

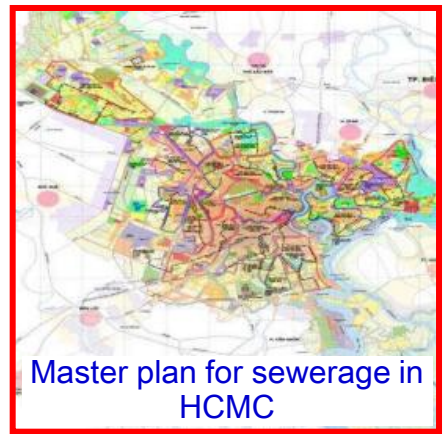
Implementation systems

Foundation for Advancement of International Science

ALS Co., Ltd
Nihon Suido Consultants Co., Ltd.

Location

Ho Chi Minh City, VIETNAM



Background

- Needs of governmental response for water pollution following rapid economic growth.
- Imposing vast costs of operation and maintenance for public sewerage.
- Necessary to save the running cost as same of industrial organic wastewater treatment.
- Aeration cost in biological wastewater treatment is made up of a majority of total cost.
- Requirement of the automatic control system as the advanced and aeration-saving without empirical knowledge because of the shortage of veteran engineers in VIETNAM.

Abstract

Contribution to the reclamation of water environment spreading the microbial control system for organic wastewater treatment (Domestic, Industrial) with high advanced and saving-energy simultaneously.

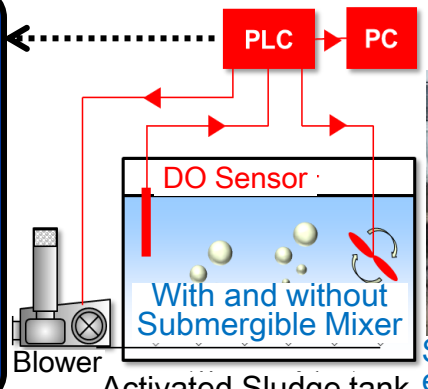
Outline of Technology

AOSD (Automatic Oxygen Supply Device)

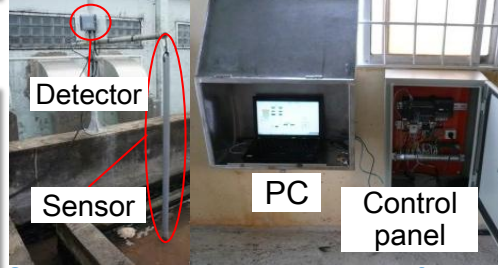
Optimized control system for biological wastewater treatment by calculation of required amount of oxygen consumed for removal of organic pollutant and nitrification reaction using special formula with data, automatic operation of blower with ON-OFF switching.

AOSD :Original Artificial Intelligence program
Dr.INAMORI, Mr.SUEMURA calculates optimum ON-OFF time for aeration in a moment using gained data and controls blower automatically. KLa^* is set easily and low-loading for blower.

KLa : Overall Volumetric Oxygen Transfer Coefficient



Food Processing Factory in Vietnam



Simultaneous achievement of elevation of stability and saving electricity cost under the fluctuation of wastewater quality, which can not be controlled artificially.

Expected outcome

Cooperation with Sakura Eco Tech & NG Engineering

- Low loading of BOD,N,P which accomplish water environment restoration
- High stability to treat fluctuated wastewater by AOSD automatic operation
- Saving electricity cost by innovative optimized provision of required oxygen
- GHG reduction by saving electricity and optimized operation of the facility

Expected results and business prospects

- ① Upgrade of existing WWTP
- ② Rental with saving initial investment
- ③ Newly-built WWTP with the technology

Business growth with best-balance combination of three business models for ASEAN, China, India and Japan