

CHAPTER III

OVERVIEW OF THE ABC COMPANY

This chapter will present a general overview and current situation of the ABC Company as an introduction with an aim to help the reader to clearly understand overall situation and culture of the company.

3.1 Company Background

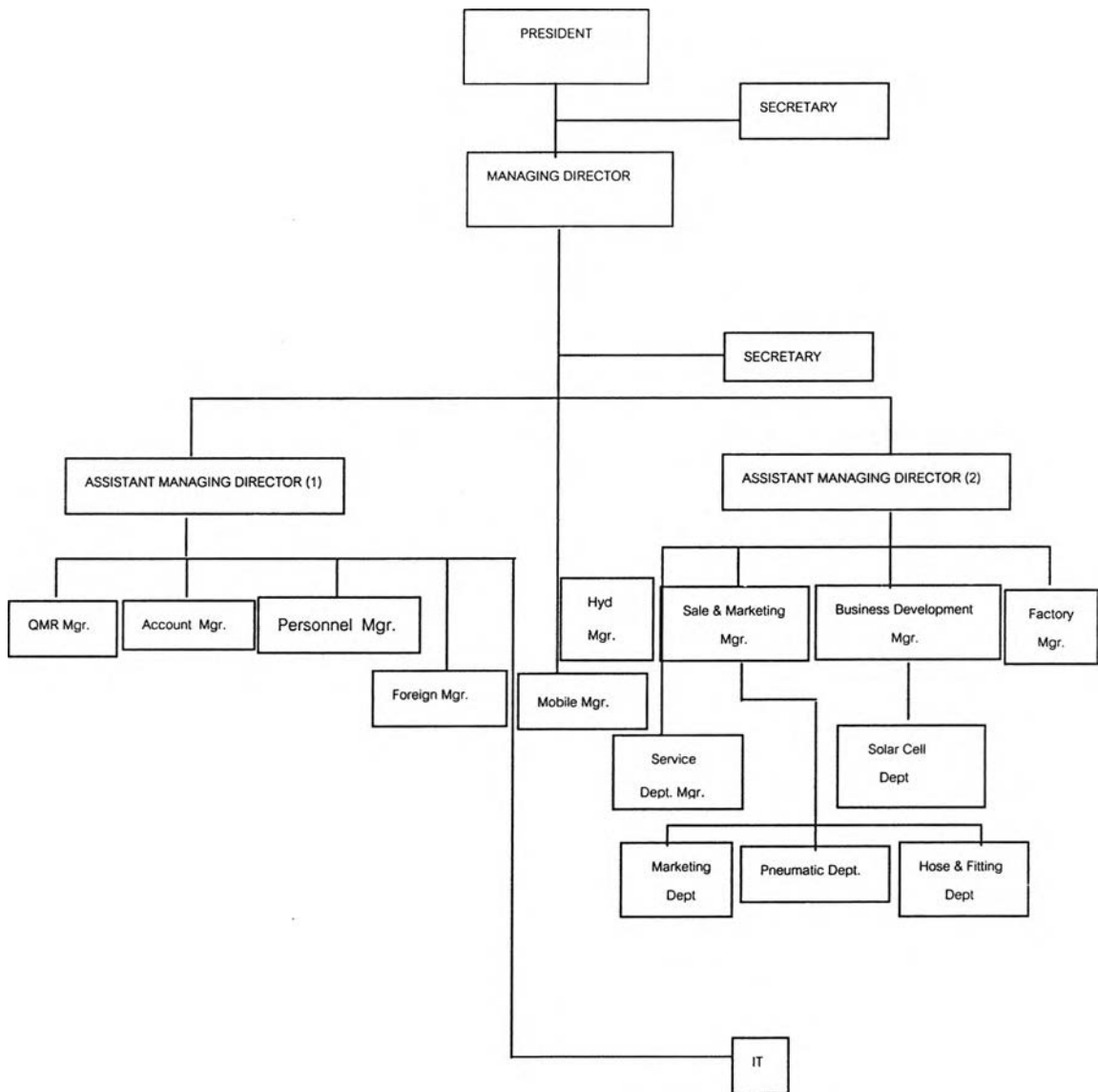
ABC was established thirty years ago as the local agent of hydraulic and pneumatic components. Changes in customer requirements along with ABC's expertise in hydraulic and pneumatic system provided the opportunity for ABC to expand its business into full range products and services provider of fluid power and motion control system.

Its main customers are the manufacturing firms in various industries. In the past, the original product with plain features can serve customer needs. However, the changes in development of technology and manufacturing process require for an additional level of product customisation. The quality control of company product is therefore a key success factor for the company to maintain competitiveness in terms of customer requirement fulfilment in this market.

3.2 Organisation Structure

ABC was established by its present president. Many positions in this company have been appointed to his family and relatives such as the assistant managing director-1 and -2, sales and marketing manager, business development manager, and finance manager, and it has been operated with the old-fashioned family management style, which mostly relies on the president. Despite the weekly meeting is held, missions and decision making depend on the president. ABC's organisation structure is shown below.

