally standardized freight container* enables all components of a transport system - air and seaport facilities, railways, highways, and packages - to interface efficiently. This, combined with standardized documents to identify sensitive or dangerous cargoes makes international trade cheaper, faster and safer.

m, kg, s, A, K, mol, cd are the symbols representing the seven base units of the *universal system of measurement known as SI* (Système international d'unités). The SI system is covered by a series of 14 International Standards. Without these standards shopping and trade would be haphazard and technological development would be handicapped.

Paper sizes. The original standard was published by DIN in 1922. Now used worldwide as ISO 216, standard paper sizes allow economies of scale with cost benefits to both producers and consumers.

A well-designed symbol conveys a clearcut message in a multilingual world. The same *symbols for automobile controls* are displayed in cars all over the world, no matter where they are manufactured.

Safety of wire ropes: used on oil rigs, on fishing vessels, in mines, in all types of building operations, for lifts and cable cars, etc. ISO International Standards systematically define basic characteristics such as size, surface finish, type of construction, tensile grade of the wire, minimum breaking load and linear mass. Standardization of performance or safety requirements ensures that user requirements are met while allowing individual manufacturers the freedom to design their own solutions for meeting these basic needs. Consumers then benefit from the effects of competition among manufacturers.

The *ISO international codes for country names, currencies and languages* help to climinate duplication and incompatibilities in the collection, processing and dissemination of information. As resource-saving tools, universally understandable codes play an important role in both automated and manual documentation.

The diversity of screw threads for identical applications used to represent an important technical obstacle to trade. It caused maintenance problems, and lost or damaged nuts or bolts could not easily be replaced. A global solution is supplied in the ISO standards for *ISO metric screw threads*.

1.6. Who makes up ISO?

ISO is made up of its members which are divided into three categories.

1.6.1. Member Body of ISO

A *member body of ISO* is the national body "most representative of standardization in its country". Thus, only one body in each country may be admitted to membership of ISO.

A member body takes the responsibility for:

informing potentially interested parties in their country of relevant international standardization opportunities and initiatives;

ensuring that a concerted view of the country's interests is presented during international negotiations leading to standards agreements;

providing their country's share of financial support for the central operations of ISO, through payment of membership dues.

Member bodies are entitled to participate and exercise full voting rights on any technical committee and policy committee of ISO.

1.6.2. Correspondent Member

A *correspondent member* is usually an organization in a country which does not yet have a fully developed national standards activity. Correspondent members do not take an active part in the technical and policy development work, but are entitled to be kept fully informed about the work of interest to them.

1.6.3. Subscriber Membership

ISO has also established a third category, *subscriber membership*, for countries with very small economies. Subscriber members pay reduced membership fees that nevertheless allow them to maintain contact with international standardization.

1.7. ISO Standarts Development

ISO standards are developed according to the following principles:

Consensus

The views of all interests are taken into account: manufacturers, vendors and users, consumer groups, testing laboratories, governments, engineering professions and research organizations.

Industry-wide

Global solutions to satisfy industries and customers worldwide.

Voluntary

International standardization is market-driven and therefore based on voluntary involvement of all interests in the market-place.

There are three main phases in the ISO standards development process.

The need for a standard is usually expressed by an industry sector, which communicates this need to a national member body. The latter proposes the new work item to ISO as a whole. Once the need for an International Standard has been recognized and formally agreed, the *first phase* involves definition of the technical scope of the future standard. This phase is usually carried out in working groups which comprise technical experts from countries interested in the subject matter.

Once agreement has been reached on which technical aspects are to be covered in the standard, a *second phase* is entered during which countries negotiate the detailed specifications within the standard. This is the consensus-building phase.

The *final phase* comprises the formal approval of the resulting draft International Standard (the acceptance criteria stipulate approval by two-thirds of the ISO members that have participated actively in the standards development process, and approval by 75 % of all members that vote), following which the agreed text is published as an ISO International Standard.

Most standards require periodic revision. Several factors combine to render a standard out of date: technological evolution, new methods and materials, new quality and safety requirements. To take account of these factors, ISO has established the general rule that all ISO standards should be reviewed at intervals of not more than five years. On occasion, it is necessary to revise a standard earlier.

To date, ISO's work has resulted in some 12 000 International Standards, representing more than 300 000 pages in English and French (terminology is often provided in other languages as well).

1.8. ISO's Work Financing

The financing of ISO closely reflects its decentralized mode of operation with, on the one hand, the financing of the Central Secretariat activities and, on the other hand, the financing of the technical work as such.

The financing of the Central Secretariat derives from member subscriptions (80 %) and revenues from the sale of the Organization's standards and other publications (20 %). The subscriptions required of members for financing the operations of the Central Secretariat are expressed in units and calculated in Swiss francs (CHF). The number of units that each member is invited to pay is calculated on the basis of economic indicators: gross national product (GNP), and value of imports and exports. The value of the subscription unit is set each year by the ISO Council.

The ISO member bodies bear the expenditure necessary for the operation of the individual technical secretariats for which they are responsible. It is generally estimated that the operating expenditure of the central secretariat represents about one-fifth of the total cost of financing the ISO administrative operations.

To that, one must also add the value of the voluntary contributions of some 30 000 experts in terms of time and travel. While no precise calculation has ever been made to assess in figures this contribution of fundamental knowledge to the work of ISO, it is nevertheless certain that this expenditure amounts to several hundred million Swiss francs each year.

IL ISO 9000 FAMILY

The standards, guidelines and technical reports which make up the ISO 9000 family and which are listed below are available separately, or as collections. The ISO 9000 compendium presents the ISO 9000 family in hard copy form.

| Standards and guidelines | Purpose |
|---|--|
| SSO 9000:2000, Quality management systems - Fundamentals and vocabulary | Establishes a starting point for understanding the standards and defines the fundamental terms and definitions used in the ISO 9000 family which you need to avoid misunderstandings in their use. |
| 50 9001:2000, Quality management systems - Requirements | This is the requirement standard you use to assess your ability to meet customer and applicable regulatory requirements and thereby address customer satisfaction. It is now the only standard in the ISO 9000 family against which third-party certification can be carried. |
| ISO 9004:2000, Quality management systems - Guidelines for performance improvements | This guideline standard provides guidance for continual improvement of your quality management system to benefit all parties through sustained customer satisfaction. |
| ISO 19011, Guidelines on Quality and/or Environmental Management Systems Auditing (currently under development) ISO 10005:1995, Quality management - Guidelines for quality plans | Provides you with guidelines for verifying the system's ability to achieve defined quality objectives. You can use this standard internally or for auditing your suppliers. Provides guidelines to assist in the preparation, review, acceptance and revision of quality plans |
| ISO 10006:1997, Quality management - Guidelines to quality in project management | Guidelines to help you ensure the quality of both the project processes and the project products. |
| ISO 10007:1995, Quality management - Guidelines for configuration management | Gives you guidelines to ensure that a complex product continues to function when components are changed individually. |
| ISO/DIS 10012, Quality assurance requirements for measuring equipment - Part 1: Metrological confirmation system for measuring equipment | Give you guidelines on the main features of a calibration system to ensure that measurements are made with the intended accuracy. |
| ISO 10012-2:1997, Quality assurance for measuring equipment - Part 2: Guidelines for control of measurement of processes | Provides supplementary guidance on the application of statistical process control when this is appropriate for achieving the objectives of Part 1. |
| ISO 10013:1995, Guidelines for developing quality manuals | Provides guidelines for the development, and maintenance of quality manuals, tailored to your specific needs. |
| ISO/TR 10014:1998, Guidelines for managing the economics of quality ISO 10015:1999, Quality management - | Provides guidance on how to achieve economic benefits from the application of quality management. Provides guidance on the development, implementation. |
| Guidelines for training | maintenance and improvement of strategies and systems for training that affects the quality of products. |

Table 1: ISO family

2.1. ISO 9001 Quality Systems

Model for quality assurance in design/development, production, installation and servicing applies to suppliers who have a responsibility for the design and development, production, installation, and servicing for a product. It includes a set of requirements for the suppliers' quality management program, begining with top management responsibility and providing objective criteria to verify that key elements in the total quality management approach are present. It defines requirements for conducting internal quality audits to verify to effectiveness of the quality management system.

2.2. ISO 9002 Quality System

Model of quality issurance in production and installation, is similar to ISO 9001 except that it is limited to suppliers that only produce and install a product and do not design, develop, or service the product.

2.3. ISO 9003 Quality System

Model of quality assurance in final inspection and test, is limited to guidelines for final inspection and testing because of the relative simplicity of the product. This standard shifts reponsibility for quality to the supplier so the customer is assured of the level of quality when the product is received.

14 ISO 9004 Quality System

Geidelines, provides guidelines for developing and implementing the quality management programs required in ISO 9001, 9002 and 9003. These guidelines and suggestions help management develop an effective quality management program so their companies can be qualified to meet ISO 9001, 9002 and 9003 requirements. The ISO 9000 standards can generally be applied to the service sector by making such simple modifications as substituting terms – for example, process for production and service for product.⁴

2.5. Examples of The ISO 9000 Standarts in Use

ISO 9001:2000 is used if you are seeking to establish a management system that provides confidence in the conformance of your product to established or specified requirements. It is now the only standard in the ISO 9000 family against whose requirements your quality system can be certified by an external agency. The standard recognizes that the word "product" applies to services, processed material, hardware and software intended for, or required by, your customer.

There are five sections in the standard that specify activities that need to be considered when you implement your system. You will describe the activities you use to supply your products and may exclude the parts of the Product Realization section that are not applicable to your operations. The requirements in the other four sections ? Quality management system, Management responsibility, Resource management and

⁴ Roberta S.Russel, Bernard W. Taylor, Operations Management, third addition, pp. 117

Measurement, analysis and improvement? apply to all organizations and you will demonstrate how you apply them to your organization in your quality manual or other documentation.

Together, the five sections of ISO 9001:2000 define what you should do consistently to provide product that meets customer and applicable statutory or regulatory requirements. In addition, you will seek to enhance customer satisfaction by improving your quality management system.

ISO 9004:2000 is used to extend the benefits obtained from ISO 9001:2000 to all parties that are interested in or affected by your business operations. Interested parties include your employees, owners, suppliers and society in general.

ISO 9001:2000 and ISO 9004:2000 are harmonized in structure and terminology to assist you to move smoothly from one to the other. Both standards apply a process approach. Processes are recognized as consisting of one or more linked activities that require resources and must be managed to achieve predetermined output. The output of one process may directly form the input to the next process and the final product is often the result of a network or system of processes.

The nature of your business and the specific demands you have will determine how you apply the standards to achieve your objectives.

Here are a few examples:

Example 1

A metal parts fabricating company used ISO 9000:2000 to develop a plan to implement their quality management system. When they were ready, they prepared a quality manual and quality system procedures as required by ISO 9001:2000, excluding the requirements covering product design and development because their products are made to designs prepared by their customers. Later, in order to bid on the supply of parts to a major automotive company, they adapted their quality system to meet the sector specific requirements of ISO/TS 16949.

Example 2

A welfare agency decided to establish a quality improvement strategy. It adopted ISO 9004:2000 as the basis for planning and implementing its system. The agency found that ISO 9000:2000 provided very useful additional guidance and plans to seek certification to ISO 9001:2000 to gain more credibility.

Example 3

A washing machine manufacturer had a well-established company culture of continual improvement and effective production control. The management decided to improve the company's development processes and to implement ISO 9001:2000 to obtain certification for commercial purposes. The company used ISO 9004:2000 to guide its improvement processes and ISO 10006:1997 to develop a project management plan.

Example 4

A large chemical processing company was required by its major customers to gain registration/certification to ISO 9001:2000. In order to obtain additional benefits, company leadership planned a comprehensive management strategy based on ISO 9000:2000 and ISO 9004:2000. A thorough review of their business processes indicated that all elements of ISO 9001:2000 were applicable to their quality management system. The company used ISO 10013:1999 to guide the development of quality documentation in its various production divisions and ISO 10015:1999 for guidance in the preparation of training plans for their employees.

Example 5

A firm of international lawyers wanted to improve their client management processes and to achieve registration/certification to ISO 9001:2000. Their quality management system provides for the design and development of new services such as international tax planning and modifying traditional services to meet the requirements of new or amended legislation. They included purchasing control to cover the selection of computer hardware and software, as well as purchasing the services of specialist lawyers as needed. After successfully implementing ISO 9001:2000, they used the selfassessment guidelines of ISO 9004:2000 to monitor their progress as they improved their quality management system.

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ABSTRACT

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose.

The ISO (International Organization for Standardization) is a worldwide federation of national standards bodies from more than 140 countries, one from each country. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity.

