Chapter 8

Conclusion

8.1 Conclusion

This comparative study of cost allocation methods used for mold manufacturing process, between the traditional methods and the ABC method, came to the conclusion as the following;

1. The Activity-Based Costing method could be applied usefully with the calculation of actual mold cost, under the cost structure of traditional costing concept, which classified costs into direct cost, overhead-variable cost, and overhead-fixed cost.

2. Considering cost accountability, and the detailed costs of manufacturing especially for the overhead costs, the Activity-Based Costing method gave the most beneficial result in mold cost allocation, when compared with other traditional methods. The ABC information could be used as a benchmark in comparison with other mold costing methods.

3. In a stable environment, the performance of ABC in allocating cost was better than traditional costing methods, for all type of manufacturing.

4. Traditional costing methods undercosted low labor products, which were mostly produced from advance manufacturing process relying mainly on machines. However, the 'machine hour' base was still successfully applicable for some type of costs that related considerably to machine operation.

5. The ABC method provided clearer view for the management to control the cost of the mold. While traditional methods worked the cost out as a whole, the ABC method classified cost into significant categories for the benefit of better cost controlling.

6. The ABC method might be applied to other job order manufacturing of which the overhead cost contributed the largest portion of product's cost. The ABC method worked well with the organization that had high level of support services, and had many service users.

7. The ABC method was complicated and demanded the most effort in collecting information and calculating cost of the mold, comparing to traditional methods. The existing information system of the company did not cover all significant data needed for the ABC method. The biggest limitation of the ABC method was the availability of data.

8. In general, the biggest cost of mold manufacturing in this study came from the fixed cost of mold department, which included depreciation, direct labor salary, indirect labor salary, and planned maintenance of the mold shop. These costs contributed approximately 50% of total cost of a mold. On the other side, variable cost of mold department took the smallest contribution of total cost of a mold. However, the exact percentage of each cost of mold manufacturing still needed more time and information to confirm.

9. The existing system of the company was very poor in both properness and accountability of cost allocation. The single allocation base used, Total Direct Cost-YTD, was not relevant to the nature of most cost being allocated. Moreover, the system did not accountable for all ranges of cost needed to be allocated to the mold.

10. Raw material and total direct cost-YTD were not the suitable bases to be applied to the mold cost allocation. Inappropriate traditional cost allocating methods provided wrong picture of cost to the management, which in turn made wrong decision from the obscured information.

11. The most suitable traditional allocation method for mold cost calculation in this study was the allocation based on 'machine hour'. This method gave a satisfactory result when being used to allocate the variable cost and the fixed cost of the mold department. However, the result was not satisfactory for the fixed cost of support functions. All of the results were compared with the ABC method.

12. The 'machine hour' based allocation could be used instead of the ABC method in the allocation of variable and fixed cost of mold department, by sacrificing of 10-20% accuracy in exchange with more simplicity in mold costing. Nevertheless, no method could replace the ABC method in the allocation of fixed cost of support function.

13. The company should change from the existing system to the ABC method, or at least to the combination between activity base and machine hour base, for better efficiency of mold costing method. The compromising alternative for mold costing was to allocate variable and fixed cost of mold department to the mold by 'machine hour', and to allocate fixed cost of support function to the mold by the ABC method.

14. The accuracy and reliability of each costing method were impossible to be compared in this study due to the unavailability of significant information, which was needed for allocating of cost.

8.2 Suggestion for further research

After the study, some useful suggestions were given, for further study and development of mold costing methods and mold cost estimation in the future, as following;

1. The ABC method proposed for mold cost calculation in this research was just the beginner, and needed to be further developed. By improving the availability of information, more appropriate allocation bases might be derived, then the ABC method could be more efficient in reflecting the cost of a mold. Cost accuracy of mold costing could be improved.

2. However, working in deeper detail information needed considerable time and resources to collect and arrange the data. Therefore, the further research should start early to collect the information about the relationship between the activity, activity

center, cost, and cost driver of the processes, so the ABC method could be improved to be more accurate in reflecting the mold cost.

3. The relevance between overhead costs and various cost drivers could be analyzed by the regression analysis, using the coefficient of determination or R Squared to indicate the extent of relationship between the two variables. However, this further research must be done after the data base of costs and relating information was well established.

4. Cost characteristic of molds reflected from this research is still questionable and needs to be confirmed by more studies, due to the insufficiency of the sample molds. The ABC method should be expanded to use with all molds, and various kind of mold to study and confirm the cost characteristic of injection mold in overall. Then, the reliability of the cost characteristic of mold manufacturing could be improved.

5. The actual cost of a mold, calculated by the ABC method proposed in this research, should be further proceeded by recording in relating with the specific information of the mold to create a significant data base of mold cost, to prepare for the development of mold cost estimation systems in the future. The suitable specific information of a mold, which is significant for cost estimation, is another topic that needs to be further studied. Some examples of the information might be the characteristics of the cavity, the mechanism of the mold, and the characteristics of the mold base.

6. From the reliable data base of the cost, and relating physical characteristics of molds, further research can be done to develop and compare the most efficient estimation methods for mold cost in the future, for the benefit in making a dependable price offer.