Figure 3.1: ABC's Organisation Structure



Currently, the middle and top management team spend most of their time on compliance and conformity. Without their own visions, they always seek the way to facilitate what the president wants to achieve to be accomplished. The president acts as the leader with the directing leadership style. This nature has caused the lower management level starting from the managing director to the middle management and down to the supervisor operate their units with the minimum level of leadership or so called “managers.”

Therefore, only one person in this organisation has applied the leadership role which is considered to be insufficient for the company to survive in the market and

even expand into the new market. The implementation of KQI is therefore rather difficult for this type of company in which all decisions rely on one key person.

The author recommends the ABC management team to consider improving leadership skill and management style of its team once the implementation of balance scorecard and KQI is taken place. The management team should develop their own thoughts with vision and think more outside the box. The situational management style should be applied differently for each subordinate and in different situation. Eventually, the leadership skills and behavior such as initiating and originating, innovative, commitment, enabling, participating, etc. can be expected from the management team. The optimal level of management contribution, which is the crucial fundamental of KQI, will help the company to achieve its goals easier with most efficient way.

3.3 Company Product

ABC's hydraulic products can be classified into three categories as the following.

3.3.1 Hydraulic Cylinders

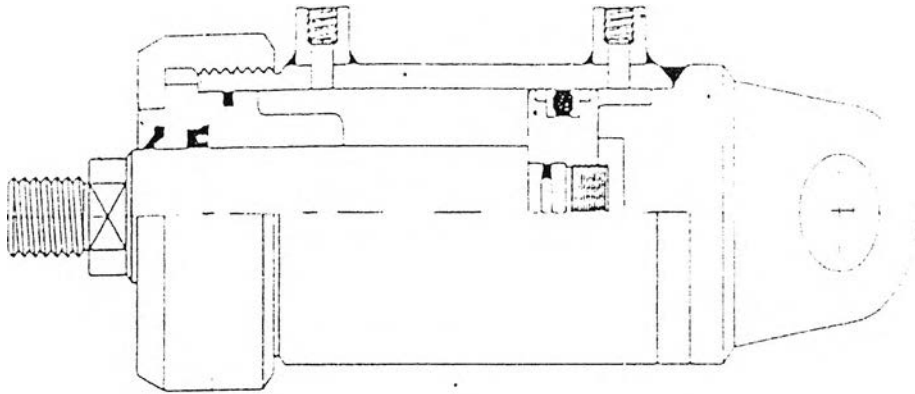
3.3.2 Hydraulic Hose and fitting

3.3.3 Hydraulic Systems and Components (for example, power units and valve blocks)

The scope of this research will focus only on the Hydraulic Cylinders product. Hydraulic cylinder generally refers to a device which converts fluid power into linear mechanical force and motion. It usually consists of a movable element such as piston and piston rod, plunger rod, plunger or ram, operating within a cylindrical bore.

Hydraulic cylinders' basic parts is shown in the following figure.

Figure 3.2: Hydraulic Cylinders Basic Parts



The cylinder or barrel or housing is a tube in which the plunger or piston operates. In the ram-type cylinder, the plunger or ram actuates the load directly. In the piston cylinder, a rod is connected to the piston to actuate the load. The end of the cylinder from which the rod or plunger protrudes is called the rod end. The end opposite is called the cap end. The hydraulic connections are called the cap end port and the rod end port.

3.4 Manufacturing Process

ABC's factory is located in Pathumthani Province. According to ABC's Manufacturing Procedure Manual, the manufacturing process of hydraulic cylinders is as follows.

1. Head of Engineering reviews the Material Lists Form and Finished Product Delivery Form along with the Design Review Form and Customer Contract Form receiving from salesperson. If the Customer Contract Form is incomplete, a Head of Engineering is responsible for obtaining complete forms from salesperson and process further. If the forms are complete, Head of Engineering will pass it to Design Section.
2. Head of Engineering will then assign the Design Section to design a hydraulic cylinder per customer requirement. The complete design will be passed to Assembly Section.
3. Head of Assembly is responsible for checking specification and availability of parts and components by using the Factory Inventory Report. If the parts and components is not sufficient for manufacturing product, Assembly staff has to fill in the Bills of Materials Form with the details of product specification and pass to Factory Purchasing Officer (Administration Section.)
4. Factory Purchasing Officer is responsible for raw materials ordering.
5. Once the raw materials, parts and components deliver to the factory, Administration and Quality Control sections have to inspect quality of raw materials by using Raw Material Inspection Form and Raw Materials Defection Form.
6. A complete design from step2 will be formalised in Design Plan Form by Design Section and passed to the Head of Engineering for checking purpose.
7. The Design Plan Form from step6 will then be passed to the Factory Manager for approval. In case of correction is required, Head of Design has to review, amend and follow step 6.
8. Once the Factory Manager approves Design Plan Form, the manufacturing process can be started.
9. Head of Engineering is then responsible for setting a production plan for the whole process by liaise with Head of Production. Then, pass it to Factory Manager for approval.
10. Throughout the process, Head of Quality Control is responsible for quality of product inspection and examination by referring to ISO manual.

