CHAPTER V
CONCLUSIONS AND SUGGESTIONS

From analysis and discussion in the previous chapter, it can be put forward the following conclusions and suggestions.

5.1 Conclusions

The conclusions that can be drawn from this study are:

1. Material classification resulted that most of materials are included in the characteristic of intermittent with erratic and lumpy demand category. This is in accordance with materials character which constitute the majority of spare parts or materials required to meet maintenance and repair needs.

2. Simulation results indicate that the value of \((s, S)\) obtained from the formula does not always provide the best service level and total cost. With increase or the value of \(Z\) value inputted to an interval range, most of the new \(s\) and \(S\) values improved the service levels and / or the total cost.

3. Experiments to obtain the values of \(s\) and \(S\) have produced the best average reduction of the materials total cost by 3.6% compared to those obtained from the formula. The materials service level has been reduced slightly by 0.04% but still exceed the company service level of 95%. Overall the company total cost is reduced with an improvement in the service level as well (beyond the company targetted level). And it has improved the inventory cost by % and service level by % from the existing situation.

4. The result from decision on \(s\) and \(S\) max value will lead to significant reduced in material’s total inventory cost by 48% from the existing situation. The materials service level has been slightly reduced by 0.21% but still exceed the company service level of 95%.
5.2 Suggestions

The suggestions that can be considered for the next research are:

1. Current research uses a constant lead time material characteristic, whereby is 1 month. It is suggested to consider more varieties lead time that suit to the materials characteristic.

2. Inventory control is done by various methods in accordance with characteristics of each material.

3. More diversified materials to be studied, not only turbine parts but can be other equipment that support the power plant operation such as HRSG (Heat Recovery Steam Generator) parts, to have the optimum improvement in reduced overall company’s total cost and increased the service level.