

CHAPTER VI

SUMMARY AND RECOMMENDATIONS

6.1 Summary

The programme for two-phase flow of cryogen has been developed by using C++ language. The Chisholm method and rational gas flow formula were employed in this work. It can solve the cryogenic and gas piping systems that have different configuration. It was convenient to input all the data in each dialog, because it provided many Graphic User Interfaces, and could be run on windows. The results of calculation were presented in tabular form.

The accuracy of cryogenic piping systems simulation was compared to PDROP2-4 and the examples in references. This developed programme can be used as a simulator for cryogenic and gas piping systems design. Furthermore, the database of this programme can be added for developing its ability and studying the behavior of cryogen.

6.2 Recommendations

This developed programme has limitation of flow mechanism. Further development in this programme can be proposed as follows:

1. Increase the number of fluids and properties in database.
2. Modify the database that has multimedia and method for estimating and describing the properties of cryogenic fluids and materials.
3. Modify Graphic User Interface for input and output.
4. Create the on-line help to suggest the user.
5. Add new method for solving the problems of several fluid flow mechanisms.
6. Modify gas quality model.

7. Add new method for estimating pressure drop due to fitting and valve.
8. Modify unit conversion module that can add or remove the conversion factor.