

CHAPTER 3 INFORMATION OF SELECTED COMPANY

MOLEX Thailand Ltd. is one of the company's leading harness and connector suppliers. MOLEX company consists of 4 regions; The Americas, Far East North, Far East South, Europe. And far East South consists of 6 locations; MOLEX Taiwan, MOLEX Singapore, MOLEX Hong Kong, MOLEX China, MOLEX Malaysia and MOLEX Thailand. MOLEX Thailand have establish for 7 years. The employee in MOLEX Thailand is about 200 people. MOLEX Thailand does not sell only harness and connector which assembly in MOLEX's manufacturing, but we sell the products which come from other MOLEX entity. And we call it as indirect sales, resale. The indirect sales and resale will be discussed further.

Organization Structure (Figure 3.1 Present Organization Of MOLEX Thailand Ltd Company)

There are 8 departments in MOLEX Thailand company;

- Financial Department
- Marketing & Sales Department
- Material Department
- QA Department
- Human Resource Department
- Production Department
- Engineering Department
- Management Information System (MIS) Department

Wire/Cable Harness is the main product of MOLEX Thailand LTD company such as

:

- Telephone Jack harness
- Fiber Optic harness
- Computer & Power Supply harness
- Flat Cable harness : This is used for Hard drive, On main board of personal computer.

