

# **Quality Analytical Entrance Cost Applied Study in the Garments Factory of "Waladi" in Mosul**

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#### Abstract

Spared no accountants will cost effort in trying to develop methods of analysis of cost elements, including elements of the cost of quality in order to provide information contributes to achieving the goals of the company and provide the best products at the lowest cost, so it became the analysis of the elements of quality costs within companies an essential element and an important part in the competition in the modern environmental, in order to control this elements and improve their performance as far as the strategic because the quality focus on reducing costs and working to increase customer satisfaction, therefore, this research aims to shed light on the statement of the role of the cost of quality in achieving effective products with the aim of improving the quality of production and reduce costs and enhance the company's ability compete locally and internationally, and the statement of the benefits envisaged from the analysis process and its role in achieving effective products.

**Keywords**: Elements and appraisal cost of quality, Defects, Root cause, Pareto analysis

#### Introduction

The widespread interest in contracts last few of the concept of quality is due to the real need to address the problems related to defects of production and process productivity, where Japan adopted after World War II the ideas and teachings of Deming Edward list to improve the reputation of their products in order to enter as strong competitors to foreign markets "Albuldawi 16,2007". Quality as it is known is one of the competitive advantages adopted by most of the companies and of adopting an acceptable level of quality in the products or services provided by these companies to customers at the time of purchase and during the period of use, where the pioneers of modern management believes that there are many of the justifications and benefits of what is spent by the additional costs of improving the product quality. However, the way ahead described in this paper by highlighting the role of quality cost on the effectiveness of products and the benefits of analysis of quality cost analysis. Finally, this requires rewriting costs are reflected positive to improve the quality of the product or service provided in order to enhance their competitiveness both locally and internationally.

# Research problem statement

Characterized today's world many variables convention on international trade, the revolution in information, communication technology, free movement of capital, and the owner of E-Commerce has transformed the world into a small village. Thus, these changes leads to isolation from the rest of the world implausible on the framework and shift production from the global market to global consumer which require the ability of the success of the companies in market competition both domestically and internationally to provide high quality and competitive prices and continuous improvement of products. In addition, search products received acceptance from customers that's become a quality cost analysis processes and the main objective which the main focus of care and attention by the management companies that basis, already it is selected research problem in the following questions:

- 1. What are the causes of the failure and the large number of defects in the production process?
- 2. What are the reasons for not improving the quality of the goods that are produced in a clothes factory defect to reach the international quality standards?
- 3 What are the reasons for the failure of the lab in strengthening the capacity of goods that are produced in garments factory of (Waladi) on the domestic and international competition?

#### Aim of the research:

The research aims to:

- i. Identify points of failure and failure sites and occurrence of defects in the production process and know the causes and work on them.
- ii. Improve the quality of the goods that are produced in the garments factory, "Waladi" which will serve as necessary to enter local markets and to achieve a market share acceptable identity.
- iii. Strengthening the capacity of goods that are produced in the garments factory, "Waladi" to compete locally and internationally



#### Research importance:

Highlights the importance of research of the importance of the subject where most Iraqis suffering from poor quality products in Iraq compared to foreign products than the loss of survival within the competition with them. Repeatedly, compete with foreign products imported and this is what prompted many to shutdown such companies after it was known as an international reputation company.

#### **Research Hypothesis:**

- 1. Quality cost analysis leads to the discovery of the failure and the failure areas and sites occurring defects in the production process.
- 2. Analysis of the costs of quality in the garments factory, "Waladi" will claim to meet the quality of their products, which allowing them the opportunity to continue, stay and growth.
- 3. Quality cost analysis will enhance the effectiveness of the products to compete locally and internationally.

# The research sample:

Due to the importance of the activity that the practice factory garments "Waladi", which may contributes to the strengthening of the national economy and development, which requires quality cost and knows analysis to attribute to production costs after the company became products suffer a lot of dissatisfaction in marketing and in the domestic market because of the many flaws in, so it was chosen as a sample for research and study.

