

## CHAPTER VI

### CONCLUSION , RECOMMENDATION

This chapter concludes the cellular manufacturing and incentive plan, which has been developed for the department of cutting die of PF Inter tech Co., Ltd. These system is evaluated basing on the expected benefits, which should be gained from all application which have been applied in comparison to the tradition system.

#### **6.1 Conclusion**

The development of cellular manufacturing and incentive plan for the department of cutting die can conclude in the following :

##### **6.1.1 Line Production**

The traditional production make a lot of problem , long lead time to work , inefficiency of payment and can not control the unit cost .

##### **6.1.2 Cellular Manufacturing**

The changing from line production to cellular manufacturing can grouping team work into 3 group . Output productivity per material increase 7.28% of the traditional and the employees have a various skill .

A small team can increase the productivity and they try to improve themselves . Skill matrix can separate a level of the employees . Cellular manufacturing can increase productivity but the efficiency of wage payment is still low . The output productivity per labor increase 20.99% . They have not team incentive .

##### **6.1.3 Incentive Plan**

Incentive plan is a method to improve the productivity by incentive . It concern with the quality , delivery , and reduce unit cost but the employees will have a high income as work in over time .

When apply incentive plan with a cutting die department , it can make the exact output on 105 pieces everyday . We can control the scheduling in a high efficiency and capability to control unit cost , 28 baht /pcs. The employees are happy to go home earlier when they complete the target . The output productivity per material and output productivity per labor increase 21.90% and 5.31% respectively .

### Advantage of Incentive Plan

Both , the employees and the company have the advantage as the following.

#### 1) Employees

- 1.1) The team can go home before time when they complete the target / with satisfied income
- 1.2) Make one team responsibilities for all the processes needed to produce the product.
- 1.3) Improve the worker can do several task.
- 1.4) Increase team spirit and good team working.

#### 2) Company

- 2.1) Makes the product complete daily that not wait for complete lot which take about a week so the customer can get product daily earlier.
- 2.2) The company can get 100% target every day.
- 2.3) Reduce lead time to work.
- 2.4) Reduce work in process inventory and improve production planning.
- 2.5) Improve productivity and reduce unit cost.
- 2.6) Constant output and easily to manage resources.
- 2.7) Increase capacity when the order is high season.

### Key factor to success

- 1) Team work, the employees must believe it is going to improve productivity.
- 2) Strong leadership, the employees have got to understand that they are required to work as a team

- 3) Empowerment, the employees need to have the freedom of working for improve skill of themselves

## 6.2 Recommendation

Although cellular manufacturing and incentive plan can solve a problem in production but there are the other method to improve the productivity.

These are still some recommendation further improvement the Cellular Manufacturing and Incentive plan for the cutting die process as follows:

- 1) This study was conducted in the department of cutting die of PF. The system developed here will applied to the other departments because the principle concept and the result can satisfied both the company and the employees.
- 2) Cutting die have a various type so the production planning must have a strong communication skill and high precision.
- 3) Cellular manufacturing and loop incentive, the employees must QC by themselves so output productivity is very high. It make a cost sense to the employees.
- 4) Strong team working, the new one will be train by the old and the team leader.
- 5) If the employees work more than the target volume, the company will set the new target and payment.
- 6) Training before production, training must include the practice of work simplification, quality control, raw materials utilize and productivity.

- 7) When changing new things, the following up data and improvement of the management is important because they must solving problem immediately. It can prevent the problem that will happen in the future.
- 8) Pre-production work such as raw material preparation, planning, facilities should be proper and not interrupt in team working.
- 9) Management focus with quick response when changing new things.
- 10) Internal group income distribution should be considered for their satisfaction.
- 11) When the company has lower order or low season, there will not have enough order for serve their target so the worker will get minimum wage.

Incentive plan can improve productivity and reduce unit cost. The difficult of it is a setting up of target because we must calculate from the previous data by using overtime, hours and daily output. The other is the difficult to convince the employees, but we can solve this problem by select the sample group. By the concept of giving reward, the employees will be satisfaction, they will have a penalty for control quality and it a learning of the employees.

This incentive plan should be suitable for the industry that manufacturing in piece work for mass and batch production such as shoe and garment industry.