

## CHAPTER II

### EXPERIMENT INVESTIGATION

#### Plant Studies and Waste Samples.

The production line of waste from slaughterhouses will be studied, the sources of waste discharged are investigated. The volume and characteristics of wastes at each points are observed. Samples were taken at almost the same point and the same time, and then taken to the Sanitary Engineering Laboratory, Chulalongkon University and kept in the refrigerator at 4 - 5°C to prevent septic condition until analysis being made.

#### Sampling and Analysis

The waste from the plant are collected and transported by a pipe to the screen, and then the waste is piped to the sedimentation pond in Fig ( 1 )

The waste water sample are collected at the sedimentation pond, and analyzed for COD, PH, BOD, temperature, dissolved oxygen, Suspended solids, ammonia nitrogen, nitrate nitrogen. The method of analysis was conducted according to STANSARD METHOD ( 1971 )

#### Experiment Equipments.

According to the aeration tank , capacity of 92 liters ( with 25 inches long, 15 inches wide and 15 inches deep ) was built with

glass plates  $\frac{1}{4}$  inch thick and the four porous diffusers of 14 inches long and  $\frac{3}{4}$  inch wide were placed at 5 inches apart on the rod, 2.5 inch above the bottom of the aeration tank as shown in Fig ( ii ). The air compressor of 50 psi. capacity introduced air directly into the aeration tank by passing through the diffusers.