#### The second topic: History for quality

Received the subject of quality with great interest by researchers, businessmen and international organizations as well as general public in recent years to the point that for many call this era. The era of quality and who invited me to re-write in this topic is what witnessed our country Iraq to lower most of the products produced quality locally or imported from meager Chainsaws, especially Chinese ones, which reflected entirely on the performance and on the customers and the reputation of the country, Joseph Juran and is a pioneer in the field of quality and advocates to quality analysis and study of the costs of quality since 1951, is the first teacher quality is the top who contributed to the build quality revolution in Japan After World War II, which describes the three-Quality Planning Quality Trilogy planning and control and improve the Improvement In this sense If we take a quick look at the quality movement we see that the history of this movement went through four stages or periods, and the first three stages and have provided a lot of useful tools of management in a timely manner is as follows:

1. First stage: product examination (Inspection Stage)

Extends for the period of 1800 -1900 AD (European colonization stage), the reliance on traditional measurement tools to check products in order to identify varieties of poor and non-conforming products.

- 2. **Second stage**: the stage of quality control (Quality Control stage)
- This period extends from 1920 1950 AD (stage of the Industrial Revolution and the pioneers of scientific management). The dependence in this period tools of statistics, mathematics, technology supervision and control of the operational processes in addition to relying on the so-called duck or his examination models to test samples of the product in order to quality control.
- 3. **Third stage**: the stage of assuring quality (Quality Assurance stage)
- This extends the period of 1950- 1960 AD the stage of the outbreak of Japanese industry. The dependence in this period to the so-called quality cost control and total quality programs and re-engineering programs and zero defects.
- 4. **Fourth stage**: the strategic management of quality (management Strategic Quality). This extends for the period of 1960 and so far. The dependence in this period on the so-called strategic management of quality, where the focus was in this conceptual stage to quality stage and quality of the company perspective as well as the customer's perspective and work to reduce the costs of quality for ways completely get rid of bad quality.

#### **Quality Costs Concept**

There are many definitions of the concept of quality, for example but not limited Dictionary defines Oxford quality to mean "degree of excellence or preference (Hutchins, 1992: 5). Bank is defined, as full satisfaction of consumer needs less internal cost. (Bank, 2000: 24). The International Organization for Standardization ISO define quality as a "set of features and totalitarian characteristics in goods and services affecting meet virtual and implicit customer needs in order to satisfy the customers the time of purchase needs, during and after the period of use" (Hoyle, 1997: 6). From the above, we conclude that quality is the production of goods or provide services to customers according to their needs and specifications to accept their wishes.

The what regards to quality cost opines Joseph Juran in the concept of quality as those assigned to the costs that will disappear if the defects were removed from products and processes, and companies vary in the estimation of those costs." (Juran J., M. & Gryna, FM, 1988: 4). Sees Horngren At the cost of quality as "those costs that occur to prevent poor quality or are those costs which the Open Event because bad quality has taken



place. (Horngren 0.2006: 661).

It is therefore a measure of the extent to meet the needs and requirements of customers phenomenon and implicit at the lowest possible costs, quality is no mean excellence or only the excellence but the extent of conformity of the product or service mu of qualities required and to avoid the loss caused by the product of the community after its submission to the customer that whether those losses caused by the failure to meet the needs of the consumer or the failure to meet the required characteristics in the product which may affect the consumer or the surrounding environment and expectations.

# The importance of quality cost analysis:

The meaning of "Okyakusama" is guest distinguished or the customer in Japanese language has a lot of giant Japanese companies such as Nissan and others built on this principle, which is the idea of "customer satisfaction" and the philosophy served The Depot Home sense of "all customer needs that his dealings also treated your mother or your father or your brother or your sister (Ivan and Dean 2009: 217) in the sense that you give them all the services of goods and other in the best way and the lowest possible cost even become standards of global quality (9000, ISO 9000 Standards) that have been developed by private quality international organizations which is about a group of five standards for quality management and approved by more than 85 countries in the world to help companies documentation and certification of production processes that lead to quality effectively and to ensure that customers receive a product of interest in the high quality specifications (Hornkeran et al., 2009: 1237) is a global measure of quality all over the so that the world can not be ignored for any company and Takeda for the development of all of Edwar d Deming and PhilipCrosby a set of principles and rules to achieve quality in the production of goods and services represented in the following points: (Bundagji 0.2002: 191).

