

CHAPTER 4

CONCLUSION AND SUGGESTION FOR FURTHER WORK

4.1 Conclusion.

1. The actual cycle as performed in this experiment behaves as a constant temperature absorption when the absorber is shaken during the absorption process and behaves nearly as a constant pressure absorption without shaking.

2. As the ammonia concentration is increased the amount of the ammonia condensed as well as the COP increase.

3. For a 24 hours cycle, a recommended concentration was propose at 0.53 - 0.54.

4. The temperature of the condenser cooling water has significant effect on the amount of the ammonia condensed. At fixed concentration if the temperature of cooling water is lower the maximum temperature and maximum pressure decrease and the amount of the ammonia condensation increases.

5. In the range of the X_r between 0.500 and 0.585 the COP of the cycle varies from 0.430 to 0.548 and the COP of the apparatus varies between 0.276 and 0.380.

6. As the rate of heat applied into generator decreased, the amount of ammonia condensation would slightly decreased and the maximum temperature would be low (Table 6 test No. 5 $T_{max} = 65^{\circ}\text{C}$) so it is feasible to use absorber collector with this system.

4.2 Suggestion for further works.

1. The absorber unit should be redesigned to increase the absorption.

2. A proper mean of controlling the evaporator temperature should be incorporated. ie either by increasing the interface area or improving the mixing process.

3. The system should be tested with non focusing solar collector type.