

A Case Study;



Shade Foods, Inc. Industrial Airport, Kansas

time of about 3 hours. Shade foods opted to install the ZEPHYR system in the second settling tank.

Results

1. According to Mr. Charles Hedric, the 3HP ZEPHYR Induced Air Flotation System immediately formed a 3"

thick, jelly-like foamy crust on the surface of the water. The foamy crust was easily removed through skimming.

2. The 3HP ZEPHYR Induced Air Flotation System is removing more than 50% of the fat coming out of the overall system.

Benefits

1. Energy and cost savings: With (1)

3HP ZEPHYR Induced Air Flotation system, Shade Goods saved more than 75HP worth of aeration equipment.

2. Municipal surcharge was reduced more than 50%.
3. No trained technicians are required to operate the system.
4. No bulky expensive equipment is required.
5. The equipment is simple to install and operate.
6. The equipment requires very little maintenance.
7. The equipment is highly reliable.

Background

Shade Foods processes chicken. During the processing and the washing of the floor and utensils, a considerable amount of fat and other biological wastes are discharged into the town wastewater treatment system. The total Biochemical Oxygen Demand (BOD) had to be reduced to below 200 mg/l to allow the wastewater to be discharged to the Municipal treatment system without surcharge. The process water from the plant was pre-treated through three underground settling tanks, each with three hours detention time.

Problem

1. The major components in the wastewater consist of fats and biological solids. The excess chicken fat was overloading the small municipal treatment plant.
2. The processing plant faced an exorbitant surcharge, based on both total BOD and total solids.

Solution

Shade Foods had (3) choices:

1. Install an Induced Air Flotation system in the settling tanks to improve the fat and solids removal rate before discharging the wastewater to the Municipal treatment system.
2. Construct a complete secondary treatment system to reduce the BOD to below 200 mg/l.
3. Build an expensive Dissolved Air Flotation system. AEROMIX recommended installing (1) 3HP ZEPHYR Induced Air Flotation System in one of their settling tanks. The wastewater flow rate is 14 GPM and each settling tank can hold 2500 gallons, with a detention