- 1. Find a fixed target for the development of goods and services.
- 2. Departments adopt new philosophies able to confront contemporary challenges.
- 3. The continuous improvement of production systems for the purposes of quality.
- 4. Comprehensive training for all staff workforce of technicians and administrators, at all administrative levels.
- 5. The existence of effective leadership.
- 6. Stay away from the methods of terrorism administrative and raise feelings of fear among workers.
- 7. Remove bureaucratic barriers between departments and divisions so that everyone works as a team.
- 8. The involvement of all employees in the decision-making process.
- 9. Everyone's participation in the work of planning, implementation and training on self-censorship.
- 10. Correct mistakes quickly, as well as develop a program ensure no errors.
- 11. Motivate employees to inform the administration about the problems and obstacles that stand in the way of work.
- 12. Open channels of communication between all levels of management through the establishment of councils for quality management.
- 13. Establishing the doctrine of quality for all workers.
- 14. Quit the principles of Management by Objectives and quota systems so that they are integrated business

As shown above, the importance of quality cost analysis and the importance attributed to the costs and the main components and sub-define the relationship between them and trends in order to:

- 1. Reduce the damage or losses on the level of operating hours
- 2. To identify the size of the quality problems from a financial perspective, allowing the allocation of the necessary financial resources and in the appropriate places (Juran J., M & Gr yna, F, M, 1988: 3-4)
- 3. Reduce the cost of inventories and the processing time for the production of defective than the A DVD to reduce capital costs. (Diphtheria, al-Rubaie 0.2005: 178)
- Reduction of cost examination, testing and other services cost associated Joel de to reduce operating costs.
- 5. Increase the volume of sales, which Joel de calculated to lower prices and in turn to increase profits.
- 6. Improve the exploitation of Elmo R. d efficiency available to the company.

# **Elements of quality costs:**

Most of the studies is consistent in quality (Gryna F. M. 1999) and (Cartin, TJ1999) and (Campanella, J. Ed 2003) on the quality rating assigned to four categories, namely:

# 1. Prevention costs "prevention"

Are those activities that are specifically designed to reduce or eliminate production of goods or of poor quality services are then all realized in planning, implementing and maintaining the continuity of quality management system, which aims to ensure the quality requirements of costs and is one of the most effective ways to reduce



the costs of quality while maintaining the quality High of products or services provided because the cost of prevention or prevention be less in most cases than the cost of correcting defects after they occur. (Garrison and Noreen .200 2: 996)

And include elements of these costs (engineering and planning quality, design and development, quality training, preparation of quality reports, quality assurance, quality planning, statistical oversight activities, maintenance of quality equipment, quality improvement projects, quality management system, any other preventive costs).

Note from the foregoing that most of the costs of prevention is to spend each company in order to prevent the production of products not in conformity with the required specifications, "which shows trying to avoid eating mesh failures and mistakes from the first time (Masoudi 0.2010: 56-57).

#### 2. Appraisal Costs

Are those activities aimed at finding solutions to the problems of quality solutions in other words is to know the product case and make sure it is free of defects and include elements of these costs (inspection and testing of raw materials, inspection and testing commissioned during operations, final inspection and testing costs, equipment and test equipment cost, cost analysis and the preparation of inspection and testing reports, the salaries of those who commissioned screening operations, the costs of any other private correction)

Note from the foregoing that most of the costs of the correction are those costs associated with the measurement and evaluation of products to ensure compatibility with the requirements of quality and performance standards. (Drury, Colin. 2000: 901)

#### 3. Internal failure costs

Are those internal activities associated with the disposal of the product due to lack in matching the required specifications and, therefore, is this of activities not to add value, but it is an important tool to measure the efficiency and effectiveness of prevention activities working within the company and include elements of these costs (scrap "Surplus" costs, re-work the product costs or Services defective, repair costs and stop the machines and equipment that led to the production incompletely, incomplete production reduces the cost resulting from the sale of defective units, get rid of defective products, analyze the causes of production defects).

We note from the foregoing that most of these costs are associated with the defects that are discovered before the arrival of the product to the customer and that are spent on products without Elmo the qualities required by the company and are discovered VPL shipped to customers.