MOLEX THAILAND LTD ORGANIZATION CHART

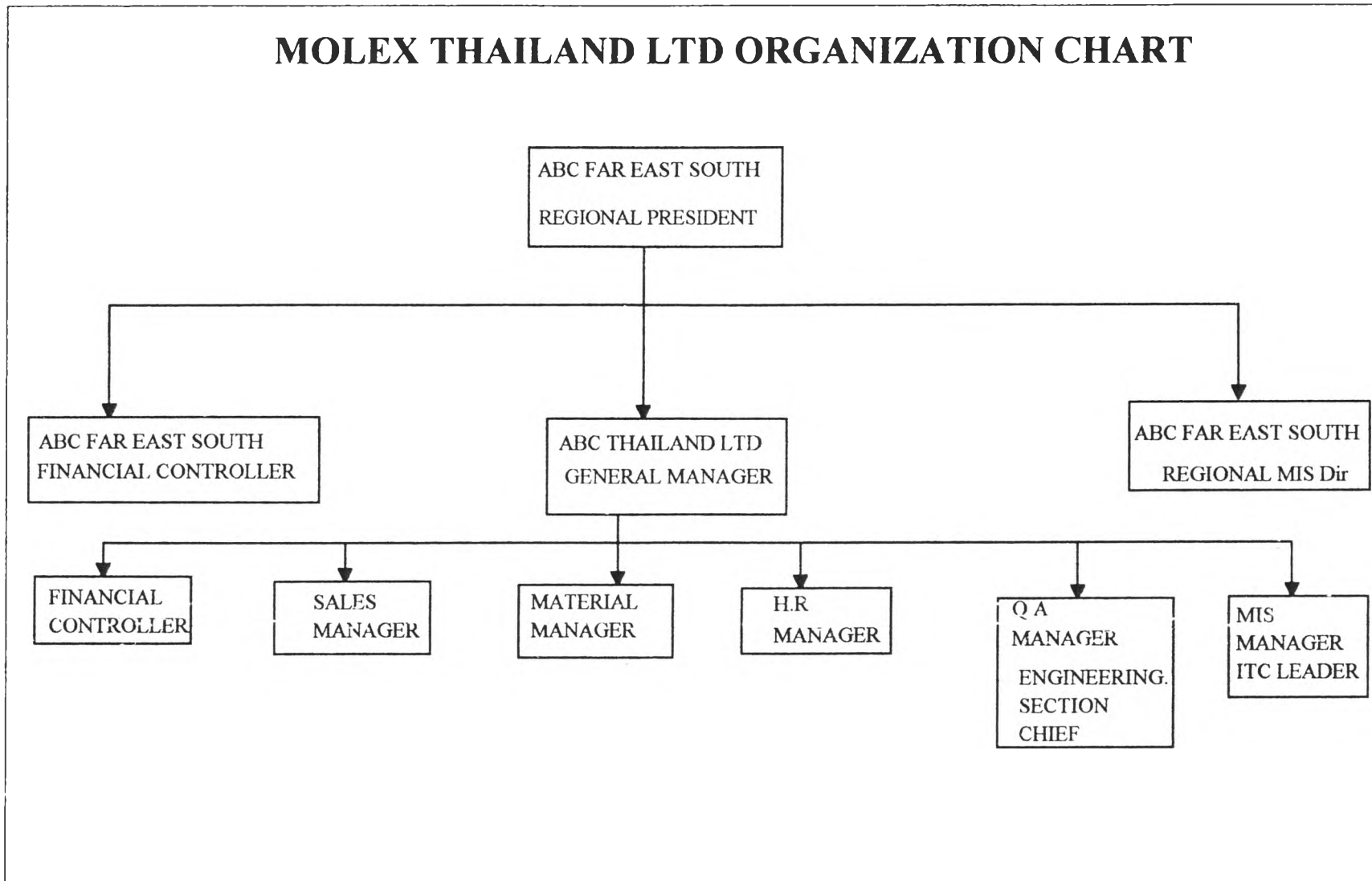


Figure 3.1 : MOLEX THAILAND ORGANIZATION CHART

Current Situation Before Implementation Proposed

3.1 Incoming Inspection

3.1.1 Incoming Inspection Process

Incoming Inspection Process is very simple and not clear as shown figure 3.2. Inspector receives the product then do inspection based on $c = 0$ sampling . This sampling plan is not declared in any work instruction or ISO 9000 procedure. There is no process to review the quality history in order to sample the product in flexible way. That means , sampling technique that is used for $c = 0$ is not flexible in according to its quality history. The process to handling and review defective raw material is not verify aggressively.

Corrective action on the defective material is not followed up . The documentary (file) is not managed. The process of incoming inspection process is as follows,