The aim of this project is to explain what are the benefits of ISO certificate for any organization. What is its positions before and after to have ISO certificate for any organization? In this project, I will try to examine that how is it applied by Cemsa Boya in Lefkosa.

INTRODUCTION

Aims of The Study :

ISO is the one of the most famous non governmental organization all over the world that determines the standards for every sector. Because of the important position of ISO, I have decided to study on this subject. Today, in our developing and globalizing world, there are visible improvements in goods and service sectors. Competition is not only provided by production but it's also provided by standardization. So, in this point, ISO has a very important mission. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. The aim of this stuy is to examine that how is applied ISO in Cemsa Boya.

Methodology Used :

In this Project interview, literature and internet research will be used.

Structure of The Study :

This study divided into three main parts.

What are ISO and Standards?

In this part, we will define ISO and standards. Also this part will cover international standardization needed, ISO's achievements, ISO standards development and ISO's work financing.

I. WHAT ARE ISO AND STANDARDS?

1.1. Definition of the Quality

Quality is a customer determination not engineer's determination, not a marketing determination or a general management determination. It is based upon the customer's actual experience with the productor service, measured against his or her requirements. People deal with the issue of quality continually in their daily lives. We concern our selves with quality when grocery shoping, eating in a restaurant, and marketing a major purchase such as an automobile, a home, a television, or a furniture. Perceived quality is major factor by which people make distinctions in the market place.

Quality involves meeting or exceeding customer expectation

Quality applies to products, service, people, process and environments

Quality is an ever-changing state (i.e., what is considered quality today may not be good enough to be concidered quality tomorrow)

Quality has been defined in a number of different ways by a number of different people and organizations.

Consider following definitions :

Fred Smith, CEO of Federal Express, defines quality as "performance to the Standard expected by the customer."

The General Services Administration (GSA) defines quality, as "meeting the customer's needs the first time and every time."

Boing defines quality as "providin our customers with products and services that consistently meet their needs and expectations."

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The U.S. Department of Defence (DOD) defines quality as "doing the right thing right the first time, always striving for improvement, and always satisfying the customer."

W. Edwards Deming has this tos tay about quality "quality can be defined only in the terms of the agent. Who is the judge of quality? In the mind of the production worker, he produces quality if he can take pride in his work. Poor quality, to him, means loss of business, and perhaps of his job. Good quality, he thinks, will keep the company in business. Quality to the plant manager means to get the numbers out and to meet specifications. His job is also, whether he knows it or not, continual improvement of leadership¹.

1.2. Definition and Historical Background of ISO

48,49.

The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies from more than 140 countries, one from each country. It is not a part of the United Nations.

ISO is a non-governmental organization established in 1947. ISO head quartered in Geneva, Switzeland, has its members the national standards organizations. The ISO member for the United States is in the American National Standards Intitude (ANSI). The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods ¹ David L. Goetsch, Stanley B. Davis, Quality Management, Third adition, Prentice Hall, 2000, p.p.47,

and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity.

During the 1970s it was generally acknowledged that the word quality and different meanings within and among industries and countries and around the world. In 1979 the ISO member representing the United Kingdom, the Biritish Standard Institute (BSI), recognizing the need for standardization for quality management and assurance, submitted a formal proposal to ISO to develop international standards for quality assurance techniques and practices. Using standards that already existed in the United Kingdom and Canada as a basis, ISO established generic quality standards primarily for manufacturing firms that could be used worldwide.

The ISO 9000 series of quality management and assurance standarts was first published in 1978. ISO 9000, the first standard in the series, titled Quality Management Quality Assurance Standards for Selections and Use, is a guide for using four other standards which are ISO 9001, ISO 9002, ISO 9003 and ISO 9004.²

ISO's work results in international agreements which are published as International Standards.

² Roberta S. Russel, Bernard W. Taylor, Operation Management, third edition, p.p.117

1.2.1. ISO's Name

Many people will have noticed a seeming lack of correspondence between the official title when used in full, International Organization for Standardization, and the short form, ISO. Shouldn't the acronym be "IOS"? Yes, if it were an acronym – which it is not.

In fact, "ISO" is a word, derived from the Greek isos, meaning "equal", which is the root of the prefix "iso-" that occurs in a host of terms, such as "isometric" (of equal measure or dimensions) and "isonomy" (equality of laws, or of people before the law).

From "equal" to "standard", the line of thinking that led to the choice of "ISO" as the name of the organization is easy to follow. In addition, the name ISO is used around the world to denote the organization, thus avoiding the plethora of acronyms resulting from the translation of "International Organization for Standardization" into the different national languages of members, e.g. IOS in English, OIN in French (from Organisation internationale de normalisation). Whatever the country, the short form of the Organization's name is always ISO.³

1.3. Definition of Standarts

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of

³ http://www.iso.ch/iso/en/aboutiso/introduction
characteristics, to ensure that materials, products, processes and services are fit for their purpose.

For example, the format of the credit cards, phone cards, and "smart" cards that have become commonplace is derived from an ISO International Standard. Adhering to the standard, which defines such features as an optimal thickness (0,76 mm), means that the cards can be used worldwide.

International Standards thus contribute to making life simpler, and to increasing the reliability and effectiveness of the goods and services we use.

1.4. Why is Internetional Standardization Needed?

Industry-wide standardization is a condition existing within a particular industrial sector when the large majority of products or services conform to the same standards. It results from consensus agreements reached between all economic players in that industrial sector - suppliers, users, and often governments. They agree on specifications and criteria to be applied consistently in the choice and classification of materials, the manufacture of products, and the provision of services. The aim is to facilitate trade, exchange and technology transfer through:

enhanced product quality and reliability at a reasonable price;

improved health, safety and environmental protection, and reduction of waste; greater compatibility and interoperability of goods and services; simplification for improved usability; reduction in the number of models, and thus reduction in costs; increased distribution efficiency, and ease of maintenance.

Users have more confidence in products and services that conform to international standards. Assurance of conformity can be provided by manufacturers' declarations, or by audits carried out by independent bodies.

The existence of non-harmonized standards for similar technologies in different countries or regions can contribute to so-called "technical barriers to trade". Exportminded industries have long sensed the need to agree on world standards to help rationalize the international trading process. This was the origin of the establishment of ISO.

International standardization is well-established for many technologies in such diverse fields as information processing and communications, textiles, packaging, distribution of goods, energy production and utilization, shipbuilding, banking and financial services. It will continue to grow in importance for all sectors of industrial activity for the foreseeable future.

There five main reasons that international standarts needed.

1.4.1. Worldwide Progress in Trade Liberalization

Today's free-market economies increasingly encourage diverse sources of supply and provide opportunities for expanding markets. On the technology side, fair competition needs to be based on identifiable, clearly defined common references that are

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recognized from one country to the next, and from one region to the other. An industrywide standard, internationally recognized, developed by consensus among trading partners, serves as the language of trade.

1.4.2. Interpenetration of Sectors

No industry in today's world can truly claim to be completely independent of components, products, rules of application, etc., that have been developed in other sectors. Bolts are used in aviation and for agricultural machinery; welding plays a role in mechanical and nuclear engineering, and electronic data processing has penetrated all industries. Environmentally friendly products and processes, and recyclable or biodegradable packaging are pervasive concerns.

1.4.3. Worldwide Communications Systems

The computer industry offers a good example of technology that needs quickly and progressively to be standardized at a global level. Full compatibility among open systems fosters healthy competition among producers, and offers real options to users since it is a powerful catalyst for innovation, improved productivity and cost-cutting.

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1.4.4. Global Standards for Emerging Technologies

Standardization programmes in completely new fields are now being developed. Such fields include advanced materials, the environment, life sciences, urbanization and construction. In the very early stages of new technology development, applications can be imagined but functional prototypes do not exist. Here, the need for standardization is in defining terminology and accumulating databases of quantitative information.

1.4.5. Developing Countries

Development agencies are increasingly recognizing that a standardization infrastructure is a basic condition for the success of economic policies aimed at achieving sustainable development. Creating such an infrastructure in developing countries is essential for improving productivity, market competitiveness, and export capability.

1.5. ISO's Achievements

Below are some examples of ISO standards that have been widely adopted, giving clear benefits to industry, trade and consumers.

The *ISO film speed code*, among many other photographic equipment standards, has been adopted worldwide making things simpler for the general user.

Standardization of the format of *telephone and banking cards* means the cards can be used worldwide.

Tens of thousands of businesses are implementing *ISO 9000* which provides a framework for quality management and quality assurance. The *ISO 14000* series provides a similar framework for environmental management.

The *internationally standardized freight container* enables all components of a transport system - air and seaport facilities, railways, highways, and packages - to interface efficiently. This, combined with standardized documents to identify sensitive or dangerous cargoes makes international trade cheaper, faster and safer.

m, kg, s, A, K, mol, cd are the symbols representing the seven base units of the *universal system of measurement known as SI* (Système international d'unités). The SI system is covered by a series of 14 International Standards. Without these standards shopping and trade would be haphazard and technological development would be handicapped.

Paper sizes. The original standard was published by DIN in 1922. Now used worldwide as ISO 216, standard paper sizes allow economies of scale with cost benefits to both producers and consumers.

A well-designed symbol conveys a clearcut message in a multilingual world. The same *symbols for automobile controls* are displayed in cars all over the world, no matter where they are manufactured.

Safety of wire ropes: used on oil rigs, on fishing vessels, in mines, in all types of building operations, for lifts and cable cars, etc. ISO International Standards systematically define basic characteristics such as size, surface finish, type of construction, tensile grade of the wire, minimum breaking load and linear mass. Standardization of performance or safety requirements ensures that user requirements are met while allowing individual manufacturers the freedom to design their own solutions for meeting these basic needs. Consumers then benefit from the effects of competition among manufacturers.

The *ISO international codes for country names, currencies and languages* help to climinate duplication and incompatibilities in the collection, processing and dissemination of information. As resource-saving tools, universally understandable codes play an important role in both automated and manual documentation.

The diversity of screw threads for identical applications used to represent an important technical obstacle to trade. It caused maintenance problems, and lost or damaged nuts or bolts could not easily be replaced. A global solution is supplied in the ISO standards for *ISO metric screw threads*.

1.6. Who makes up ISO?

ISO is made up of its members which are divided into three categories.

1.6.1. Member Body of ISO

A *member body of ISO* is the national body "most representative of standardization in its country". Thus, only one body in each country may be admitted to membership of ISO.

A member body takes the responsibility for:

informing potentially interested parties in their country of relevant international standardization opportunities and initiatives;

ensuring that a concerted view of the country's interests is presented during international negotiations leading to standards agreements;

providing their country's share of financial support for the central operations of ISO, through payment of membership dues.

Member bodies are entitled to participate and exercise full voting rights on any technical committee and policy committee of ISO.

1.6.2. Correspondent Member

A *correspondent member* is usually an organization in a country which does not yet have a fully developed national standards activity. Correspondent members do not take an active part in the technical and policy development work, but are entitled to be kept fully informed about the work of interest to them.

1.6.3. Subscriber Membership

ISO has also established a third category, *subscriber membership*, for countries with very small economies. Subscriber members pay reduced membership fees that nevertheless allow them to maintain contact with international standardization.

1.7. ISO Standarts Development

ISO standards are developed according to the following principles:

Consensus

The views of all interests are taken into account: manufacturers, vendors and users, consumer groups, testing laboratories, governments, engineering professions and research organizations.

Industry-wide

Global solutions to satisfy industries and customers worldwide.

Voluntary

International standardization is market-driven and therefore based on voluntary involvement of all interests in the market-place.

There are three main phases in the ISO standards development process.

The need for a standard is usually expressed by an industry sector, which communicates this need to a national member body. The latter proposes the new work item to ISO as a whole. Once the need for an International Standard has been recognized and formally agreed, the *first phase* involves definition of the technical scope of the future standard. This phase is usually carried out in working groups which comprise technical experts from countries interested in the subject matter.

Once agreement has been reached on which technical aspects are to be covered in the standard, a *second phase* is entered during which countries negotiate the detailed specifications within the standard. This is the consensus-building phase.

The *final phase* comprises the formal approval of the resulting draft International Standard (the acceptance criteria stipulate approval by two-thirds of the ISO members that have participated actively in the standards development process, and approval by 75 % of all members that vote), following which the agreed text is published as an ISO International Standard.

Most standards require periodic revision. Several factors combine to render a standard out of date: technological evolution, new methods and materials, new quality and safety requirements. To take account of these factors, ISO has established the general rule that all ISO standards should be reviewed at intervals of not more than five years. On occasion, it is necessary to revise a standard earlier.

To date, ISO's work has resulted in some 12 000 International Standards, representing more than 300 000 pages in English and French (terminology is often provided in other languages as well).