#### 4. External failure costs

Are those outdoor activities that arise after production and marketing process to customers and therefore, these costs occur when a product fails or one of its parts from matching the recipes to the customer's needs and include elements of these costs (warranty claims, the legal responsibility for the product, the market cost, customer complaints, preparation books, the answer support, repair faults within the warranty period, the value of products sold response).

From the above note that the costs are nose a s e of these activities are very large compared to other types of quality costs as a result of the impact of this kind of failure on the company's reputation and that the costs associated with this type of failure be after the arrival of products to the customers are linked to mistakes are not taken to detect the longer marketed to customers and therefore, the defenders of quality management believe that every activity Semen p external failure is cost effective (Hilton, el, al., 2003: 268).

# The third topic: Analysis of quality costs in the garments factory of "Waladi" in Mosul

Ready-made clothes factory ("Waladi") in brief:
The garments factory, "Waladi" in Mosul, one of the General Company for the manufacture of ready-made clothes factories, have been lab run in 1983 with a production capacity 726 000 pieces per year of Knits congenital for girls and men's and women as well as the implementation of the agreements with the Ministry of Industry and Minerals, defense, health, electricity and sector companies contracts. Specially, for the production of clothing and supplies that some private companies and ministries and departments. Total cost of the project in a timely manner is 9500000 dinars only nine million five hundred thousand dinars.

The factory applies uniform accounting system in the recording and tabulation and analysis of financial operations, reporting and financial statements through the stages of system, VCD financial circles in the laboratory of the Department of the financial accounts and the accounts inventory and accounts of the cost and the Department of pay and benefits. In spite of the attempt laboratory commitment to quality internationally established standards and allocate a section for quality and her team work, we find a lot of signs of weak quality control, which resulted in a lot of notes.



#### Production stages in the factory:

Going through the production process in the lab through several stages productivity, namely:

1) <u>Stage of purchase:</u> The purchase of fabrics and accessories either from the domestic market or foreign market "imported" and are at this stage commitment to quality standards set by the quality control standards and emanating from the strategy and the Ministry of Industry and Minerals in Iraq and in accordance with the applicable regulations in the procurement process and at this stage there are several points examination and inspection for quality, as shown below:

#### A. Examination of Source:

Is the examination of fabrics and accessories work for other industry agreed clothing models by the first party, a representative of the purchase before the purchase and supply of fabrics process to ensure their conformity with the specifications agreed terms between the parties and they are free of defects and in accordance with the regulations that are set by the ministry

#### B. Examination at the site:

The Committee on the examination and inspection upon the arrival of fabrics and accessories to work the other to the factory stores performed testing laboratory "physical and chemical" Textiles to make sure they conform to the specifications in addition to ensure that the length of fabrics and displayed, quantities, weights and are those operations through a combination of hardware and equipment so special, including "Granulating device to measure friction cloth, and a washing machine to measure the shrinkage of water and contraction by coy and contraction Bfayyoznk and extensibility with water, and inspection organs the number of warp yarns and weft of existing models and consignments, and a screening influenced cloth heat and device portability cloth boards, and color fastness by coy and color fastness panning and color fastness of light in addition to the private viability water permeability test. Then it is received cloth and put it inside warehousing and thus regulates the minutes after it is to clarify all the previous things in this record through a form specially prepared by the department and quality control for this purpose.

# 2) The design stage:

At this stage, the design department to choose models meet specifications and needs of customers and their preferences for the purpose of design models of clothing or models of contracts that have been agreed with the concerned authorities, are after the selection show those models on the committee of wise men to choose suitable for the production of models and according to what is available from labor and material requirements initial if that committee has failed to meet the needs of these customers, this means they failed to achieve the quality of their designs, then the quality control division examines the design models and the extent of compliance with the conditions and specifications agreed then be prepared "Alpetronat" of the models that have been selected for the purpose configured for the subsequent stage.

# 3) Operating phase, "sewing":

This section consists of four production lines and line assign one and through these lines is split production of the seamstresses where means all sewing or all of the production line a certain part of the product, oversees production at every stage or a partition or a supervisor or line over the follow-up work and monitoring accuracy implementation is then output delivery to Alcoy after being attic final inspection process before preparation for marketing. At this stage being output divided into first class and second class and is split second class to the defects can be repaired where the replay sewing machine department to be to address the flaws again and products cannot be continued as a damaged product, then as products are sold and after this it would be deposited in production stores.

