

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

The new plantwide control structure design procedure of Wongsri has been applied to design the control structure for monoisopropylamine process.

The Wongsri procedure, 8-step plantwide control structures design can be used to design the control structure of any plant and easy steps the operator can conform easily. The control structure of all cases can handle the disturbances entered to the system (total feed, feed temperature and composition change).

The performance of each control structure is appraised by the IAE value, the results show the best of control structure is CS4 which could handle the process safely and smoothly. These results indicate that the composition control loop is the best, should be controlled by a dual-end control at the DIPA recycle column (C3). Additionally, the reflux-to-feed ratio control loop is an alternative to maintain the MIPA product specification at the product column (C2).

6.2 Recommendation

The recommendation for further study can be done by other processes and focus on bypassing the heat exchangers in the process. These evaluate the IAE and the utilities cost are compared to the normal control structure. Furthermore, adding enhanced controllers can also improve the performances of control.