1.8. ISO's Work Financing

The financing of ISO closely reflects its decentralized mode of operation with, on the one hand, the financing of the Central Secretariat activities and, on the other hand, the financing of the technical work as such.

The financing of the Central Secretariat derives from member subscriptions (80 %) and revenues from the sale of the Organization's standards and other publications (20 %). The subscriptions required of members for financing the operations of the Central Secretariat are expressed in units and calculated in Swiss francs (CHF). The number of units that each member is invited to pay is calculated on the basis of economic indicators: gross national product (GNP), and value of imports and exports. The value of the subscription unit is set each year by the ISO Council.

The ISO member bodies bear the expenditure necessary for the operation of the individual technical secretariats for which they are responsible. It is generally estimated that the operating expenditure of the central secretariat represents about one-fifth of the total cost of financing the ISO administrative operations.

To that, one must also add the value of the voluntary contributions of some 30 000 experts in terms of time and travel. While no precise calculation has ever been made to assess in figures this contribution of fundamental knowledge to the work of ISO, it is nevertheless certain that this expenditure amounts to several hundred million Swiss francs each year.

IL ISO 9000 FAMILY

The standards, guidelines and technical reports which make up the ISO 9000 family and which are listed below are available separately, or as collections. The ISO 9000 compendium presents the ISO 9000 family in hard copy form.

| Standards and guidelines | Purpose |
|---|--|
| SSO 9000:2000, Quality management systems - Fundamentals and vocabulary | Establishes a starting point for understanding the standards and defines the fundamental terms and definitions used in the ISO 9000 family which you need to avoid misunderstandings in their use. |
| 50 9001:2000, Quality management systems - Requirements | This is the requirement standard you use to assess your ability to meet customer and applicable regulatory requirements and thereby address customer satisfaction. It is now the only standard in the ISO 9000 family against which third-party certification can be carried. |
| ISO 9004:2000, Quality management systems - Guidelines for performance improvements | This guideline standard provides guidance for continual improvement of your quality management system to benefit all parties through sustained customer satisfaction. |
| ISO 19011, Guidelines on Quality and/or Environmental Management Systems Auditing (currently under development) ISO 10005:1995, Quality management - Guidelines for quality plans | Provides you with guidelines for verifying the system's ability to achieve defined quality objectives. You can use this standard internally or for auditing your suppliers. Provides guidelines to assist in the preparation, review, acceptance and revision of quality plans |
| ISO 10006:1997, Quality management - Guidelines to quality in project management | Guidelines to help you ensure the quality of both the project processes and the project products. |
| ISO 10007:1995, Quality management - Guidelines for configuration management | Gives you guidelines to ensure that a complex product continues to function when components are changed individually. |
| ISO/DIS 10012, Quality assurance requirements for measuring equipment - Part 1: Metrological confirmation system for measuring equipment | Give you guidelines on the main features of a calibration system to ensure that measurements are made with the intended accuracy. |
| ISO 10012-2:1997, Quality assurance for measuring equipment - Part 2: Guidelines for control of measurement of processes | Provides supplementary guidance on the application of statistical process control when this is appropriate for achieving the objectives of Part 1. |
| ISO 10013:1995, Guidelines for developing quality manuals | Provides guidelines for the development, and maintenance of quality manuals, tailored to your specific needs. |
| ISO/TR 10014:1998, Guidelines for managing the economics of quality ISO 10015:1999, Quality management - | Provides guidance on how to achieve economic benefits from the application of quality management. Provides guidance on the development, implementation. |
| Guidelines for training | maintenance and improvement of strategies and systems for training that affects the quality of products. |

Table 1: ISO family

2.1. ISO 9001 Quality Systems

Model for quality assurance in design/development, production, installation and servicing applies to suppliers who have a responsibility for the design and development, production, installation, and servicing for a product. It includes a set of requirements for the suppliers' quality management program, begining with top management responsibility and providing objective criteria to verify that key elements in the total quality management approach are present. It defines requirements for conducting internal quality audits to verify to effectiveness of the quality management system.

2.2. ISO 9002 Quality System

Model of quality issurance in production and installation, is similar to ISO 9001 except that it is limited to suppliers that only produce and install a product and do not design, develop, or service the product.

2.3. ISO 9003 Quality System

Model of quality assurance in final inspection and test, is limited to guidelines for final inspection and testing because of the relative simplicity of the product. This standard shifts reponsibility for quality to the supplier so the customer is assured of the level of quality when the product is received.

14 ISO 9004 Quality System

Geidelines, provides guidelines for developing and implementing the quality management programs required in ISO 9001, 9002 and 9003. These guidelines and suggestions help management develop an effective quality management program so their companies can be qualified to meet ISO 9001, 9002 and 9003 requirements. The ISO 9000 standards can generally be applied to the service sector by making such simple modifications as substituting terms – for example, process for production and service for product.⁴

2.5. Examples of The ISO 9000 Standarts in Use

ISO 9001:2000 is used if you are seeking to establish a management system that provides confidence in the conformance of your product to established or specified requirements. It is now the only standard in the ISO 9000 family against whose requirements your quality system can be certified by an external agency. The standard recognizes that the word "product" applies to services, processed material, hardware and software intended for, or required by, your customer.

There are five sections in the standard that specify activities that need to be considered when you implement your system. You will describe the activities you use to supply your products and may exclude the parts of the Product Realization section that are not applicable to your operations. The requirements in the other four sections ? Quality management system, Management responsibility, Resource management and

⁴ Roberta S.Russel, Bernard W. Taylor, Operations Management, third addition, pp. 117

Measurement, analysis and improvement? apply to all organizations and you will demonstrate how you apply them to your organization in your quality manual or other documentation.

Together, the five sections of ISO 9001:2000 define what you should do consistently to provide product that meets customer and applicable statutory or regulatory requirements. In addition, you will seek to enhance customer satisfaction by improving your quality management system.

ISO 9004:2000 is used to extend the benefits obtained from ISO 9001:2000 to all parties that are interested in or affected by your business operations. Interested parties include your employees, owners, suppliers and society in general.

ISO 9001:2000 and ISO 9004:2000 are harmonized in structure and terminology to assist you to move smoothly from one to the other. Both standards apply a process approach. Processes are recognized as consisting of one or more linked activities that require resources and must be managed to achieve predetermined output. The output of one process may directly form the input to the next process and the final product is often the result of a network or system of processes.

The nature of your business and the specific demands you have will determine how you apply the standards to achieve your objectives.

Here are a few examples:

Example 1

A metal parts fabricating company used ISO 9000:2000 to develop a plan to implement their quality management system. When they were ready, they prepared a quality manual and quality system procedures as required by ISO 9001:2000, excluding the requirements covering product design and development because their products are made to designs prepared by their customers. Later, in order to bid on the supply of parts to a major automotive company, they adapted their quality system to meet the sector specific requirements of ISO/TS 16949.

Example 2

A welfare agency decided to establish a quality improvement strategy. It adopted ISO 9004:2000 as the basis for planning and implementing its system. The agency found that ISO 9000:2000 provided very useful additional guidance and plans to seek certification to ISO 9001:2000 to gain more credibility.

Example 3

A washing machine manufacturer had a well-established company culture of continual improvement and effective production control. The management decided to improve the company's development processes and to implement ISO 9001:2000 to obtain certification for commercial purposes. The company used ISO 9004:2000 to guide its improvement processes and ISO 10006:1997 to develop a project management plan.

Example 4

A large chemical processing company was required by its major customers to gain registration/certification to ISO 9001:2000. In order to obtain additional benefits, company leadership planned a comprehensive management strategy based on ISO 9000:2000 and ISO 9004:2000. A thorough review of their business processes indicated that all elements of ISO 9001:2000 were applicable to their quality management system. The company used ISO 10013:1999 to guide the development of quality documentation in its various production divisions and ISO 10015:1999 for guidance in the preparation of training plans for their employees.

Example 5

A firm of international lawyers wanted to improve their client management processes and to achieve registration/certification to ISO 9001:2000. Their quality management system provides for the design and development of new services such as international tax planning and modifying traditional services to meet the requirements of new or amended legislation. They included purchasing control to cover the selection of computer hardware and software, as well as purchasing the services of specialist lawyers as needed. After successfully implementing ISO 9001:2000, they used the selfassessment guidelines of ISO 9004:2000 to monitor their progress as they improved their quality management system.

Enample 6

computer software developer serving a niche market recognized that as their user expanded they would be faced with issues concerning product management and enfiguration control. Changes to base products, user hardware and regulatory encirements were compounding customer service issues. ISO 9004:2000 provided the indance they needed to establish documented procedures to control process change and provement. ISO 10006:1997 and ISO 10007:1995 provided additional assistance as they managed the project and prepared procedures for configuration management. They later acquired another software developer and were able to use their quality management system to integrate the acquisition into their own structure very quickly with a minimum of disruption to customers.

Example 7

A bank decided to implement a quality management system for its on-line Internet banking services. They ensured that their quality manual made clear that their other conventional banking services were not included in their quality management system. While adopting the requirements of ISO 9001:2000, the bank obtained guidance from ISO 9000:2000 to interpret words and phrases used in the standard for their application. They applied all the requirements of Clause 7, recognizing that design and development is an important part of creating new service processes. The bank used ISO 10013:1995 to prepare their documentation, which they posted on their internal computer network to ensure current procedures are available to their staff.⁵

⁵ http://www.iso.ch/iso/en/aboutiso/examples

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1.6. Implementing ISO 9001:2000 Quality Management System

2.6.1. Identify the goals you want to achieve

Typical goals may be:

Be more efficient and profitable

Produce products and services that consistently meet customer requirements

Achieve customer satisfaction

Increase market share

Maintain market share

Improve communications and morale in the organization

Reduce costs and liabilities

Increase confidence in the production system

2.6.2. Identify What Others Expect of You

These are the expectations of interested parties (stakeholders) such as:

Customers and end users

Employees

Suppliers

Shareholders

Society

2.6.3. Apply the ISO 9000 Family of Standards in Your Management System

Decide if you are seeking certification that your quality management system is in conformance with ISO 9001:2000 or if you are preparing to apply for a national quality award.

Use ISO 9001:2000 as the basis for certification

Use ISO 9004:2000 in conjunction with your national quality award criteria to prepare for a national quality award

2.6.4. Obtain Guidance on Specific Topics Within the Quality Management System

These topic-specific standards are:

ISO 10006 for project management ISO 10007 for configuration management ISO 10012 for measurement systems ISO 10013 for quality documentation ISO/TR 10014 for managing the economics of quality ISO 10015 for training ISO/TS 16949 for automotive suppliers ISO 19011 for auditing 2.6.5. Determine the Processes That are Needed to Supply Products to Your Customers

Review the requirements of the ISO 9001:2000 section on Product Realization to determine how they apply or do not apply to your quality management system including;

Customer related processes

Design and/or development

Purchasing

Production and service operations

Control of measuring and monitoring devices

2.7. Maintaining the Benefits and Continual Improvement

Most new users obtain measurable benefits early in the process of deploying the standard requirements in their operations. These initial benefits are generally due to improvements in their organization and internal communication. The benefits must be strengthened through effective internal auditing and management review of system performance. Like all systems, it either improves or becomes less effective. It does not remain static for long.

When you adopt ISO 9001:2000, you must strive for the satisfaction of your customers and the continual improvement of your quality management system. Continual improvement is a process of increasing the effectiveness of your organization to fulfill your quality policy and your quality objectives. ISO 9001:2000 requires that you plan and manage the processes necessary for the continual improvement of your quality management system. ISO 9004:2000 provides information that will be helpful in going beyond ISO 9001:2000 to improving the efficiency of your operation. It is recommended that you obtain data from various sources, both internal and external, to assess the appropriateness of your quality system goals. This information can also be used to improve the performance of your processes.

Some organizations may expand their management systems by extending the ISO 9001:2000 structure to include the requirements of ISO 14001:1996, Environmental management systems. The structural and organizational requirements of the two management systems have been designed to be compatible.

2.8. The Future Evolution of ISO 9000

In order for the ISO 9000 family to maintain its effectiveness, the standards are periodically reviewed in order to benefit from new developments in the quality management field and also from user feedback. ISO/TC 176, which is made up of experts from businesses and other organizations around the world, monitors the use of the standards to determine how they can be improved to meet user needs and expectations when the next revisions are due in approximately five years' time.

ISO/TC 176 will continue to integrate quality assurance, quality management, sector specific initiatives and various quality awards within the ISO 9000 family.