#### 4) Marketing stage:

Lab products are marketed through direct sales outlets for citizens or through agents or through laboratory accredited contractors.

# Use Pareto model to analyze the quality lab commissioned in ready-made clothes (Waladi):

The style of Pareto Analysis is one of the most important and easiest method of statistical way used in quality cost as possible through this method to focus on optimization few of importance paragraphs process analysis in production costs and leaving a lot is important considering that the main objective of the analysis of the costs of quality and is to reduce the overall size of the costs related to quality products and often died A de bad quality to higher costs borne by the Company as a result of this defective units and of re-production, inspection and transport and dealing with complaints of customers and costs related to the discount granted to the costs of the products' bad quality (Said 2009: 78).

From this point you're not focusing on two aspects of this analysis of a design and quality conformance quality so we can quality costs divided into two main sections:

# **First: Conformance Costs:**

Compatibility all costs incurred by the laboratory to ensure the quality of design and quality matching any matching products with specific specifications for the unit in advance when the product design and the extent to which the properties of the product to the needs and desires of customers include costs. These costs are



# divided into two types:

#### A)Prevention costs:

It includes the cost of activities aimed to prevent a deviation from the specifications set out by the product designers.

#### B) Appraisal Costs:

This includes all activities aimed at continuous assessment of the production in order to ensure compatibility with the specifications set out in advance.

# **Second: Failure costs:**

And include all the costs of the elements of the "failure" failure to achieve the required quality. These costs are divided into two types:

# A) Internal failure costs:

It includes all of the costs borne by the plant because of production flaws that are discovered before marketed to customers 'products a second degree".

# B) External failure costs:

It includes all costs incurred by the plant as a result of the discovery of defects in production after the marketing of products to customers.

The following report is demonstrate the quality of the factory as set forth in cost for the fiscal year ending in "31/12/2012 AD accounts records"

Table (1)
The actual cost of quality "Report 2012"

| Details Quality commissioned   | Costs Dinars | Ratio to sales | The ratio of quality to cost |
|--|--------------|----------------|------------------------------|
| First, the costs of compatibility  |              |                |                              |
| 1: prevention cost   |              |                |                              |
| Cost engineering and planning quality  | 18082200     | 0.0071         |                              |
| Training on quality cost   | 130000       | 0.0 0005       |                              |
| Studies and research on quality, cost  | 85000        | 0.0            |                              |
| Quality maintenance equipment  | 103000       | 0.000          |                              |
| Design and development cost  | 31105200     | 0.0123         |                              |
| Statistical oversight activities   | 484277       | 0.00019        |                              |
| The total cost prevention "prevention"   | 49989677     | 97 0.01        | 0.35                         |
| 2: cost "Meet and Yum"   |              |                |                              |
| Examine and test cost of raw materials   | 4848179      | 0.0 0 19       |                              |
| Transport raw materials for the purpose of examination of the external                   | 35000        | 0.0            |                              |
| During the examination and testing operations  | 20242047     | 0.0 08         |                              |
| Final inspection and testing cost  | 3309232      | 0.00 13        |                              |
| The demise of equipment and inspection and control cost                                  | 10769255     | 0004           |                              |
| Maintenance of equipment and inspection cost   | 103000       | 00             |                              |
| Analysis and preparation of inspection and testing reports commissioned                  | 3418205      | 0001           |                              |
| Other commissioned Calendar  | 22000        | 00             |                              |
| Total cost "Calendar"  | 42746918     | 0.0169         | 0.30                         |
| Second, the cost of failure: "Failure"   |              |                |                              |
| 1: internal failure cost   |              |                |                              |
| Damaged exhaust and cost of raw materials  | 244091       | 0.0            |                              |
| Damaged cost and exhaust in the design, production and Osteoarthritis                    | 41732000     | 0.016          |                              |
| The difference between the cost of first-class production and sale of second             | 3593287      |                |                              |
| Repair machines that led to the defective production costs                               | 2940000      | 0.001          |                              |
| Reduce the sale price of the production costs for defective "First class for the second" | 287463       | 0.0001         |                              |
| Re-work the defective products cost  | 846640       | 0.0003         |                              |
| The total cost of internal failure   | 49643481     | 0.0196         | 0.35                         |
| The total cost of quality  | 142380076    | 0.0563         | 100%                         |
| Actual sales value   | 2527835639   |                |                              |
| Quality ratio assigned to the value of sales   | 0.0563       | 1              |                              |

Source: prepared by researchers relying on user financial reports and records of the factory.



