CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The conclusions of the present research are the following:

1. The catalytic activity of Co-Mg-O/Al_2O_3 system is high for the combustion of phthalic anhydride and maleic anhydride.

2. For the combustion reaction, the oxidation activity of Co-Mg-O/Al_2O_3 catalyst depends upon the type of reactant.

3. For both phthalic anhydride and maleic anhydride combustion, magnesium plays the role as promoter for Co-Mg-O/Al_2O_3 catalyst.

4. The amount of cobalt and magnesium in the catalyst affects the catalytic activity for anhydride combustion.

5. 8Co1MgO/Al_2O_3 is the suitable catalyst for both phthalic anhydride and maleic anhydride combustion.

6.2 Recommendations for future studies

From the previous conclusions, the following recommendations for future studies can be proposed.

1. It is interesting to study the other metal oxide to find the best catalyst for anhydride combustion.

2. 8Co1MgO/Al_2O_3 catalyst is suitable to use in the catalytic combustion of phthalic anhydride and maleic anhydride. Therefore, it is interesting to further study the oxidation property of 8Co-Mg-O/Al_2O_3 catalyst with other anhydrides.