If work-in-process is not qualified, Quality staff will attach the QC HOLD tag to the product. Assembly section will then responsible for product re-assembly. The re-assembly products will go to the quality inspection process again. If the quality of product can not be accepted after re-assembly, QC staff will decide whether or not to discard it.

11. Product that passed quality inspection will be then processed for painting, name plate attaching and packaging by Painting staff, which will be then ready for delivery.

3.5 Current Problem

ABC has faced intensified competition in hydraulic cylinder market. According to the result of customer survey revealed that customer satisfaction level decreased recently, with the major problems in aspect of quality of product, delivery time and company service's trustworthy.

Due to the limited source of data, customer complaints used in this research is only for the period of last quarter in year 2004. Summary of customer complaints is shown in the following table.

Table 3.1: Customer Complaint Data

Type of Complaints	Frequency	Percentage	Cumulative
1. Late delivery	31	33.3	33.3
2. Low quality of product	18	19.4	52.7
3. Incorrect specification	12	12.9	65.6
4. Incorrect painting / packaging	10	10.9	76.5
5. Lack of salesperson relationship / contact	8	8.6	85.1
6. Effectiveness of consulting service	5	5.3	90.4
7. Speed of responsiveness to customer problems	5	5.3	95.7
8. Effectiveness of problem solving	4	4.3	100
Total	93	100	

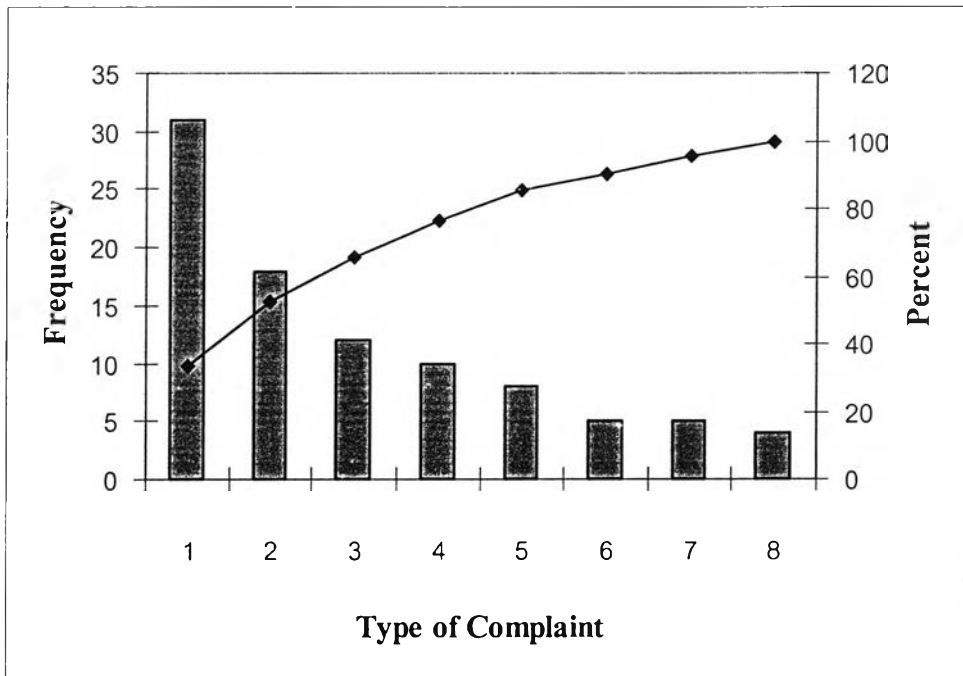
Complaints shown in the above table can be classified into three main categories as follows.

Table 3.2: Customer Complaint Category

Category	Customer Complaint
Product Delivery	Late delivery
Quality of Product	Low quality of product
	Incorrect specification
	Incorrect painting/packaging
Services	Lack of salesperson relationship contact
	Effectiveness of consulting service
	Speed of responsiveness to customer problem
	Effectiveness of problem solving

According to the Pareto analysis, Pareto analysis is a technique employed for prioritising problems of any type. The analysis highlights the fact that most problems come from a few of the causes and it indicates what problems to solve and in what order. 76.5% of total eight problems consist of major two problem areas for solving (product delivery and quality of product).

Pareto chart for the above customer complaint data is shown in the following Figure.

Figure 3.3: Pareto Chart for Customer Complaints

With a purpose of customer satisfaction improvement, this research will present how to use the data regarding to customer complaints to define KQI, and how to deploy Key Quality Indicator in the quality control procedure of hydraulic cylinder manufacturing process in order to increase customer satisfaction level.