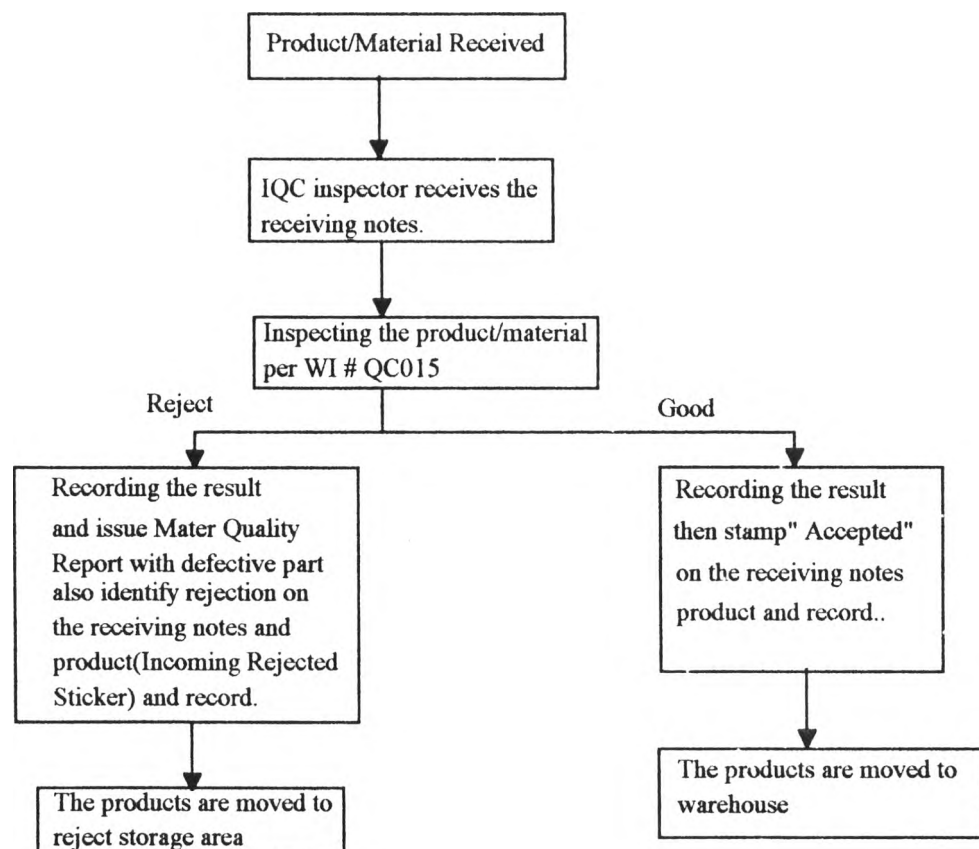


Figure 3.2 :Incoming Quality Control Process

From figure 3.2 , it can be seen that QA engineer and QA manager are not in the process of review whether the issue have to be asked for the corrective action. The process of incoming inspection should be describe clearly. After that, work instruction have to be written based its process. The work instruction before implementation proposed, is shown in appendix I.

In aspect of incoming inspection method, the way to detect the quality problem at IQC section . Supplier supplied information help us to identify the possible quality problem. Supplier manufacturing process flow describes the process of producing the product operation by operation. In this plant (MOLEX Thailand LTD) , supplier manufacturing process flow has never been utilized to identify the potential failure that may occur during supplier process. It has to be written out and identified in the IQC inspection check sheet so that IQC inspection will follow up the check sheet and inspect these potential failures. This is more effective way to detect the quality problem at incoming control inspection section.

3.1.2 Goal to control Lot Acceptance Rate and Production Complaint Rate

Goal for Lot Acceptance Rate and Production Complaint have never been set in order to control the defective raw material being inspected at incoming quality control section. Incoming quality control section have to perform the task effectively in order to prevent defective purchased items entering production based on the target. In the same way, the defective items target have to be set when the products are released to production then the defective raw material is found. If the defective raw material is rejected by production over the target, that means incoming inspection method have been performed ineffectively.

This is to show that IQC data is utilized in the effective way to control the defects and feed back to the supplier to improve the product in the next lot. The process to handle the material quality problem have to be written out then practice aggressively. Before implementation, IQC data has never been used to justify the supplier performance and corrective action is followed up ineffectively. That means the quality problem may be not solved (at supplier site) then recurred in the shipment.

Furthermore, IQC data has never been sentence to reduce IQC inspection as call skip and ship to stock program. Quality history of the product have to be monitored so that the products of any supplier that meet LAR and Production complaint goal , will be allow the skip inspection even ship to stock without IQC inspection because reducing IQC inspection means to reducing in labor cost and saving time.

3.1.3 Skip and ship to stock program.

Skip and ship to stock program will be applied to one supplier but current status of each part no. of the product is not managed. No report to show the status of the product. Process for skip and ship to stock program and the condition to apply this program to the supplier had never written out. During, procedure (MOLEX Thailand LTD) study, only this work instruction was found and has been applied to incoming inspection for skip and ship to stock program.

Skip and ship to stock program data has to be utilized to justify the supplier performance rating. If the products of one supplier are in stage of ship to stock. That means, the products of this supplier have good quality. Then it should be considered in supplier performance rating in order to reflect the product quality to the supplier.

3.2 Supplier Quality Improvement

3.2.1 Supplier Qualification (& Disqualification) and Quality System Audit

Supplier qualification process, passed 69 % by rating sheet , the supplier would be approved. The process of supplier qualification, MOLEX staff will used the rating sheet as they called questionnaires, to give score to the supplier quality system. The existing process of supplier qualification is shown in figure 3.3.