ISO's commitment to sustaining the ISO 9000 momentum through reviews, improvement and streamlining of the standards guarantees that your investment in ISO 9000 today will continue to provide effective management solutions well into the future

III. CASE STUDY; "How to Apply the ISO to the CEMSA BOYA"

3.1. Historical Background of Cemsa Boya

Cemsa Boya owned by Mr. Mehmet Karalım that producing decorative paintings and dust tile sticers, the applications of these staffs with the profesional workers team. Company head Office and the branches are located Nicossia, T.R.N.C. Additionally, 72 brach offices are giving services in several cities.

Karalım Co. Ltd. started its activities in 1979, and got legal company status in 1986. first products were heavily related on plaster "santex-roltex" manifacturing and application in the establishment years. In 1986-1987 years "water based plaster" painting are manufactured and tile stickers are started.

Fastly growing Cemsa Boya existing fabrics did not satisfy administration building and production buildings in 1995. In 1998 row materials and pacaging warehouse and tool maintenance units are added to the compex. Total area is 3300 m², 2200 m² of that area is closed. It is planned to add 1000-1200 m² for the growing production.⁶

Cemsa Boya is the first company among the paint firms which gets the first ISO certification in the T.R.N.C. Cemsa Boya has taken ISO 9001:2000 version in August 2002. Armen Denizcilik and Kıb-Et are the firms which gets ISO certification before Cemsa Boya in T.R.N.C.

⁶ Please look at appendix part for more detail

3.2. Sales Potential of Cemsa Boya



Graphic 1 : Sales potential of Cemsa Boya

Firm's policy dosn't constitude its own private showroom. Sales are done directly to the customers and distributed through the retailers. As T.R.N.C. is a small market. The companycan not focus on singel segment customer.

Therefore company make product differentiation and by this way the company focus on all market. The company tries to increase its sales potential by giving service to all customers.

3.3. Market share of Cemsa Boya

There are no absolute results about the market share. However, Cemsa Boya is providing goods to 80 retailers out of 120. Also it has a leader position in plastic and oil paint sales. A pompetitive firm named as Arslan Boya is the leader position in the povder paint sales.

3.4. The Reasons Which Cause Cemsa Boya to Get ISO Certificate

Unavoidably, the world is globalized. As a result of this globalization firms are in need of certain standarts. ISO provide these standarts is in the best appropriate way. Cemsa Boya needs to get ISO certification in order to keep in steps with these standarts.

Also It is considered appropriate to get this certificate to obtain certain standarts. It is believe that Cyprus problem will be solved in the future. After the solution ISO certificate is also necessary to compete world wide.

3.5. Types of Stages the Company Deals to Get ISO Certificate

This process takes six months. At the begining they signed an agreement with a consultant firm named Managemen Plus Consulting & Training. By this way, they learned what kind of documents are needed for ISO certificate. During this period, laboratories are established aiming to test produced paints. It is also necessary to save

every tester for 1 year. Decide these activities the stores of the firm revised and put in a form in accordance with ISO standarts.

All the activities are recorded as fundamental rule of ISO standarts. Specialize training programs are applied to all employees. For example; total quality management training.

After this consulting period, an application must be made to take ISO certificate. There are 5 – 6 firms which have authority to provide ISO certification on the world wide bases and again there are a lot of representatives over the world. Cemsa Boya is applied to get ISO certification from Istanbul representative of BVQI Company. BVQI Company's head office is in U.K. The Istanbul representative of BVQI's is authorize to give ISO certification to whole milde east and Turkish republics.

The auditors of BVQI research the Cemsa Boya for 2 - 3 days and then decide the firms ablity for the organization. They examin the whole system and then they decide that Cemsa Boya have the ability to possess the certification.

After the ISO certification had been taken the auditors contibue to examin the firm. First two years, these controls are once a year and later once in two years.

The main aim is to minimize the errors in the system. Auditors report the inconviences and they obliget the firm to take correct actions. If they find serious mistakes, they have the right to cancel the certificate.

3.6. Cost of This Period

We can divide that cost into two part as consultation service and innovation which are done to get ISO certificate. It is paid aboud 16.000 \$ to the Management Plus Company as a consultation service. In the other hand, the expenditures that are made to prepare company can be follow as; it is spended 100 billion TL for the construction of laboratory and 150 billion TL for ventilation, warehouse and air-conditions.

There is no extra cost after getting the ISO certificate, except the expenditures of the auditors annually who are coming to the company and these are very niche amounts.

3.7. Changes in The Management, Administration and Production Manner After ISO

It is reduced to the minimum degree which car arise eighter machine or employee mistakes in the production process. It is ordinary meeting system in the administration. Hence, communication iner company is increased and semi-annually meetings for checking the administration is conducted. Sales, production, training and trend of the personels are discussed in this meetings and necessary changings are made. Also company determined the new targets. Beside of this meeting every department meets monthly.

ISO is an order highly dependent on system and not to individuals. Hence, in the replacement process firm does not harmed, system continuous to work with the new personal effectively.

3.8. Company Position and Customer Approaches After Getting ISO Certificate

In several tenders and in gevernmental works ISO certificate can be shown as good reference. Finally, if a company has ISO certificate means that company reach some standards in international area. Cemsa Boya has increased its customer portfolio more and more after having ISO certificate.

It has positive effects in the eyes of the customer. It is organized variety questionnaire in order to understand customer approach. First questionnaire which made in direct sales called UT.⁷ It covers delivery time, meeting the costomer needs, technological competence, etc. Customer grade them as very good, good, moderate, bad and very bad. For example; in the result of this questionnaires Cemsa Boya has understood that workers are leaving the working place before making necessary cleaning. Cemsa Boya has taken necessary precautions toward to this problem. Second questionnaire is applied to the retailers called CRM⁸. It covers saled production quality, production variety and customer service after sales. Also retailers are graded company according to this questionnaire. For example; retailer questionnaire showed that Cemsa Boya has a handicaped in advertisment. Finally, Cemsa Boya has increased its advertisment program by having sponsor in several TV programs.

As a result, customer questionnaires are the best way to understand the customer needs and reduced mistakes to the minimum, and increased customer satisfaction to the maximum level.

Please see Appendix to examine questionnaire form.

⁸ Please see Appendix to examine questionnaire form.

3.9. Does Company Meet The Expected Results After Having ISO Certificate?

The reason of ISO certificate is the regulate the company. Because it was going difficult to control when the company getting bigger and this system is established with ISO certificate.

ISO met the expectations of the company. Customer satisfaction has increased, but sales didn't increase because of the economic crise faced in Turkey. Even though, company has through the crise situation by keeping quality high and costs contant.

3.10. Company's Responsibilities After ISO Certificate

There are two important rule in the ISO philosophy:

Write what you did, do what you wrote!

Trust is not a barrier to the control!

There would be no misunderstandings if the system is written and connected with each other accordingly forms. The most responsibility ISO charged to the company is that forms to be filled out well and decrease to the mistakes to the zero.

The other responsibility charged by ISO is the auditing the goods and services provider where goods and services bought. For instance, is there a guide book for machines that sold or are they shipping in the specified time? These are registered to the forms again anda re graded over 100. If the good or service provider takes under 70, ISO does not give the permition for the corporation.⁹

3.11. Advanced Process of The ISO Certificate for Cemsa Boya

ISO system will be continued as its established. It will be revised according to the new system whwn ISO has improved any version and company has to take the new certificate too. New system will continue its improvements with the changings.

⁹ Please see Appendix to examine provider inspection form.

CONCLUSION

Unavoidably, the world is globalized. As a result of this globalization firms are in need of certain standarts. ISO provide these standarts is in the best appropriate way.

After applying ISO standards to any company, you can see a lot of improvements in productivity, satisfaction of customers and employees, quality of goods and services. The main characteristics of ISO are "Write what you did, do what you wrote!" and "Trust is not a barrier to the control!". It means that everything must be under record according to the ISO standards. For exampe, in our company (Cemsa Boya), we couldn't find any information about sales potential before ISO certification. But, after ISO certification, you can find all informations about its activities.

ISO standards are provide a regular working system to the company. ISO certification has got a lot of regulations to the company (Cemsa Boya). For example, after ISO certification, each machine has a usage hand book, each job has a job description paper and all of the activities are taken under record by employees and managers. Also there is a lot of training programs for employees and these programs are increasing their efficiency.

ISO standards are increasing internal communucation of company. According to the ISO, each manager and department has a continual communication with other managers and departments. This communication is obtained by meetings and these meetings are made regularly.

When you look at ISO internationally, we can see a lot of achievements on trade world. One of the most important example is standardization of the format of telephone and banking cards. It means that each telephone and banking card sizes are same all over the world. Standard card sizes allow economies of scale with cost benefits to both producers and consumers.

ISO standards are upgraded and new version of ISO certificates are supply companies one in six years. Also companies are upgrade themselves according to ISO standards improvements. For example last version of ISO 9000 family is 2000 and Cemsa Boya has ISO 9001:2000 version.

RECOMMENDATIONS

Firstly, let we are look at ISO generally. According to my opinion, this system is a perfect system. If a company want to export its product, it should have a ISO certificate. Because, If you have a ISO certificate, it shows that your products have a international standards. Also we can say that ISO is a "door" to open the world for any company.

The company (Cemsa Boya) is applying ISO standards successfully. They should continue to apply ISO standards. Also, when ISO supply the new version of certificate, the company should take next version of ISO certificate. It will provide so important competitive advantages to the company in the future. Especially, after solution of Cyprus problem, company will open to the rest of the world. They will be able to export their products.

There is no specific department for ISO and quality management in the company (Cemsa Boya). The production manager is responsible about ISO and quality management in Cemsa Boya. The company should constitute a specific department and this department should be responsible about ISO.

There is some problem about recognition that some retailers and people do not know Cemsa Boya has a ISO certificate. This is an advertisement problem. Therefore, the company should increase advertisement in the market.

APPENDIX

A 34611 -

NEAR EAST UNIVERSITY

Faculty of Economics and Administrative Sciences Department of Business Administration

MAN 400 (GRADUATION PROJECT)

"ISO 9000 FAMILY, THEORY & PRACTICE"

Submitted to Ali MALEK

Submitted by Fatih KORUCU / 980285

Nicosia – June 13th, 2003

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ACKNOWLEDGEMENT

I would like to thanks to my supervisor MBA, Mr. Ali Malek and appreciate all the efforts of my valuable lecturers who guided me through these years in order to be able to graduate.

Also I would like to thanks Mr. Fikret Unutmaz who is the manager of Cemsa Boya. Appreciation also goes to my parents for all their supports to my training.

ABSTRACT

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose.

The ISO (International Organization for Standardization) is a worldwide federation of national standards bodies from more than 140 countries, one from each country. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity.

The aim of this project is to explain what are the benefits of ISO certificate for any organization. What is its positions before and after to have ISO certificate for any organization? In this project, I will try to examine that how is it applied by Cemsa Boya in Lefkosa.

INTRODUCTION

Aims of The Study :

ISO is the one of the most famous non governmental organization all over the world that determines the standards for every sector. Because of the important position of ISO, I have decided to study on this subject. Today, in our developing and globalizing world, there are visible improvements in goods and service sectors. Competition is not only provided by production but it's also provided by standardization. So, in this point, ISO has a very important mission. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. The aim of this stuy is to examine that how is applied ISO in Cemsa Boya.

Methodology Used :

In this Project interview, literature and internet research will be used.

Structure of The Study :

This study divided into three main parts.

What are ISO and Standards?

In this part, we will define ISO and standards. Also this part will cover international standardization needed, ISO's achievements, ISO standards development and ISO's work financing.

I. WHAT ARE ISO AND STANDARDS?

1.1. Definition of the Quality

Quality is a customer determination not engineer's determination, not a marketing determination or a general management determination. It is based upon the customer's actual experience with the productor service, measured against his or her requirements. People deal with the issue of quality continually in their daily lives. We concern our selves with quality when grocery shoping, eating in a restaurant, and marketing a major purchase such as an automobile, a home, a television, or a furniture. Perceived quality is major factor by which people make distinctions in the market place.

Quality involves meeting or exceeding customer expectation

Quality applies to products, service, people, process and environments

Quality is an ever-changing state (i.e., what is considered quality today may not be good enough to be concidered quality tomorrow)

Quality has been defined in a number of different ways by a number of different people and organizations.

Consider following definitions :

Fred Smith, CEO of Federal Express, defines quality as "performance to the Standard expected by the customer."

The General Services Administration (GSA) defines quality, as "meeting the customer's needs the first time and every time."

Boing defines quality as "providin our customers with products and services that consistently meet their needs and expectations."

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The U.S. Department of Defence (DOD) defines quality as "doing the right thing right the first time, always striving for improvement, and always satisfying the customer."