#### \* Note:

- 1) Sales value of \$2527835639 dinars are not compatible with the total cost of production of \$14496896369 dinars because the cost of labor make up a large proportion of the cost of production as the number of employees at the plant more than 1,600 workers.
- 2) The laboratory when determining production costs excluding salaries and wages of cash production costs, unlike the accounting rules in force.
- 3) It was excluded salaries and wages paid to employees of the departments of quality control and quality cost of \$944342000 dinars from this analysis because they constitute their own quality of 0.3735 and this ratio exceeds internationally accepted standards cost.

For the purpose of determining the proportion of each element of quality assigned to elements of the total cost of quality has been the adoption of the ratios (Juran & Gryna) as an indicator in the analysis, according to what is shown in the following table:

Table (2) Elements of cost-quality ratio to the total cost of quality

| All in prevention "prevention" | Assigned to "Calendar" | Cost of failure |
|--------------------------------|------------------------|-----------------|
| 0.5% - 5%                      | 10% - 50%              | 20% - 40%       |

Source: "Juran J., M & Gryna, F, M, 1988

As for determining the ratio between quality and cost value of sales it has been the adoption of the "index Russell & Taylor", and as shown in the following table:

Table (3) Quality ratio between the cost and the value of sales

| Industry Type                    | Quality ratio of cost to sales |
|----------------------------------|--------------------------------|
| Statistics industries            | 0.5% - 2%                      |
| Traditional mechanics industries | 1% - 5%                        |
| Micro industries                 | 2% - 10%                       |
| Aviation and space industries    | 5% - 25%                       |

Source: Russell & Taylor "1995"

Since the textile industry and garment industry is one of the small industries of the one who has been the adoption of the ratio between 0.5% - 2% as an indicator of measurement and analysis. As is shown in the table as follows: -

Table (4) shows the amount of defects for some of the fabrics received during the Year 2012

| Sequence | Types of fabrics                   | The amount of defects in meter |
|----------|------------------------------------|--------------------------------|
| 1        | Vaseline cloth and celestial Green | 2095                           |
| 2        | Lazaro cloth colors                | 132                            |
| 3        | Indigo cloth and Brown             | 100                            |
| 4        | Cotton cloth colors                | 105                            |
| 5        | My cloth colors                    | 270                            |
| 6        | Humayun cloth colors               | 120                            |
|          | Total                              | 2822                           |

The following figure shows the statistical amount of defects per meter of fabric:



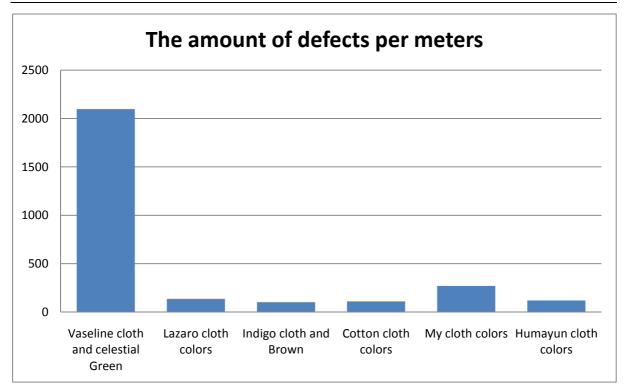


Fig (1) the amount of defects per meter of cloth

This can be illustrated by the total cost of quality through the following type:

| Sequence | Quality cost type                    | Amount / IQD |
|----------|--------------------------------------|--------------|
| 1        | Prevention "prevention" commissioned | 49989677     |
| 2        | Rating assigned                      | 42746918     |
| 3        | Internal failure cost                | 49643481     |
|          | The total cost of quality            | 142380076    |

As shown, the above table is about the types of statistical quality cost as follows:



