CHAPTER I

INTRODUCTION

Competing in the world market today, product quality acts as an order-winner factor to overcome competitors. It helps to achieve customer satisfaction, zenith goal of making any businesses. Any companies, which can get a satisfaction from their clients, will be the first choice in mind of customers when they think to buy a product. However, to achieve product quality driven by customer, most companies found themselves hardly to manage it with efficiency. Because of several problems in the company, as a result it difficult to cover and manage all of problems in once times.

Traditionally, most companies try to cover only critical quality issues such as Customer complains, Rework, Penalty and etc. These problems can measurable as non-conformance and leave a sense of inefficiency all over the organization. The companies try to solve those problems by using their experiences. And, the companies founded regularly that some problems were not solved completely as a result they occurred again and again. This means inefficient activity still remains as a blind issue. Missing a quality improvement direction is a causing of improvement project failures. Especially, they miss a direction to gain customer satisfaction and their expectation.

Nowadays, a recent quality system, TQM, provides a useful tool for quality improvement process. Its concepts will help to understand customer requirements and the opportunities for improving. In addition, it involves the betterment through using the organization involvement and teamwork. At the same way, large companies –Toyota, Mitsubishi, Ford and etc.- put a lot of efforts to gain the employee involvement in quality improvement.

To achieve in improvement programs, Philip Crosby has defined fourteen step of quality improvement as shown in Table 1.1. One of the most important steps is cost of quality evaluation or quality cost assessment.

Table 1.1: Crosby's fourteen-step quality improvement programs

1. Management commitment
2. Quality improvement team
3. Quality measurement
4. Cost of quality evaluation
5. Quality awareness

6. Corrective action
7. Establish an ad hoc committee for the zero defects programs
8. Supervisor training
9. Zero defects day
10. Goal-setting
11. Error cause removal
12. Recognition
13. Quality councils
14. Do it over again

The assessment in quality is useful information to describe a company-wide review of the status of quality. It provides a formal method for a starting point of quality improvement processes as a result the continuos improvement will be happen systematically. In addition, the assessment cause of a performance measurement system using keeps in touch in each improvement program.

1.1 PERFORMANCE MEASUREMENT VS QUALITY

Performance is the final conclusion of all activities, measured for evaluation and control of activities in most companies. One of performance measurements practically used is cost, which can measure corporate efficiency and effective by interpreting in term of monetary units. By comparing between past and present, the cost provides the companies to identify their situation dealing with profitability, income, budget, sale and others. Consequently, the company can define what should do next.

By the way, quality is established with the spirit of continuous improvement. It is what customers satisfy both current and future. Under the competitive environment, It acts as a tool to achieve opportunities becoming in the market place. In contrast, bad quality is like a trigger to destroy any organization.

The relationship between cost and quality is usually is mystery, so nobody know what we gain or we loss when we implementing quality. Evaluating quality in cost term, it can present, on a monthly basis, reports to management as a result of quality problems are discovered. These reports shall include customer support time, product replacement costs, lost production time, and any other costs traceable to shipment to customers of product failing to meet customer specifications.

Cost of Quality is a powerful and complete quality cost management system designed to help you identify and track quality cost. It provides essential dollars and cent to each employee regarding the outcomes of his or her ideas and hard work. Furthermore, it gains incentive and accurate feed back. However, it requires experience and expertise of each manufacturer to make it correctly.

1.2 BACKGROUND OF INDUSTRY

The increasing of both populations and food technologies in last two-decade causes the catering equipment or food service equipment becoming a proportion of making any kind of foods. This means the catering equipment market is fascinating and challenging to many companies.

In this paper, the company is not referred to by name to keep anonymity, so it is called "studied company". The studied company was established in 1971 in Thailand. The business started with designing and installing commercial kitchen for five star hotels in Thailand. Nowadays, the company can design, manufacture, install and service including import all kinds of catering equipment. Most customers are currently not just only hotel but also Convenience Store, Fast Food, Fight kitchens, Hospital kitchen and Restaurants as well as clubs.