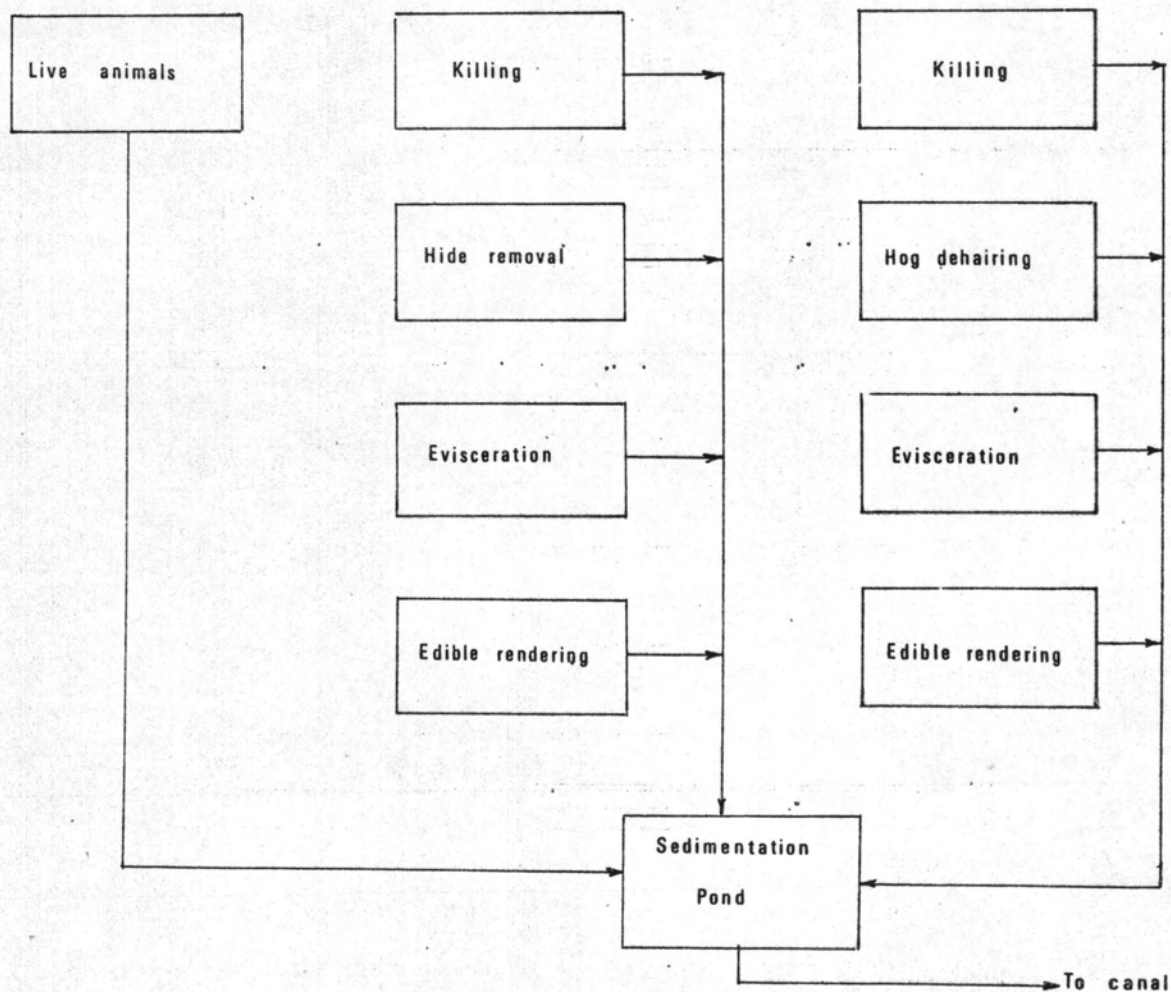
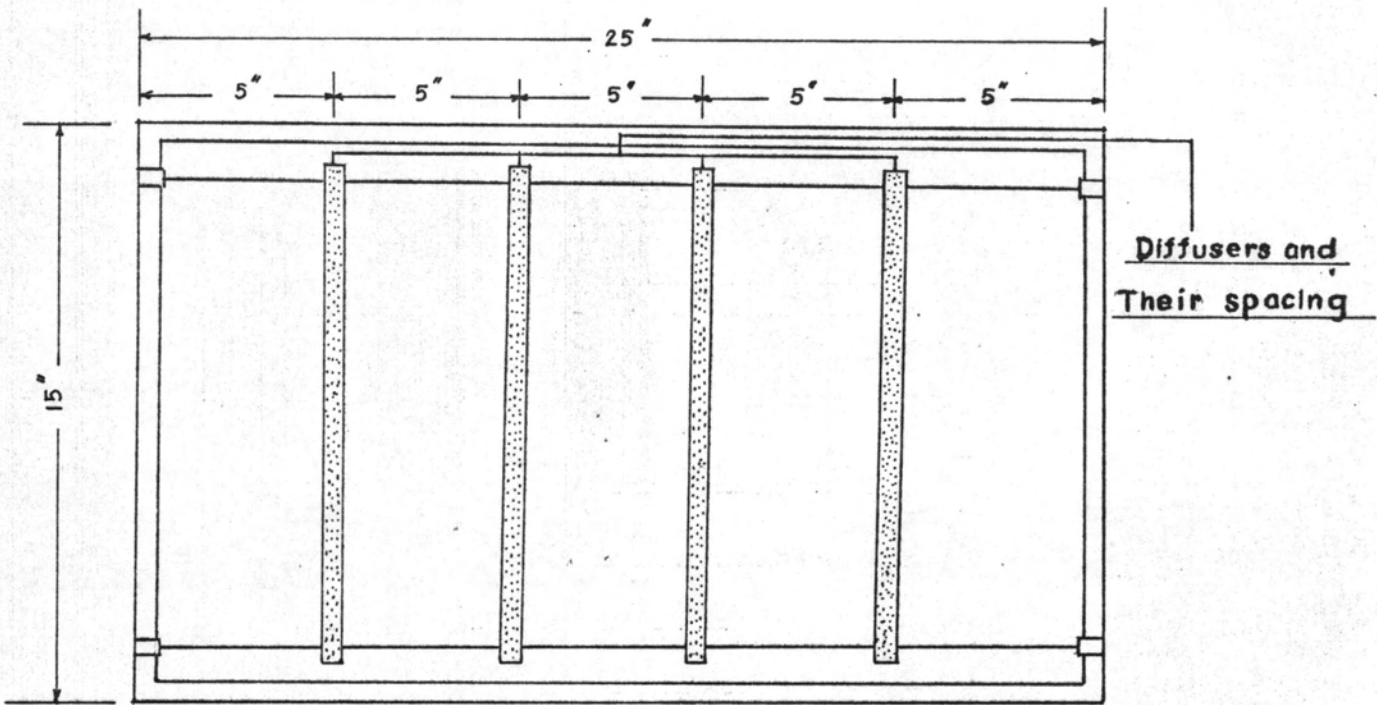
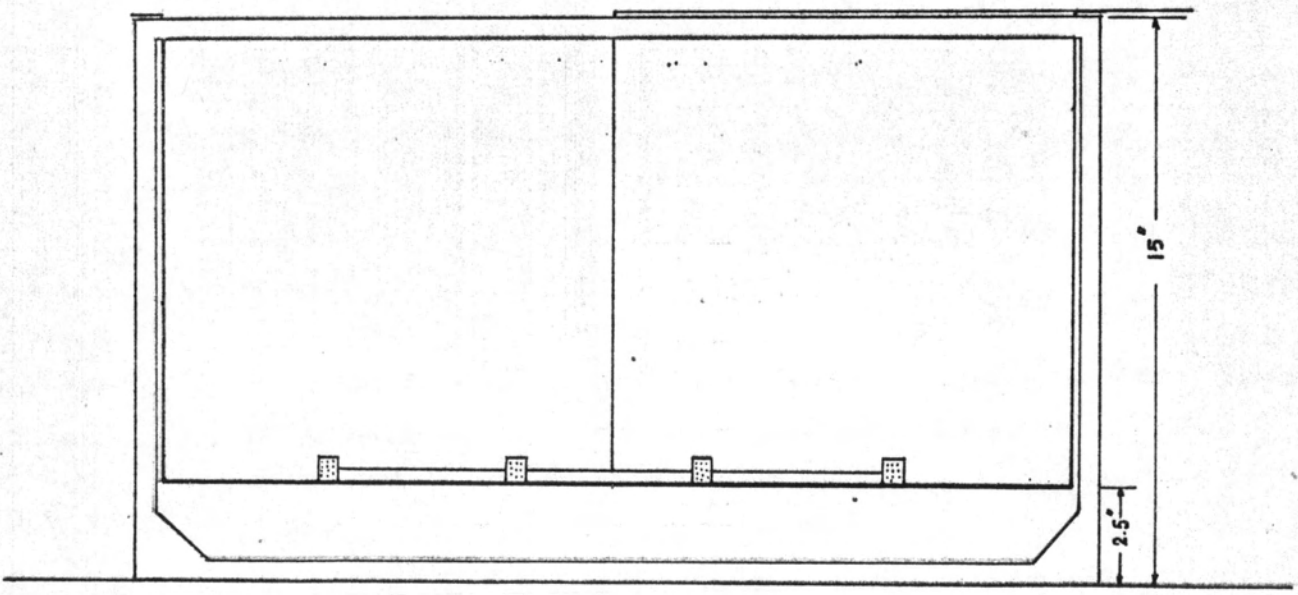


Fig (i) Flow chart of waste from processing plant



PLAN



ELEVATION

Fig (ii) AERATION TANK DIAGRAM