Form (2) Quality commissioned



# Pareto analysis: Schemes and "cause and effect":

#### First: Pareto analysis:

As it is well known that the bad quality leads to increase certain types of with the cost of that borne by the lab and on the defective units of production so it is a study of the costs of quality is one of the important tools for continuous improvement of the quality and the longer the style of Pareto of one of the successful techniques in the analysis and treatment processes, from through its focus on the little of importance and focus on improvement on those few operations because they help to identify the failure sites and invisible sources through the use of statistical tools "cause and effect" and according to the following steps:

- 1) Identify problems faced by the production processes of importance.
- 2) Identify factors that impact on the A problem.
- 3) Determine the contribution rates of influencing factors.
- 4) Corrective action of.
- 5) Compare results before and after corrective action.

In addition, according to the available data of the data it has been identified the most important factors that have caused these failures in the following:

#### First: the problems facing the production processes:

A) Design-related problems:

Factory in the design of its products to traditional models adopted and available to it, generating a lot of problems highlighted by the following:

I)The reluctance of the citizens of the popularity of these products, similar to a marrying of local products or foreign products.

- II) High prices of these products compared to quality, specifications and consumer tastes.
- B) Problems related to PAL human factors:

These problems are in the following:

- I)The lack of training programs or even non-existent one of the main reasons that led to these deviations can be seen through what has been spent on this item, which does not exceed 130,000 dinars compared to production of more than 14,496,896,369 dinars costs and the number of pieces for more than 2,213,803 pieces.
- II) Inadequate supervision or inadequate production operations despite exceeded the salaries of employees in the control and supervision of the department of 944342000 dinars.
- C) Problems related to components of the material:

These problems are the following:

- I)The different specifications required between what are required for the production and design and the material components purchased where purchases are made from exporters either from the domestic market. In this case can be found for the resource and re-infringing material specifications of, and are made through intermediaries and outside the country and tack of the differences in most cases not matching those purchases models agreed. It was literally be the difference in the rates of formation of such fabrics or differences in some of the colors or the difference in the materials used components, in other words not matching the specifications of these problems and is one of their reasons behind the low factory sales, because most of the items to be purchased are made by committees lacked the knowledge of customer tastes so requires the selection and training of employees in this area and give them freedom to diversify procurement sources and the use of different suppliers.
- D) Related problems with machines and devices used production:

These are the problems in the following:

I)The absence of preventive maintenance

- II) Poor maintenance of machinery and equipment used in production processes and inspection where amounts constitute maintenance combined with the cost of spare parts needed for those 30943000 dinars.
- III) Inadequate inspection and control devices to suit the size and operating in addition to the sharp quality of the machines and equipment compared to devices used in the rest of the developed countries because of the gap between production methods and production possibilities available.
- E) Performance-related problems:

It notes through the production process speed and performance without considering the required quality, which is a burden, I consequent those extra distractions.

#### **Second: Factors that impact on the problem:**

There are a lot of factors that have impact on the mentioned problems including:

A) Blurred vision of the Supreme administrative and financial management of the importance of quality cost analysis and its role in increasing the value of revenue



B) Lack of communication with customers and surveyed about products that are marketed and defects that surrounded and machines reproduce products and compensate for another one.

Most of the cost within quality cost, quality control division as a section solely responsible for the follow-up product quality in the factory show.

# Third, determine the contribution of factors affecting rates:

- A) Through the study of factors that affect the problems it can be seen that the lack of clarity of vision with senior management the importance of quality cost analysis resulted in high cost products compared with those local or foreign.
- B) Despite the large number of employees assigned to the "Calendar" account for a large proportion of the cost of quality and thus it requires giving priority to reduce costs calendar.

# Fourth: The corrective action:

This requires the following:

- A)Understand the importance of quality in addition to the cost of administrative support and effective implementation of this program and the cooperation of other departments to apply analysis.
- B) Design products to meet the needs of customers through quality designs and taking into account customer tastes must interview those designs through the corresponding quality.
- C) Study the needs and tastes of customers through market research to determine the needs and meet their requirements in terms of product characteristics and the extent of its ability to meet these requirements specifications and standards of acceptable quality.
- D)The management of the lab work constantly to improve product quality by improving the quality of work inside the lab.
- E) The quality cost analysis process that helps to solve a lot of problems and that by comparing the costs and benefits of quality improvement and prioritize programs to reduce costs.

