# Chapter VI

## RECOMMENDATION FOR FURTHER RESEARCH

According to the study, the system of the Cyclone conveyor could be applied immediately. However, more study on this system should be preceeded as follows:

(1) In order to establish the design criteria of the optimum suction pipe, the pressure distribution of air at the bottom-end of the Cyclone with different diameters must be studied.

(2) Study the inlet nozzle diameters with various sizes at a constant rate of flow of the compressed air supplied. The effect of changes in compressed air velocity on the vacuum produced in the Cyclone will be obtained.

(3) Study the effect of changes in discharge pressures on the vacuum produced in the Cyclone. The study will yield design criteria for the length of the suction line and the length of the discharge line.

(4) Design a Cyclone conveyor system on a large scale to compare its performances with other pneumatic conveying systems.

(5) The system of the Cyclone conveyor has a less dense stream of material in the discharge line than in the suction line. The rate of flow of air in the discharge line is greater than in the suction line by the amount of compressed air supplied.

The discharge part of the system may be modified to convey a denser stream of material. Thus, a discharge line equipped with a material feeder should be studied.

(6) On the theoretical side, relationships between the vacuum produced in the Cyclone and its independent variables should be analysed.

(7) Since the Cyclone with 7.5 cm Cyclone height give results differing from the results of Cyclones with greater heights, an experimental study of Cyclones with very small heights should be investigated.

(8) Study the effect of changes in compressed air supplied at a constant pressure on the vacuum produced in the Cyclone. The results of the study may give information on the type of the blower suitable for the system.

(9) Study the Cyclone generating from the other curves revolves about the cone axis.