W. Edwards Deming has this tos tay about quality "quality can be defined only in the terms of the agent. Who is the judge of quality? In the mind of the production worker, he produces quality if he can take pride in his work. Poor quality, to him, means loss of business, and perhaps of his job. Good quality, he thinks, will keep the company in business. Quality to the plant manager means to get the numbers out and to meet specifications. His job is also, whether he knows it or not, continual improvement of leadership¹.

1.2. Definition and Historical Background of ISO

48,49.

The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies from more than 140 countries, one from each country. It is not a part of the United Nations.

ISO is a non-governmental organization established in 1947. ISO head quartered in Geneva, Switzeland, has its members the national standards organizations. The ISO member for the United States is in the American National Standards Intitude (ANSI). The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods ¹ David L. Goetsch, Stanley B. Davis, Quality Management, Third adition, Prentice Hall, 2000, p.p.47,

and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity.

During the 1970s it was generally acknowledged that the word quality and different meanings within and among industries and countries and around the world. In 1979 the ISO member representing the United Kingdom, the Biritish Standard Institute (BSI), recognizing the need for standardization for quality management and assurance, submitted a formal proposal to ISO to develop international standards for quality assurance techniques and practices. Using standards that already existed in the United Kingdom and Canada as a basis, ISO established generic quality standards primarily for manufacturing firms that could be used worldwide.

The ISO 9000 series of quality management and assurance standarts was first published in 1978. ISO 9000, the first standard in the series, titled Quality Management Quality Assurance Standards for Selections and Use, is a guide for using four other standards which are ISO 9001, ISO 9002, ISO 9003 and ISO 9004.²

ISO's work results in international agreements which are published as International Standards.

² Roberta S. Russel, Bernard W. Taylor, Operation Management, third edition, p.p.117

1.2.1. ISO's Name

Many people will have noticed a seeming lack of correspondence between the official title when used in full, International Organization for Standardization, and the short form, ISO. Shouldn't the acronym be "IOS"? Yes, if it were an acronym – which it is not.

In fact, "ISO" is a word, derived from the Greek isos, meaning "equal", which is the root of the prefix "iso-" that occurs in a host of terms, such as "isometric" (of equal measure or dimensions) and "isonomy" (equality of laws, or of people before the law).

From "equal" to "standard", the line of thinking that led to the choice of "ISO" as the name of the organization is easy to follow. In addition, the name ISO is used around the world to denote the organization, thus avoiding the plethora of acronyms resulting from the translation of "International Organization for Standardization" into the different national languages of members, e.g. IOS in English, OIN in French (from Organisation internationale de normalisation). Whatever the country, the short form of the Organization's name is always ISO.³

1.3. Definition of Standarts

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of

³ http://www.iso.ch/iso/en/aboutiso/introduction

characteristics, to ensure that materials, products, processes and services are fit for their purpose.

For example, the format of the credit cards, phone cards, and "smart" cards that have become commonplace is derived from an ISO International Standard. Adhering to the standard, which defines such features as an optimal thickness (0,76 mm), means that the cards can be used worldwide.

International Standards thus contribute to making life simpler, and to increasing the reliability and effectiveness of the goods and services we use.

1.4. Why is Internetional Standardization Needed?

Industry-wide standardization is a condition existing within a particular industrial sector when the large majority of products or services conform to the same standards. It results from consensus agreements reached between all economic players in that industrial sector - suppliers, users, and often governments. They agree on specifications and criteria to be applied consistently in the choice and classification of materials, the manufacture of products, and the provision of services. The aim is to facilitate trade, exchange and technology transfer through:

enhanced product quality and reliability at a reasonable price;

improved health, safety and environmental protection, and reduction of waste; greater compatibility and interoperability of goods and services; simplification for improved usability; reduction in the number of models, and thus reduction in costs; increased distribution efficiency, and ease of maintenance.

Users have more confidence in products and services that conform to international standards. Assurance of conformity can be provided by manufacturers' declarations, or by audits carried out by independent bodies.

The existence of non-harmonized standards for similar technologies in different countries or regions can contribute to so-called "technical barriers to trade". Exportminded industries have long sensed the need to agree on world standards to help rationalize the international trading process. This was the origin of the establishment of ISO.

International standardization is well-established for many technologies in such diverse fields as information processing and communications, textiles, packaging, distribution of goods, energy production and utilization, shipbuilding, banking and financial services. It will continue to grow in importance for all sectors of industrial activity for the foreseeable future.

There five main reasons that international standarts needed.

1.4.1. Worldwide Progress in Trade Liberalization

Today's free-market economies increasingly encourage diverse sources of supply and provide opportunities for expanding markets. On the technology side, fair competition needs to be based on identifiable, clearly defined common references that are

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recognized from one country to the next, and from one region to the other. An industrywide standard, internationally recognized, developed by consensus among trading partners, serves as the language of trade.

1.4.2. Interpenetration of Sectors

No industry in today's world can truly claim to be completely independent of components, products, rules of application, etc., that have been developed in other sectors. Bolts are used in aviation and for agricultural machinery; welding plays a role in mechanical and nuclear engineering, and electronic data processing has penetrated all industries. Environmentally friendly products and processes, and recyclable or biodegradable packaging are pervasive concerns.

1.4.3. Worldwide Communications Systems

The computer industry offers a good example of technology that needs quickly and progressively to be standardized at a global level. Full compatibility among open systems fosters healthy competition among producers, and offers real options to users since it is a powerful catalyst for innovation, improved productivity and cost-cutting.

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1.4.4. Global Standards for Emerging Technologies

Standardization programmes in completely new fields are now being developed. Such fields include advanced materials, the environment, life sciences, urbanization and construction. In the very early stages of new technology development, applications can be imagined but functional prototypes do not exist. Here, the need for standardization is in defining terminology and accumulating databases of quantitative information.

1.4.5. Developing Countries

Development agencies are increasingly recognizing that a standardization infrastructure is a basic condition for the success of economic policies aimed at achieving sustainable development. Creating such an infrastructure in developing countries is essential for improving productivity, market competitiveness, and export capability.

1.5. ISO's Achievements

Below are some examples of ISO standards that have been widely adopted, giving clear benefits to industry, trade and consumers.

The *ISO film speed code*, among many other photographic equipment standards, has been adopted worldwide making things simpler for the general user.

Standardization of the format of *telephone and banking cards* means the cards can be used worldwide.

Tens of thousands of businesses are implementing *ISO 9000* which provides a framework for quality management and quality assurance. The *ISO 14000* series provides a similar framework for environmental management.

The *internationally standardized freight container* enables all components of a transport system - air and seaport facilities, railways, highways, and packages - to interface efficiently. This, combined with standardized documents to identify sensitive or dangerous cargoes makes international trade cheaper, faster and safer.

m, kg, s, A, K, mol, cd are the symbols representing the seven base units of the *universal system of measurement known as SI* (Système international d'unités). The SI system is covered by a series of 14 International Standards. Without these standards shopping and trade would be haphazard and technological development would be handicapped.

Paper sizes. The original standard was published by DIN in 1922. Now used worldwide as ISO 216, standard paper sizes allow economies of scale with cost benefits to both producers and consumers.

A well-designed symbol conveys a clearcut message in a multilingual world. The same *symbols for automobile controls* are displayed in cars all over the world, no matter where they are manufactured.

Safety of wire ropes: used on oil rigs, on fishing vessels, in mines, in all types of building operations, for lifts and cable cars, etc. ISO International Standards systematically define basic characteristics such as size, surface finish, type of construction, tensile grade of the wire, minimum breaking load and linear mass. Standardization of performance or safety requirements ensures that user requirements are met while allowing individual manufacturers the freedom to design their own solutions for meeting these basic needs. Consumers then benefit from the effects of competition among manufacturers.

The *ISO international codes for country names, currencies and languages* help to climinate duplication and incompatibilities in the collection, processing and dissemination of information. As resource-saving tools, universally understandable codes play an important role in both automated and manual documentation.

The diversity of screw threads for identical applications used to represent an important technical obstacle to trade. It caused maintenance problems, and lost or damaged nuts or bolts could not easily be replaced. A global solution is supplied in the ISO standards for *ISO metric screw threads*.

1.6. Who makes up ISO?

ISO is made up of its members which are divided into three categories.

1.6.1. Member Body of ISO

A *member body of ISO* is the national body "most representative of standardization in its country". Thus, only one body in each country may be admitted to membership of ISO.

A member body takes the responsibility for:

informing potentially interested parties in their country of relevant international standardization opportunities and initiatives;

ensuring that a concerted view of the country's interests is presented during international negotiations leading to standards agreements;

providing their country's share of financial support for the central operations of ISO, through payment of membership dues.

Member bodies are entitled to participate and exercise full voting rights on any technical committee and policy committee of ISO.

1.6.2. Correspondent Member

A *correspondent member* is usually an organization in a country which does not yet have a fully developed national standards activity. Correspondent members do not take an active part in the technical and policy development work, but are entitled to be kept fully informed about the work of interest to them.

1.6.3. Subscriber Membership

ISO has also established a third category, *subscriber membership*, for countries with very small economies. Subscriber members pay reduced membership fees that nevertheless allow them to maintain contact with international standardization.

1.7. ISO Standarts Development

ISO standards are developed according to the following principles:

Consensus

The views of all interests are taken into account: manufacturers, vendors and users, consumer groups, testing laboratories, governments, engineering professions and research organizations.

Industry-wide

Global solutions to satisfy industries and customers worldwide.

Voluntary

International standardization is market-driven and therefore based on voluntary involvement of all interests in the market-place.

There are three main phases in the ISO standards development process.

The need for a standard is usually expressed by an industry sector, which communicates this need to a national member body. The latter proposes the new work item to ISO as a whole. Once the need for an International Standard has been recognized and formally agreed, the *first phase* involves definition of the technical scope of the future standard. This phase is usually carried out in working groups which comprise technical experts from countries interested in the subject matter.

Once agreement has been reached on which technical aspects are to be covered in the standard, a *second phase* is entered during which countries negotiate the detailed specifications within the standard. This is the consensus-building phase.

The *final phase* comprises the formal approval of the resulting draft International Standard (the acceptance criteria stipulate approval by two-thirds of the ISO members that have participated actively in the standards development process, and approval by 75 % of all members that vote), following which the agreed text is published as an ISO International Standard.

Most standards require periodic revision. Several factors combine to render a standard out of date: technological evolution, new methods and materials, new quality and safety requirements. To take account of these factors, ISO has established the general rule that all ISO standards should be reviewed at intervals of not more than five years. On occasion, it is necessary to revise a standard earlier.

To date, ISO's work has resulted in some 12 000 International Standards, representing more than 300 000 pages in English and French (terminology is often provided in other languages as well).

1.8. ISO's Work Financing

The financing of ISO closely reflects its decentralized mode of operation with, on the one hand, the financing of the Central Secretariat activities and, on the other hand, the financing of the technical work as such.

The financing of the Central Secretariat derives from member subscriptions (80 %) and revenues from the sale of the Organization's standards and other publications (20 %). The subscriptions required of members for financing the operations of the Central Secretariat are expressed in units and calculated in Swiss francs (CHF). The number of units that each member is invited to pay is calculated on the basis of economic indicators: gross national product (GNP), and value of imports and exports. The value of the subscription unit is set each year by the ISO Council.

The ISO member bodies bear the expenditure necessary for the operation of the individual technical secretariats for which they are responsible. It is generally estimated that the operating expenditure of the central secretariat represents about one-fifth of the total cost of financing the ISO administrative operations.

To that, one must also add the value of the voluntary contributions of some 30 000 experts in terms of time and travel. While no precise calculation has ever been made to assess in figures this contribution of fundamental knowledge to the work of ISO, it is nevertheless certain that this expenditure amounts to several hundred million Swiss francs each year.