The products of the company can be grouped into 7 types as follows:

1) Bakery equipment: Bake oven, Bread slicer, Dough Kneader and Pasta Oven etc.

2) Beverage equipment: Blender, Coffee machine and Ice-cube machine etc.

3) Cooking equipment: Convection oven, Egg boiler, Kettle, Popcorn machine and Microwave etc.

4) Hot & Cold holding equipment: Freezer, refrigerator, Cook & hold cabinet and Hot cabinet.

5) Preparation equipment: Food cutter, Meat saw, Mixer and Vegetable cutter etc.

6) Sanitation and ventilation equipment: Fire extinguisher, Exhaust hood, Glass washer and trash packer etc.

7) Other equipment: Chinese kwali Range, Hot-dog grill warmer and Vacuum packing machine.

The year of 1999, the company has a plan to contract with a restaurant company as a supplier. Interestingly, the Restaurant Company has planed to increase the subsidiary all around the world by using Thailand as a major equipment supplier. Thailand is a good opportunity since she has strong industrial support.

However, the Restaurant Company is one of international business. It requires every contractor that has to have a quality system. Consequently, the company needs to invest in Quality system to support its requirement. Focusing on quality system, the company wants to establish the system in manufacturing according to it still lacking of any quality system.

In addition, the catering of restaurant equipment can be divided in to 10 equipment as follows:

1) Marinator
2) Refrigerator
3) Add-on unit
4) Oil filter unit
5) Exhaust hood
6) Burger station
7) Holding cabinet
8) Hand Breading table
9) French fries station
10) Fridge for burger station

The examples of equipment are shown below:

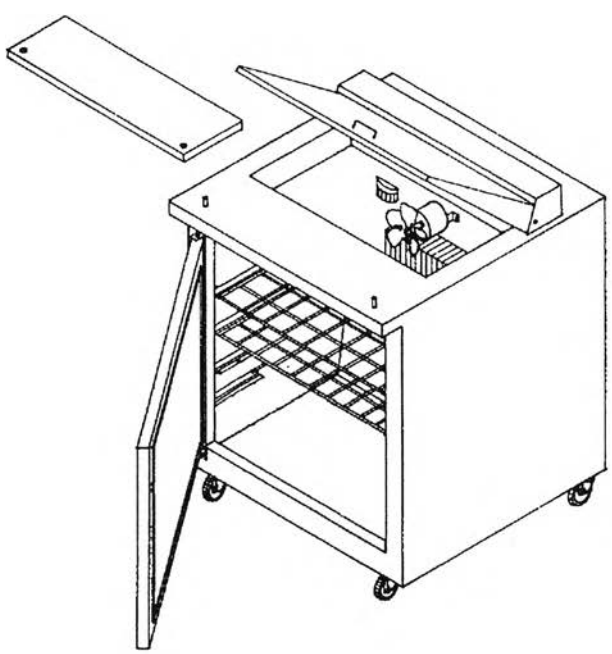

Figure 1.1: Fridge for burger station

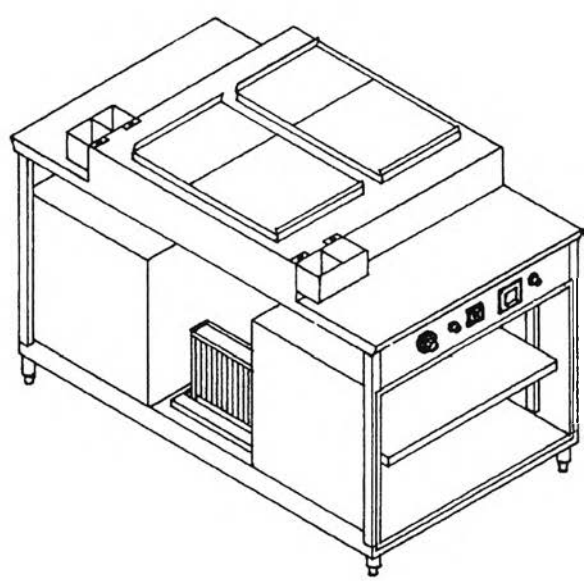

Figure 1.2: Add-on Unit

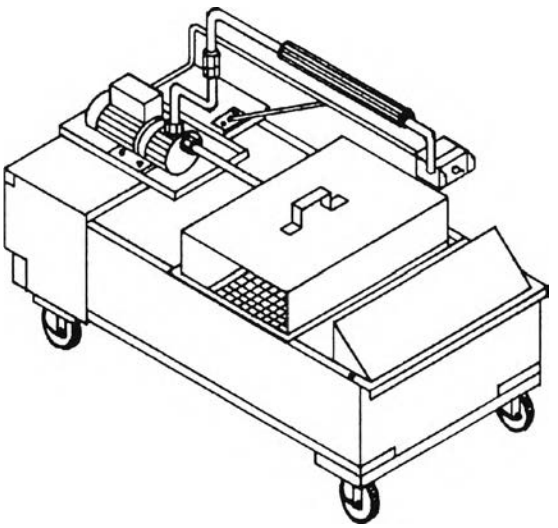

Figure 1.3: Oil Filter unit

1.3 STATEMENT OF PROBLEM

Within the company studied, it lacks of any quality system and measurement into monetary value. This results the company could not ensure definitely for implementing a quality management that are enough or not. However, the company has planed to be a supplier of a international restaurant company, as a result it has to invest quality system. In addition, the following are the impact of poor quality in the company, which the company foresees the problems whenever start producing the restaurant equipment.

1.3.1 Lacking of quality system in manufacturing

Lacking in quality system, the company could not identify what quality important is and where the quality system should be invested. One important thing, the following is effects of lacking of quality system.

1) High cost of repair
2) High scrap rate
3) Long lead time of manufacturing
4) Failure of rework during the manufacturing process is high

However, the company is trying to find out how much the magnitude of quality problems in the process.

1.3.2 Lacking of quality measurement in cost term, the company do not know such as:

1) What is suitable quality?
2) What is price of quality?
3) What is budget of quality department?
4) How much the cost for implementing quality?
5) What we plan for further quality improvement?

In short, the company still lacking of quality system and evaluating quality cost system. Consequently, it cannot find out what optimum point of establishing system in term of costing.

1.4 OBJECTIVE OF STUDY

To establish quality cost system and to study quality investment for restaurant project in manufacturing processes.

1.5 SCOPE OF STUDY

1. Study only restaurant's catering equipment manufacturing.
2. Focus on the cost affected on the equipment manufacturing process.
3. Emphasis on quality in term of cost only.
4. The equipment studied compose of:
   1) Marinator
   2) Display unit
   3) Burger station
   4) Holding cabinet
   5) French fries station

Assumption:

1) The demand of equipment is constant.
2) The processes of equipment manufacturing do not change during working on the thesis.

1.6 PROCEDURE OF STUDY

1) Survey the concerned thesis and theory

2) Collect the data and factor, which involve the quality under the restaurant equipment specification

3) Study working conditions of whole manufacturing process

4) Set up quality control system to bring up the quality of products to given specification

5) Analyze all quality activity, which involve monetary term

6) Design quality cost system in manufacturing process

7) Implement the quality cost system in the catering equipment manufacturing

8) Analyze the result of the system and find out quality investment and benefits

9) Conclusion

10) Prepare the thesis paper and any suggestions for further development.

1.7 BENEFIT EXPECTED

1) To know the quality investment in the project.

2) To establish quality cost system to help the company understanding about quality system in term of cost.

3) To help the company to manage quality with systematic and measurable.