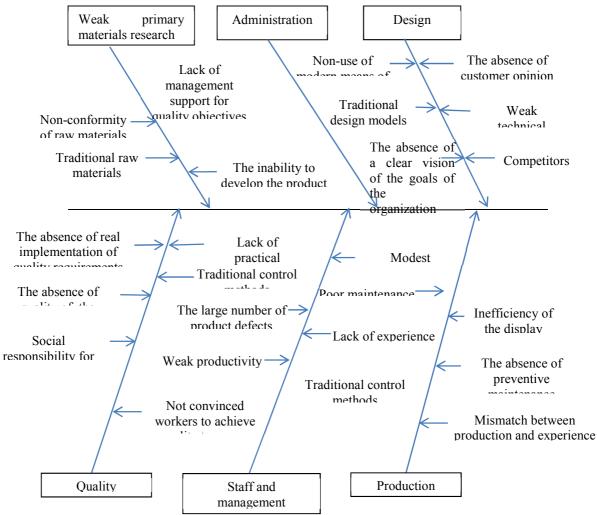
# Fifth: compare the results before and after corrective action:

Notes through the study of common and recurring problems, which have been analyzed represented the following:

A)Design and osteoarthritis section:

- B) Sewing and boot partition:
- C) The final section control:





Form (3) scheme of cause and effect / possible causes of defects resulting from non-compliance with the standards of quality of the factory

#### **Conclusions and recommendations:**

# **First: Conclusions:**

- 1) Despite the announcement of the factory for its commitment to quality applicable standards in developed countries, but we don't find the indication to analyze the costs of quality are clearly in the cost applicable in the lab for more than thirty years ago accounts from now.
- 2) The quality cost analysis will allow the factory inventory losses in the visible and the loss of business reputation and reduced the number of customers and thus lower the market share of the factory.
- 3) Although the number of employees at the factory beyond 1600 workers and salaries and cash wages paid to them exceeds 81% of the production costs and the remainder which 19% is the cost of pain test kits goods and services. We see the deterioration of the quality in some products as evidenced by a degree products again, which this requires to rehabilitate the preparation of second-degree products and they are required level in order to achieve the desired product quality.
- 4) Lack of support for the senior management team and the lack of the necessary cooperation between the financial and administrative departments and senior management in the field of analysis of the costs and quality of this product due to lack of knowledge of costs and quality and the importance of the quality analysis.
- 5) Most of the units operating in the factory do not have any idea about the importance of analyzing the costs and quality of its constituent elements and the importance of analysis and its impact on revenue.
- 6) Through quality cost analysis stand on the problems surrounding the production processes necessitating locate and identify its causes and thus work on them through the allocation of necessary financial resources.
- 7) Constitute a quality cost of \$101478275 of the total production costs for the year 2012 amounting to 14,496,896,369 IQD or by 0.7% of the total production cost and form of salaries and wages large the percentage. Nevertheless, we find that defects surrounding the production processes resulting from weak oversight on production.



#### Second, the recommendations:

- 1) The management team's commitment to rapid changes in the sections productivity and the reduction of bureaucratic work and give priority to quality cost analysis and work to involve workers and supervisors of the production. Thus, they can do to make any repairs or any defect that affects the production process in such programs.
- 2) The results of this study will be an incentive for management to give special attention to the quality analysis of cost and result in that process for improvement of the Quality Management programs and thus increase the profitability of the plant as a whole
- 3) Due to the role of the customer in assessing the quality of the product so it requires to meet the needs of customers and their requirements phenomenon and implicit, because the customer is the one who decides whether the product meets their needs or not. Moreover, it should focus on cost quality internal and external failure as types important because in these stages where the product soon will be from the consumer.
- 4) The need to train the technicians on the implementation of a high-efficiency programs and related the cost of quality using different models, "such as cost model on the basis of the activities or operations model analysis".
- 5) Work hard to create a culture of quality among all employees and all available means so that, in turn, is reflected on the upgrading of Iraqi product quality to enhance its competitiveness both in the domestic or foreign market.

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