IL ISO 9000 FAMILY

The standards, guidelines and technical reports which make up the ISO 9000 family and which are listed below are available separately, or as collections. The ISO 9000 compendium presents the ISO 9000 family in hard copy form.

| Standards and guidelines | Purpose |
|---|--|
| SSO 9000:2000, Quality management systems - Fundamentals and vocabulary | Establishes a starting point for understanding the standards and defines the fundamental terms and definitions used in the ISO 9000 family which you need to avoid misunderstandings in their use. |
| 50 9001:2000, Quality management systems - Requirements | This is the requirement standard you use to assess your ability to meet customer and applicable regulatory requirements and thereby address customer satisfaction. It is now the only standard in the ISO 9000 family against which third-party certification can be carried. |
| ISO 9004:2000, Quality management systems - Guidelines for performance improvements | This guideline standard provides guidance for continual improvement of your quality management system to benefit all parties through sustained customer satisfaction. |
| ISO 19011, Guidelines on Quality and/or Environmental Management Systems Auditing (currently under development) ISO 10005:1995, Quality management - Guidelines for quality plans | Provides you with guidelines for verifying the system's ability to achieve defined quality objectives. You can use this standard internally or for auditing your suppliers. Provides guidelines to assist in the preparation, review, acceptance and revision of quality plans |
| ISO 10006:1997, Quality management - Guidelines to quality in project management | Guidelines to help you ensure the quality of both the project processes and the project products. |
| ISO 10007:1995, Quality management - Guidelines for configuration management | Gives you guidelines to ensure that a complex product continues to function when components are changed individually. |
| ISO/DIS 10012, Quality assurance requirements for measuring equipment - Part 1: Metrological confirmation system for measuring equipment | Give you guidelines on the main features of a calibration system to ensure that measurements are made with the intended accuracy. |
| ISO 10012-2:1997, Quality assurance for measuring equipment - Part 2: Guidelines for control of measurement of processes | Provides supplementary guidance on the application of statistical process control when this is appropriate for achieving the objectives of Part 1. |
| ISO 10013:1995, Guidelines for developing quality manuals | Provides guidelines for the development, and maintenance of quality manuals, tailored to your specific needs. |
| ISO/TR 10014:1998, Guidelines for managing the economics of quality ISO 10015:1999, Quality management - | Provides guidance on how to achieve economic benefits from the application of quality management. Provides guidance on the development, implementation. |
| Guidelines for training | maintenance and improvement of strategies and systems for training that affects the quality of products. |

Table 1: ISO family

2.1. ISO 9001 Quality Systems

Model for quality assurance in design/development, production, installation and servicing applies to suppliers who have a responsibility for the design and development, production, installation, and servicing for a product. It includes a set of requirements for the suppliers' quality management program, begining with top management responsibility and providing objective criteria to verify that key elements in the total quality management approach are present. It defines requirements for conducting internal quality audits to verify to effectiveness of the quality management system.

2.2. ISO 9002 Quality System

Model of quality issurance in production and installation, is similar to ISO 9001 except that it is limited to suppliers that only produce and install a product and do not design, develop, or service the product.

2.3. ISO 9003 Quality System

Model of quality assurance in final inspection and test, is limited to guidelines for final inspection and testing because of the relative simplicity of the product. This standard shifts reponsibility for quality to the supplier so the customer is assured of the level of quality when the product is received.

14 ISO 9004 Quality System

Geidelines, provides guidelines for developing and implementing the quality management programs required in ISO 9001, 9002 and 9003. These guidelines and suggestions help management develop an effective quality management program so their companies can be qualified to meet ISO 9001, 9002 and 9003 requirements. The ISO 9000 standards can generally be applied to the service sector by making such simple modifications as substituting terms – for example, process for production and service for product.⁴

2.5. Examples of The ISO 9000 Standarts in Use

ISO 9001:2000 is used if you are seeking to establish a management system that provides confidence in the conformance of your product to established or specified requirements. It is now the only standard in the ISO 9000 family against whose requirements your quality system can be certified by an external agency. The standard recognizes that the word "product" applies to services, processed material, hardware and software intended for, or required by, your customer.

There are five sections in the standard that specify activities that need to be considered when you implement your system. You will describe the activities you use to supply your products and may exclude the parts of the Product Realization section that are not applicable to your operations. The requirements in the other four sections ? Quality management system, Management responsibility, Resource management and

⁴ Roberta S.Russel, Bernard W. Taylor, Operations Management, third addition, pp. 117

Measurement, analysis and improvement? apply to all organizations and you will demonstrate how you apply them to your organization in your quality manual or other documentation.

Together, the five sections of ISO 9001:2000 define what you should do consistently to provide product that meets customer and applicable statutory or regulatory requirements. In addition, you will seek to enhance customer satisfaction by improving your quality management system.

ISO 9004:2000 is used to extend the benefits obtained from ISO 9001:2000 to all parties that are interested in or affected by your business operations. Interested parties include your employees, owners, suppliers and society in general.

ISO 9001:2000 and ISO 9004:2000 are harmonized in structure and terminology to assist you to move smoothly from one to the other. Both standards apply a process approach. Processes are recognized as consisting of one or more linked activities that require resources and must be managed to achieve predetermined output. The output of one process may directly form the input to the next process and the final product is often the result of a network or system of processes.

The nature of your business and the specific demands you have will determine how you apply the standards to achieve your objectives.

Here are a few examples:

Example 1

A metal parts fabricating company used ISO 9000:2000 to develop a plan to implement their quality management system. When they were ready, they prepared a quality manual and quality system procedures as required by ISO 9001:2000, excluding the requirements covering product design and development because their products are made to designs prepared by their customers. Later, in order to bid on the supply of parts to a major automotive company, they adapted their quality system to meet the sector specific requirements of ISO/TS 16949.

Example 2

A welfare agency decided to establish a quality improvement strategy. It adopted ISO 9004:2000 as the basis for planning and implementing its system. The agency found that ISO 9000:2000 provided very useful additional guidance and plans to seek certification to ISO 9001:2000 to gain more credibility.

Example 3

A washing machine manufacturer had a well-established company culture of continual improvement and effective production control. The management decided to improve the company's development processes and to implement ISO 9001:2000 to obtain certification for commercial purposes. The company used ISO 9004:2000 to guide its improvement processes and ISO 10006:1997 to develop a project management plan.

Example 4

A large chemical processing company was required by its major customers to gain registration/certification to ISO 9001:2000. In order to obtain additional benefits, company leadership planned a comprehensive management strategy based on ISO 9000:2000 and ISO 9004:2000. A thorough review of their business processes indicated that all elements of ISO 9001:2000 were applicable to their quality management system. The company used ISO 10013:1999 to guide the development of quality documentation in its various production divisions and ISO 10015:1999 for guidance in the preparation of training plans for their employees.

Example 5

A firm of international lawyers wanted to improve their client management processes and to achieve registration/certification to ISO 9001:2000. Their quality management system provides for the design and development of new services such as international tax planning and modifying traditional services to meet the requirements of new or amended legislation. They included purchasing control to cover the selection of computer hardware and software, as well as purchasing the services of specialist lawyers as needed. After successfully implementing ISO 9001:2000, they used the selfassessment guidelines of ISO 9004:2000 to monitor their progress as they improved their quality management system.

Enample 6

computer software developer serving a niche market recognized that as their user expanded they would be faced with issues concerning product management and enfiguration control. Changes to base products, user hardware and regulatory encirements were compounding customer service issues. ISO 9004:2000 provided the indance they needed to establish documented procedures to control process change and provement. ISO 10006:1997 and ISO 10007:1995 provided additional assistance as they managed the project and prepared procedures for configuration management. They later acquired another software developer and were able to use their quality management system to integrate the acquisition into their own structure very quickly with a minimum of disruption to customers.

Example 7

A bank decided to implement a quality management system for its on-line Internet banking services. They ensured that their quality manual made clear that their other conventional banking services were not included in their quality management system. While adopting the requirements of ISO 9001:2000, the bank obtained guidance from ISO 9000:2000 to interpret words and phrases used in the standard for their application. They applied all the requirements of Clause 7, recognizing that design and development is an important part of creating new service processes. The bank used ISO 10013:1995 to prepare their documentation, which they posted on their internal computer network to ensure current procedures are available to their staff.⁵

⁵ http://www.iso.ch/iso/en/aboutiso/examples

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1.6. Implementing ISO 9001:2000 Quality Management System

2.6.1. Identify the goals you want to achieve

Typical goals may be:

Be more efficient and profitable

Produce products and services that consistently meet customer requirements

Achieve customer satisfaction

Increase market share

Maintain market share

Improve communications and morale in the organization

Reduce costs and liabilities

Increase confidence in the production system

2.6.2. Identify What Others Expect of You

These are the expectations of interested parties (stakeholders) such as:

Customers and end users

Employees

Suppliers

Shareholders

Society

2.6.3. Apply the ISO 9000 Family of Standards in Your Management System

Decide if you are seeking certification that your quality management system is in conformance with ISO 9001:2000 or if you are preparing to apply for a national quality award.

Use ISO 9001:2000 as the basis for certification

Use ISO 9004:2000 in conjunction with your national quality award criteria to prepare for a national quality award

2.6.4. Obtain Guidance on Specific Topics Within the Quality Management System

These topic-specific standards are:

ISO 10006 for project management ISO 10007 for configuration management ISO 10012 for measurement systems ISO 10013 for quality documentation ISO/TR 10014 for managing the economics of quality ISO 10015 for training ISO/TS 16949 for automotive suppliers ISO 19011 for auditing 2.6.5. Determine the Processes That are Needed to Supply Products to Your Customers

Review the requirements of the ISO 9001:2000 section on Product Realization to determine how they apply or do not apply to your quality management system including;

Customer related processes

Design and/or development

Purchasing

Production and service operations

Control of measuring and monitoring devices

2.7. Maintaining the Benefits and Continual Improvement

Most new users obtain measurable benefits early in the process of deploying the standard requirements in their operations. These initial benefits are generally due to improvements in their organization and internal communication. The benefits must be strengthened through effective internal auditing and management review of system performance. Like all systems, it either improves or becomes less effective. It does not remain static for long.

When you adopt ISO 9001:2000, you must strive for the satisfaction of your customers and the continual improvement of your quality management system. Continual improvement is a process of increasing the effectiveness of your organization to fulfill your quality policy and your quality objectives. ISO 9001:2000 requires that you plan and manage the processes necessary for the continual improvement of your quality management system. ISO 9004:2000 provides information that will be helpful in going beyond ISO 9001:2000 to improving the efficiency of your operation. It is recommended that you obtain data from various sources, both internal and external, to assess the appropriateness of your quality system goals. This information can also be used to improve the performance of your processes.

Some organizations may expand their management systems by extending the ISO 9001:2000 structure to include the requirements of ISO 14001:1996, Environmental management systems. The structural and organizational requirements of the two management systems have been designed to be compatible.

2.8. The Future Evolution of ISO 9000

In order for the ISO 9000 family to maintain its effectiveness, the standards are periodically reviewed in order to benefit from new developments in the quality management field and also from user feedback. ISO/TC 176, which is made up of experts from businesses and other organizations around the world, monitors the use of the standards to determine how they can be improved to meet user needs and expectations when the next revisions are due in approximately five years' time.

ISO/TC 176 will continue to integrate quality assurance, quality management, sector specific initiatives and various quality awards within the ISO 9000 family.

ISO's commitment to sustaining the ISO 9000 momentum through reviews, improvement and streamlining of the standards guarantees that your investment in ISO 9000 today will continue to provide effective management solutions well into the future

III. CASE STUDY; "How to Apply the ISO to the CEMSA BOYA"

3.1. Historical Background of Cemsa Boya

Cemsa Boya owned by Mr. Mehmet Karalım that producing decorative paintings and dust tile sticers, the applications of these staffs with the profesional workers team. Company head Office and the branches are located Nicossia, T.R.N.C. Additionally, 72 brach offices are giving services in several cities.

Karalım Co. Ltd. started its activities in 1979, and got legal company status in 1986. first products were heavily related on plaster "santex-roltex" manifacturing and application in the establishment years. In 1986-1987 years "water based plaster" painting are manufactured and tile stickers are started.

Fastly growing Cemsa Boya existing fabrics did not satisfy administration building and production buildings in 1995. In 1998 row materials and pacaging warehouse and tool maintenance units are added to the compex. Total area is 3300 m², 2200 m² of that area is closed. It is planned to add 1000-1200 m² for the growing production.⁶

Cemsa Boya is the first company among the paint firms which gets the first ISO certification in the T.R.N.C. Cemsa Boya has taken ISO 9001:2000 version in August 2002. Armen Denizcilik and Kıb-Et are the firms which gets ISO certification before Cemsa Boya in T.R.N.C.

⁶ Please look at appendix part for more detail

3.2. Sales Potential of Cemsa Boya



Graphic 1 : Sales potential of Cemsa Boya

Firm's policy dosn't constitude its own private showroom. Sales are done directly to the customers and distributed through the retailers. As T.R.N.C. is a small market. The companycan not focus on singel segment customer.

Therefore company make product differentiation and by this way the company focus on all market. The company tries to increase its sales potential by giving service to all customers.

3.3. Market share of Cemsa Boya

There are no absolute results about the market share. However, Cemsa Boya is providing goods to 80 retailers out of 120. Also it has a leader position in plastic and oil paint sales. A pompetitive firm named as Arslan Boya is the leader position in the povder paint sales.

3.4. The Reasons Which Cause Cemsa Boya to Get ISO Certificate

Unavoidably, the world is globalized. As a result of this globalization firms are in need of certain standarts. ISO provide these standarts is in the best appropriate way. Cemsa Boya needs to get ISO certification in order to keep in steps with these standarts.