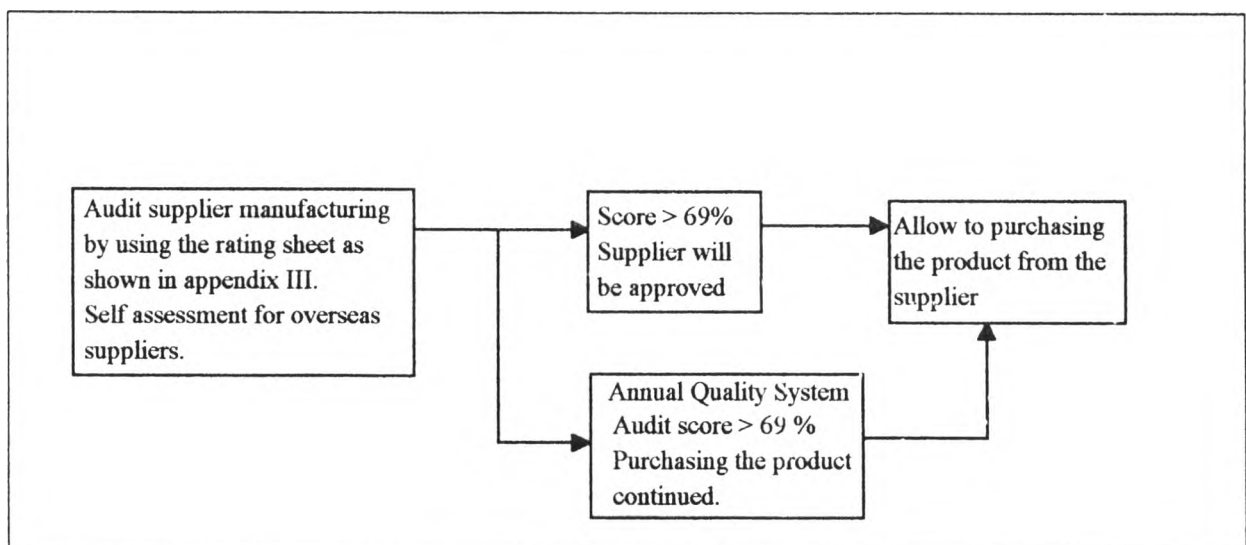


Figure 3.3 : Existing Supplier Qualification Process in MOLEX Thailand LTD

As shown in appendix II, the rating sheets lack detail in each sub system ,only yes or no is rated to the supplier manufacturing. The rating sheet could give us the manufacturing information of the supplier whether they have capability in supplying to product to MOLEX Thailand LTD. The rating sheet has to be improved and also score supplier qualification and quality system audit has to be higher than 69 % in making decision. Supplier disqualification process has no process of management team review.

Supplier disqualification process out line had not been found during procedure study. The point is that the supplier disqualification should be reviewed by management team in order to all concerned department can work aggressively together in product transition to the other suppliers. QA engineer/ Purchaser and Product engineer has to agree together to remove the supplier out of the approved list. The supplier disqualification process should be written out so that concerned people can understand the standard procedure when any supplier in the approved supplier will be terminated.

3.2.2 Supplier Performance Periodic Evaluation

During MOLEX Thailand LTD procedures and documents study, there is no ISO procedure of supplier performance periodic evaluation for product (raw material) quality rating. The product quality rating has been done in verbal agreement that the standard of product quality rating could not be explained because of less information and support documents. To reflect the supplier performance in aspect of quality in supplied products, to the supplier so that they could improve their performance effectively. The process and procedure for supplier performance periodic evaluation have to be establish under team agreement(QA engineer, Purchaser, Product engineer).

Regarding to incoming inspection, IQC data has never been utilized to evaluate the supplier performance even the method to feed back on the material problem to supplier is not effective. Responsiveness and effectiveness in corrective action should be considered in this program. The suppliers are supposed to improve both product quality and responsiveness / effectiveness of the corrective action or improvement plan.

It is recommended strongly that the suppliers have to know their performance in aspect of product quality and responsiveness in order to reduce the defective raw material and improve their service at supplier site.