

Chapter I

INTRODUCTION

Significance of the study

The control of the pollution of the environment is receiving serious attention from Governments. In Thailand the pollutions of the bodies of water in Meklong river from the sugar factory wastes have been reported and required serious study. The treatment of the sugar wastes is certainly an important measure in the control of water pollution

There are many methods of sugar waste treatment in use and understudy to day. Each one has its own advantages and disadvantages

The oxidation ditch is one method of waste treatment in use. Its efficiency is improved by the addition of aeration system to supply oxygen to the aerobic biological treatment process.

(PASVEER, 1960, WILSON, 1960, JONES et al, 1969: Adema, 1967)

Objectives of the research

The primary objective of this research is to study the physical, chemical and biological characteristics of the sugar waste

The secondary one is to study the influence of the physical, chemical, and biological factors in the modification of the oxidation pond treatment

Scope of the study

The oxidation pond system in the research consisted of a pilot oxidation pond and aeration rotor.

Chapter I

INTRODUCTION

Significance of the study

The control of the pollution of the environment is receiving serious attention from Governments. In Thailand the pollutions of the bodies of water in Meklong river from the sugar factory wastes have been reported and required serious study. The treatment of the sugar wastes is certainly an important measure in the control of water pollution

There are many methods of sugar waste treatment in use and understudy to day. Each one has its own advantages and disadvantages

The oxidation ditch is one method of waste treatment in use. Its efficiency is improved by the addition of aeration system to supply oxygen to the aerobic biological treatment process.

(PASVEER, 1960, WILSON, 1960, JONES et al, 1969: Adema, 1967)

Objectives of the research

The primary objective of this research is to study the physical, chemical and biological characteristics of the sugar waste

The secondary one is to study the influence of the physical, chemical, and biological factors in the modification of the oxidation pond treatment

Scope of the study

The oxidation pond system in the research consisted of a pilot oxidation pond and aeration rotor.

The sample of sugar wastes were weekly taken from a sugar factory at Rachburi province until the milling season ended, in order to find the variation of its biological, chemical, and physical characteristics in the treatment process by mean of modification of oxidation pond.

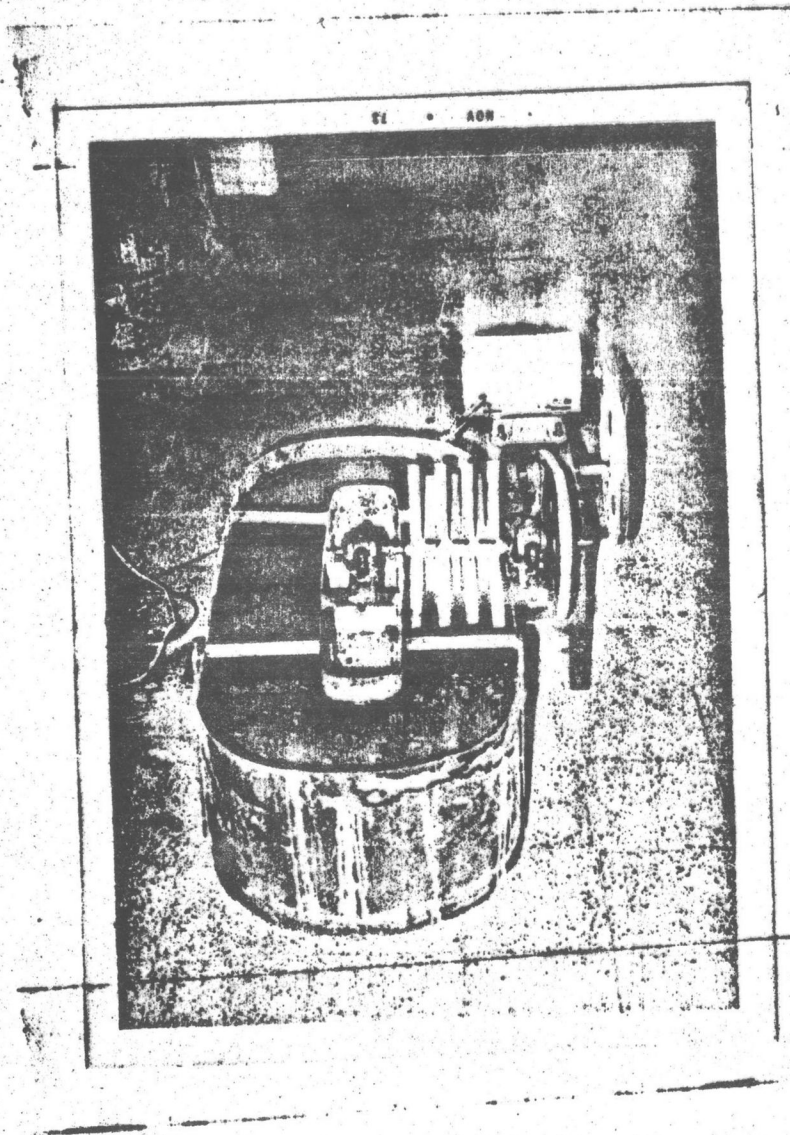


FIGURE 1

The aeration system with rotor

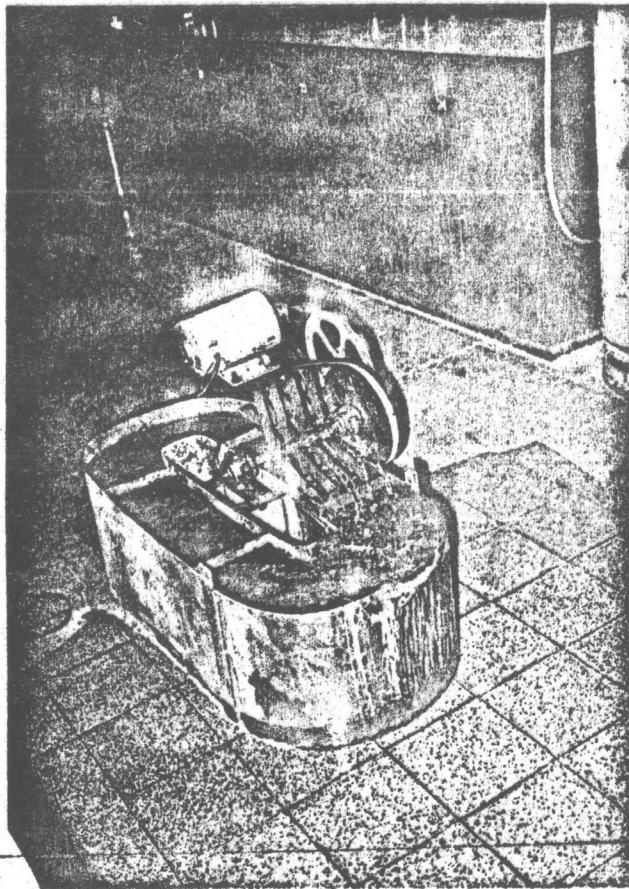


FIGURE 2

The aeration system with rotor operating
at 120 RPM and 5 cm rotor blade of immersion