Also It is considered appropriate to get this certificate to obtain certain standarts. It is believe that Cyprus problem will be solved in the future. After the solution ISO certificate is also necessary to compete world wide.

3.5. Types of Stages the Company Deals to Get ISO Certificate

This process takes six months. At the begining they signed an agreement with a consultant firm named Managemen Plus Consulting & Training. By this way, they learned what kind of documents are needed for ISO certificate. During this period, laboratories are established aiming to test produced paints. It is also necessary to save

every tester for 1 year. Decide these activities the stores of the firm revised and put in a form in accordance with ISO standarts.

All the activities are recorded as fundamental rule of ISO standarts. Specialize training programs are applied to all employees. For example; total quality management training.

After this consulting period, an application must be made to take ISO certificate. There are 5 – 6 firms which have authority to provide ISO certification on the world wide bases and again there are a lot of representatives over the world. Cemsa Boya is applied to get ISO certification from Istanbul representative of BVQI Company. BVQI Company's head office is in U.K. The Istanbul representative of BVQI's is authorize to give ISO certification to whole milde east and Turkish republics.

The auditors of BVQI research the Cemsa Boya for 2 - 3 days and then decide the firms ablity for the organization. They examin the whole system and then they decide that Cemsa Boya have the ability to possess the certification.

After the ISO certification had been taken the auditors contibue to examin the firm. First two years, these controls are once a year and later once in two years.

The main aim is to minimize the errors in the system. Auditors report the inconviences and they obliget the firm to take correct actions. If they find serious mistakes, they have the right to cancel the certificate.

3.6. Cost of This Period

We can divide that cost into two part as consultation service and innovation which are done to get ISO certificate. It is paid aboud 16.000 \$ to the Management Plus Company as a consultation service. In the other hand, the expenditures that are made to prepare company can be follow as; it is spended 100 billion TL for the construction of laboratory and 150 billion TL for ventilation, warehouse and air-conditions.

There is no extra cost after getting the ISO certificate, except the expenditures of the auditors annually who are coming to the company and these are very niche amounts.

3.7. Changes in The Management, Administration and Production Manner After ISO

It is reduced to the minimum degree which car arise eighter machine or employee mistakes in the production process. It is ordinary meeting system in the administration. Hence, communication iner company is increased and semi-annually meetings for checking the administration is conducted. Sales, production, training and trend of the personels are discussed in this meetings and necessary changings are made. Also company determined the new targets. Beside of this meeting every department meets monthly.

ISO is an order highly dependent on system and not to individuals. Hence, in the replacement process firm does not harmed, system continuous to work with the new personal effectively.

3.8. Company Position and Customer Approaches After Getting ISO Certificate

In several tenders and in gevernmental works ISO certificate can be shown as good reference. Finally, if a company has ISO certificate means that company reach some standards in international area. Cemsa Boya has increased its customer portfolio more and more after having ISO certificate.

It has positive effects in the eyes of the customer. It is organized variety questionnaire in order to understand customer approach. First questionnaire which made in direct sales called UT.⁷ It covers delivery time, meeting the costomer needs, technological competence, etc. Customer grade them as very good, good, moderate, bad and very bad. For example; in the result of this questionnaires Cemsa Boya has understood that workers are leaving the working place before making necessary cleaning. Cemsa Boya has taken necessary precautions toward to this problem. Second questionnaire is applied to the retailers called CRM⁸. It covers saled production quality, production variety and customer service after sales. Also retailers are graded company according to this questionnaire. For example; retailer questionnaire showed that Cemsa Boya has a handicaped in advertisment. Finally, Cemsa Boya has increased its advertisment program by having sponsor in several TV programs.

As a result, customer questionnaires are the best way to understand the customer needs and reduced mistakes to the minimum, and increased customer satisfaction to the maximum level.

Please see Appendix to examine questionnaire form.

⁸ Please see Appendix to examine questionnaire form.
3.9. Does Company Meet The Expected Results After Having ISO Certificate?

The reason of ISO certificate is the regulate the company. Because it was going difficult to control when the company getting bigger and this system is established with ISO certificate.

ISO met the expectations of the company. Customer satisfaction has increased, but sales didn't increase because of the economic crise faced in Turkey. Even though, company has through the crise situation by keeping quality high and costs contant.

3.10. Company's Responsibilities After ISO Certificate

There are two important rule in the ISO philosophy:

Write what you did, do what you wrote!

Trust is not a barrier to the control!

There would be no misunderstandings if the system is written and connected with each other accordingly forms. The most responsibility ISO charged to the company is that forms to be filled out well and decrease to the mistakes to the zero.

The other responsibility charged by ISO is the auditing the goods and services provider where goods and services bought. For instance, is there a guide book for machines that sold or are they shipping in the specified time? These are registered to the forms again anda re graded over 100. If the good or service provider takes under 70, ISO does not give the permition for the corporation.⁹

3.11. Advanced Process of The ISO Certificate for Cemsa Boya

ISO system will be continued as its established. It will be revised according to the new system whwn ISO has improved any version and company has to take the new certificate too. New system will continue its improvements with the changings.

⁹ Please see Appendix to examine provider inspection form.

CONCLUSION

Unavoidably, the world is globalized. As a result of this globalization firms are in need of certain standarts. ISO provide these standarts is in the best appropriate way.

After applying ISO standards to any company, you can see a lot of improvements in productivity, satisfaction of customers and employees, quality of goods and services. The main characteristics of ISO are "Write what you did, do what you wrote!" and "Trust is not a barrier to the control!". It means that everything must be under record according to the ISO standards. For exampe, in our company (Cemsa Boya), we couldn't find any information about sales potential before ISO certification. But, after ISO certification, you can find all informations about its activities.

ISO standards are provide a regular working system to the company. ISO certification has got a lot of regulations to the company (Cemsa Boya). For example, after ISO certification, each machine has a usage hand book, each job has a job description paper and all of the activities are taken under record by employees and managers. Also there is a lot of training programs for employees and these programs are increasing their efficiency.

ISO standards are increasing internal communucation of company. According to the ISO, each manager and department has a continual communication with other managers and departments. This communication is obtained by meetings and these meetings are made regularly.

When you look at ISO internationally, we can see a lot of achievements on trade world. One of the most important example is standardization of the format of telephone and banking cards. It means that each telephone and banking card sizes are same all over the world. Standard card sizes allow economies of scale with cost benefits to both producers and consumers.

ISO standards are upgraded and new version of ISO certificates are supply companies one in six years. Also companies are upgrade themselves according to ISO standards improvements. For example last version of ISO 9000 family is 2000 and Cemsa Boya has ISO 9001:2000 version.

RECOMMENDATIONS

Firstly, let we are look at ISO generally. According to my opinion, this system is a perfect system. If a company want to export its product, it should have a ISO certificate. Because, If you have a ISO certificate, it shows that your products have a international standards. Also we can say that ISO is a "door" to open the world for any company.

The company (Cemsa Boya) is applying ISO standards successfully. They should continue to apply ISO standards. Also, when ISO supply the new version of certificate, the company should take next version of ISO certificate. It will provide so important competitive advantages to the company in the future. Especially, after solution of Cyprus problem, company will open to the rest of the world. They will be able to export their products.

There is no specific department for ISO and quality management in the company (Cemsa Boya). The production manager is responsible about ISO and quality management in Cemsa Boya. The company should constitute a specific department and this department should be responsible about ISO.

There is some problem about recognition that some retailers and people do not know Cemsa Boya has a ISO certificate. This is an advertisement problem. Therefore, the company should increase advertisement in the market.

APPENDIX

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| ARIH : | | | | | | |
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Döküman No :ÜAF044 Revizyon No : 00 Tarih : 26/06/2002 Sayfa No : 1/1

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Görüş ve Düşünceler :

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DÖKÜMAN NO:ÜAT079 REVİZE NO:01 TARİH:10.02.2003 SAYFA NO:1/2

aç: Tedarikçi değerlendirmesinin yapılabilmesi ve değerlendirilebilmesi şekli. umlu:ÜMT Lideri ve Yönetim Temsilcisinin sorumluluğundadır.

KALITE SISTEMI

1.) Kalite Sistemi değerlendirilmesi altı ayda bir kere Tedarikçi Değerlendirme Performansı Faaliyet nına göre yapılır.

2.) Kalite Güvence Sistem belgesi olan firmalar bu belgelerinin geçerlilik süresince tekrar etlemezler.

3.) Denetleme sonucunda belirlenen eksiklikler tedarikçiye bildirilir.

4.) Tedarikçi gerekli tedbirleri aldıktan sonra gerekirse tekrar bir denetim talebinde bulunabilir.

5.) Tüm bu değerlendirmeler sonucu tedarikçiler 4 sınıfta toplanır.

| 100-90 Puan | ——En ideal tedarikçi——— | A |
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| 90-80 Puan | deal tedarikçi | В |
| 80-70 Puan | Kendini geliştirmeyi kaydı ile çalışabilir tedarikçi | C |
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TEDARİKÇİ DENETLEME TALİMATI

DÖKÜMAN NO:ÜAT079 REVİZE NO:01 TARİH:10.02.2003 SAYFA NO:2/2

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PUAN(Hizmet)

| _ | DEĞERLENDIRME | | | | |
|---|--------------------------------------|--------------------------|--------------|--|--|
| - | | PUAN (Hammadde/ Ambalaj) | PUAN(Hizmet) | | |
| | | 50 | 50 | | |
| | Urun Kainesi (Hizmet Livaunluču) | 10 | 25 | | |
| | Sevkiyata uygunluk(Hizmet Oygunlugu) | 10 | 25 | | |
| | Ödeme kolaylığı | 10 | | | |
| | Döküman Sağlama | 20 | | | |
| | Kalite Sistemi | 20 | | | |

1. ÜRÜN KALITESİ (%50 katkı)

ligili firma tarafından temin edilen ürün, teslim alındığında gerekli kontrollerin uygulanması sonucunda tespit edilen puandır.

| i ta ila in indiklara uvgunluk (%) | PUAN | PUAN(Hizmet) |
|-------------------------------------|------|--------------|
| Istenilen özelliklere uygunluk (10) | 50 | 50 |
| 100-95 | 40 | 40 |
| 94-90 | 30 | 30 |
| 89-85 | 20 | 20 |
| 84-80 | 10 | 10 |
| 79-70 | 10 | 0 |
| 69 ve altı | U | |

2. SEVKİYATA UYGUNLUK (%10 katkı)

Siparişlerin teslimat süresindeki gecikmelerine göre verilen puandır.

| | | | 1 Grade martine / |
|-----------------------|----------|---------|-------------------|
| T | | 10 Puan | 25 Puan |
| lam zamaninda tesitin | | | 20 Puan |
| Toplam sürede gecikme | %5 ise | 9 Puan | 20 r ddir |
| Toplatti our an g | 9610 iso | 8 Puan | 15 Puan |
| Toplam surede gecikme | /010136 | | 10 Puan |
| Toolam sürede decikme | %15 ise | 4 Puan | 101 dali |
| Toplan Saroto get | 0/00 : | 0 Puan | 5 Puan |
| Toplam sürede gecikme | %∠U ise | Viuan | |

3. ÖDEME KOLAYLIĞI (%10 katkı)

| Eger muşten; | 40 Duen | 25 Puan |
|---|---------|---------|
| Sürekli kullandığımız ödeme şeklini kabul ederse | TU Puan | 201 441 |
| Sürekli kullandığımız ödeme seklini kısmen kabul ederse | 5 Puan | 10 Puan |
| Sulekii kullandiginii 2 duono şeklini kobul otmezse | 0 Puan | 0 Puan |
| Sürekli kullandığımız ödeme şekimi kabul etmezse | | |

4. DÖKÜMAN SAĞLAMA (%10 katkı)

5. KALITE SISTEMI (%20 katkı)

| | TSE'den belgesi varsa | 10 puan | |
|-------------|------------------------------|---------|--|
| | Hic bir kalite belgesi yoksa | 5 puan | |
| Hazirlayan: | | Onay: | |
| | | | |

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KALITE EL KITABI

Döküman No:ÜAD004 Revize No:01 Tarih:14.08.2002 Sayfa No:4

1. <u>ÖNSÖZ:</u>

Iehmet KARALIM' a ait Şirketinde Şirketinde dekoratif boyalar ve toz fayans tırıcıları üretimi yapan aynı zamanda da uygulama ekipleri seviyesinde hizmet sunumu da gerçeken bir kuruluştur. Şireket merkezi, şirketin departman ve birimlerinin de yer aldığı Lefkoşa, KKTC şik tesisinde bulunmaktadır. Ayrıca çeşitli şehirlere dağılmış; 72 adet bayilik sistemi ile çalışmak-

arını kullanmak ve edilen bilgileri iç ve dış müşterilerimizle paylaşmak, sürekli gelişmeye ve top ün mükkemmelleşmeye dayalı bir organizasyon olmaktır.

isyonumuz ise; Süreçlerimizi sürekli iyileştirerek teknolojimizi yenileyerek ürün ve hizmet kalitemiçmek, değerlendirmek ve aldığımız tüm veriler doğrultusunda müşterilerimizin beklentilerine uyürün ve hizmet üreterek ülkemizin lider kuruluşu olmak ve bu liderliği dış pazarlara taşımaktır. kalite el kitabı, defensione defensione da uygulanan Kalite Yönetim Sistemi'nin ISO9001:2000 standardı s alınarak belirlenmiş olan temel niteliklerini ortaya koymak üzere standarttaki bölümlere paralel ok hazırlanmıştır.

2. Kalite El Kitabının Dağıtımı:

alite el kitabının dağıtımı ve ilgili tüm kayıtlar Üretim, Tasarım ve Kalite Takımı Lideri'nin sorumlulu Idadır. El kitabının kapak sayfasında kontrollü / kontrolsüz kopya durumu belirtilir. Üretim,Tasarım Kalite Takım Lideri işletme dışından sistem kitabını isteyenleri uygun bulduğu takdirde kontrolsüz oyasını verir.

alite el kitabının kontrollü kopyaları şirket içinde Üretim, Tasarım ve Kalite Takım Lideri tarafından ya / Değişiklik Bildirgesi Formu eşiliğinde imza karşılığı dağıtılır. Kontrolsüz kopyaların dağıtımında ayın / Değişiklik Bildirgesi''' yer almaz. Şirketin tanıtımı için kullanılan döküman özelliğindedir. ygılarmızla.



HAZIRLAYAN:

Üretim, Tasarım ve Kalite Takım Lideri

ONAYLAYAN: Genel Müdür.

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KALİTE EL KİTABI

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3. Kuruluşun Tanıtımı:

1979 yılında faaliyetlerine başlayan

Kuruluş yıllarındaki; ilk ürünler sıva ağırlıklı olup "SANTEX-ROLTEX" imalatı ve uygulamaları şeklin e idi. 1986-1987 yıllarında "Su Bazlı" plastik boyaların üretimi ve "Fayans Yapıştırıcıları" devreye alınnıştır.

Hızla büyüyen Boya mevcut tesisleri yeterli gelmediğinden 1995 yılında İDARİ BİNA ve retimin binalarını, 1998 yılında ise HAMMADDE ve AMBALAJ DEPO ve ARAÇ BAKIM ünitelerinin buınduğu bina alınmıştır. Toz Üretim Ünitesi 2002 yılında komplexe dahil edilmiştir.

oplam alan 3300m2 olup;2700m2'si kapalı alan şeklindedir.

Çevreye saygı amaçlı kullanılmayan malzemeler ve atıklar için 500m2'lik / GÖNYELİ'de ayrı bir amar devreye alınmıştır.

Genişleyen üretim için 1000-1200 m2'lik yeni bir alanın sisteme katılması planlanmaktadır.

ARALIM & CO. LTD'nin açık adresi ve Tel/Fax numaraları:

Karalım & Co. LTD

Organize Sanayi Bölgesi 16. Sokak No:30 Lefkoşa / KKTC

Telefon: 0392-2252368

Fax: 0392-2255852

Tüketici Danışma Hattı:0392-2253269

HAZIRLAYAN:

Üretim, Tasarım ve Kalite Takım Lideri

ONAYLAYAN: <

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KALITE EL KITABI

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Takım liderleri, astlarının kendi aralarında ve diğer bölümlerle koordinasyonunu sağlamak du-

D. İşlerin Yürütülmesi ve Kontrolü:

Takım Liderleri, aşırı ayrıntıya boğulmadan önemli kararlar almak, sorumluluk yüklenmek surelişmelerini ve serbest iş görme olanaklarını sağlamak için, emrindeki personele uygun ölçüde ermelidir.

Takım liderleri, departmanlarda disiplini oluşturmak, personellerini korumak ve morallerini yükk yoluyla verimliliği arttırmak, yapılan işin kalitesini geliştirmek için düzenli kontroller yapmak ve rse önlemler almak zorundadırlar.

Takım liderleri, gereksiz sarfiyattan kaçınmaya, bütçe sınırlarına uymaya, personellerinin de If fikirlerinin geliştirilmesine çalışmalıdır.

Takım liderleri, personellerinin iş yerinde mevcut alet ve ekipmanları en iyi ve sorun çıkarmaıllanacak eğitimi almalarını sağlamak zorundadır. Personellerinin aletlerin temizliğine önem verip ediklerini sürekli kontrol edip gerekli uyarılarda bulunmalıdırlar.

E. Eğitim Sorumluluğu:

Takım liderleri, emirlerindeki personelin işlerini belirlenmiş prosedürler ve talimatlar çerçeveverimli bir şekilde sürdürmeleri, geliştirmeleri ve uygulamaları için sürekli eğitime tabi tutmalıdır.

F. Faaliyet Sonuçlarının Kontrolü:

Takım liderleri, prosedürlerle belirtilmiş olan departman faaliyetlerinin düzgün yürütüldüğünün rgesi olan ilgili kayıtların tutulmasından, gerekli belgelerin düzenlenmesinden, takip ve muhafazan sorumludur.

Takım liderleri, faaliyetlerinin ne etkinlikle yürütüldüğünü göstermek için gerekli istatistikleri ırmak ve bu konularla ilgili hedefleri belirleyip bu hedeflere ne derece yaklaşıldığını düzenli erecek verileri sunmak zorundadırlar. İstatistiksel veriler düzenli olarak bölüm sorumlularınca nlenir. **"Yönetimin Gözden Geçirmesi"** toplantısında değerlendirilir.



KALITE EL KITABI

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4.2. Dökümantasyon Şartları:

4.2.1. Genel:

Kalite Yönetim Sistemi dökümantasyonu;

.) Kalite politikasının ve kalite hedeflerinin döküman haline getirilmiş beyanlarını,

.) Kalite el kitabini,

3.) Dökümante edilmiş prosedürleri: yani; Kalite Yönetim Sisteminin gereklerini yerine getirmek cıyla gerekli olan faaliyetlerini tanımlar. Temel prosedürler ne, ne zaman, nerede ve kim sorularını plar. Prosedürler faaliyetlere bağlı olarak talımatları, çeşitli standartları reterans verebilir.

4.) Yukardaki tanımların dışında bir takım ozel destek dokümanlar da kullanılmaktadır. Kalite el ki-, Organizasyon el kitabı, Hammadde kod kitabı, Ürün kitabı, Ürünlerin kalite kriterlerini tanımlayan standartları dosyası vb dökümanlardır. Bunun yanı sıra çeşitli ürün ve sistem standartları ile müşter da kullanılan dış kaynaklı dökümanlardır. nameleri vb dökümanlarda

İş akış şemaları üretim ve kontrol işlemlerini tanımlar, formlar, prosedür, talimat vb dökümanlar da mlanan faaliyetlerin kaydedildikleri ortamlardır.

Kalite Yönetim Sistemi, tüm departman ve birimler tarafından uygulanmakta olup, yapılan denetime sisteme dinamizim kazandırılarak sürekli gelişme sağlanmaktadır.

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KALITE EL KITABI

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5.4. Planlama:

5.4.1. Kalite Hedefleri:

* Müşteri şikayetleri sayısını bir önceki yılın altına indirmek (Max %20)

* Müşteri sayısndaki artışı %20 olarak sağlayabilimek.

* Maliyetleri %5 oranında azaltmak.

* Mevcut personelimizin kişi başına düşen eğitim süresini 30 saat/ kişi olarak sağlanabilmesi.

* Extra giderlerin yıllık bazda %20 oranında aşağıya çekilmesi.

Kalite hedefleri; koordinasyon toplantılarıda takımların hedefleri üzerinden belirlenir. Yönetimin en Geçirme Toplantıları ile kontrol edilir. Belirlenen hedefin gerçekleştirilmesi ise süreç iyileştirme arı ile takip edilir.

5.4.2. Kalite Yönetim Sisteminin Planlanması:

boyada istenilen özelliklerde üretimin gerçekleştirilmesi için proses sırasında ve son ol aşamasındaki doğrulama faaliyetlerinin kim tarafından hangi yöntemlerle yapılacağı ve kontrol kları **"Kalite Plan"**larında tanımlanmıştır. Ayrıca kalite hedefleri şartlarının da yerine getirilmesi için e Yönetim Sistemi'nin planlanması yapılmaktadır.

ERANS DÖKÜMANLAR:

* ÜAP037: Kalite Politikası

* ÜAP042: Kalite Yönetimi Sistemi Planlaması.

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KALITE EL KITABI

Döküman No:ÜAD004 Revize No:01 Tarih:14.08.2002 Sayfa No:14

5.4. Planiama:

5.4.1. Kalite Hedefleri:

* Müşteri şikayetleri sayısını bir önceki yılın altına indirmek (Max %20)

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Kalite hedefleri; koordinasyon toplantılarıda takımların hedefleri üzerinden belirlenir. Yönetimin den Geçirme Toplantıları ile kontrol edilir. Belirlenen hedefin gerçekleştirilmesi ise süreç iyileştirme ıları ile takip edilir.

5.4.2. Kalite Yönetim Sisteminin Planlanması:

boyada istenilen özelliklerde üretimin gerçekleştirilmesi için proses sırasında ve son trol aşamasındaki doğrulama faaliyetlerinin kim tarafından hangi yöntemlerle yapılacağı ve kontrol ıkları **"Kalite Plan"**larında tanımlanmıştır. Ayrıca kalite hedefleri şartlarının da yerine getirilmesi için ite Yönetim Sistemi'nin planlanması yapılmaktadır.

FERANS DÖKÜMANLAR:

- * ÜAP037: Kalite Politikası
- * ÜAP042: Kalite Yönetimi Sistemi Planlaması.



KALITE EL KITABI

Döküman No:ÜAD004 Revize No:01 Tarih:14.08.2002 Sayfa No:15

5.5. Sorumluluk, Yetki ve İletişim:

5.5.1. Sorumluluk ve Yetki:

Eride Boya'da organizasyonun her kademesindeki personelin görev tarifi yapılmıştır. Bunun Bıra hazırlanan talimat ve prosedürlerle de hangi işlerin kimler tarafından yapıplacağı belirtilmiştir.

Üst seviye yöneticileri olan takım liderleri kendi görevleri ile ilgili görev sorumluluklarının yanın-Calite Politikası'''na yönelik olarak görev ve sorumlulukları vardır. Ortak görev ve sorumluluklar Ida tanımlanmıştır:

A. Şirket Politikasının Bilinmesi:

Takım liderleri Kalite Politikası'nı kendi çalışma alanlarının ilgilendirdiği dercede bilbu politikanın uygulanmasını devamlı olarak takip etmek, uygunluğunu araştırmak ve Kalite Politinda yapılması gerekli değişiklikleri "Yönetimin Gözden Geçirme " toplantısına getirmekle yüküm-

B. Organizasyon:

Takım liderleri E i 'nın kabul ettiği organizasyon prensiplerini astlarına açıklayarak perellerinin bu yapı içindeki konumlarının ve yatay dikey ilişkileri anlatmak, ahenkli bir çalışma ortamı turmak zorundadırlar.

C. Departman Faaliyetlerinin Düzenlenmesi:

Takım liderleri sorumlulukları altında bulunan iş ve faaliyetlerin düzenli bir şekilde yürütülmesi gerekli prosedürlerin hazırlanmasından, mevcut prosedürlerin revize edilmesinden sorumludur.

Takım liderleri, emeğin en faydalı şekilde kullanılması ve işlerin minimum masrafla yürütülmesi yönetimleri altındaki personelin görev ve sorumluluklarını açık, seçik ve herkesin rahatça anlayabieği bir sadelikle belirlemeleri ve bunların uygulanmasını gözetmeleri şarttır.

Takım liderleri, Takım 'nın tüm eylemlerinde ilgili yasa, yönetmelik ve iş yöntemlerine bağlılığı Iamaları ve bunların uygulanmsını sürekli kontrol etmeleri, düzeltilmesi gereken hususlar için de mlu önerileri Genel Müdürlüğe yapmaları gerekir.

Randımanın artırılması ve işlerin daha düzenli yürütülmesini sağlamak üzere çalışme yöntennin sadeleştirilmesi yine takım liderlerinin sorumluluğundadır.

Takım liderleri, astlarının sorularını kesin olarak yanıtlamali, gereken kararları süratli olarak bil-

nelidirler.





