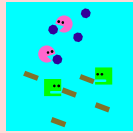


BIO ALSI microbial treatment plant

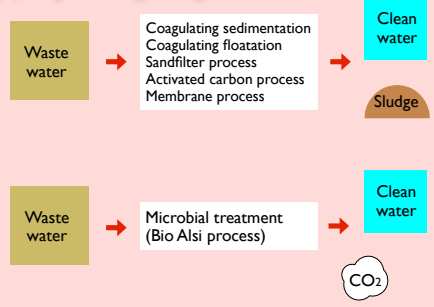
◆ Characteristics

(1) Can decompose many kinds of persistent organic matter by aerobic and anaerobic microbe. And many kinds of water can be treated.

- Sugar manufacturing waste water
- Processed marine products waste water
- Machining process waste liquid
- Water soluble cutting oil
- Die-casting
- ED waste water
- Car painting waste water...



(2) Sludge is changed to gas.



(3) Design is so simple and easy to maintenance

“Bio ALSI system” use little equipments
(only some agitators, blowers, pumps)
so maintenance is easy and never break.

(4) Comparison between Bio ALSI system and other process.

Bio ALSI process	Other physicochemical process
Unattended Automatic operation	Attended Manual operation
No sludge	Many sludge
No chemical	Many consumption chemicals
Little wastage	Many wastage

◆ Introduction Examples



Bio ALSI microbial plant
Φ10m × H6m

◆ Effects of instal BIO ALSI system

Examples	Before installation	After installation of BIOALSIL system
Waste fluid of coolant at "A" automobile manufacturing company	Annual cost for incineration: 60 million yen	Treatment by BIOALSIL: cost reduction to 20 million yen, 1/3 of the cost before installation.
Waste of mold release agents at "B" automobile manufacturing company	The amount of sludge for treatment committed and annual expense paid to the service company: 4800 tons and 80 million yen, respectively.	Substantial reduction of the amount of sludge formed to 1/100 of the volume and 1/7 of the waste treatment cost before installation with cost reduction for treatment of sludge to 11,420,000 yen .
Poultry processing wastewater	Annual cost for treatment of sludge: 25 million yens for treatment with poly aluminium chloride, caustic soda, and polymer coagulant.	No need of chemicals for pre-treatment of raw wastewater and the sludge dewatering equipment by installation of BIOALSIL. Cost reduction in treatment of sludge to 1 million yen , 1/25 of the cost before installation.
Waste fluid of painting processes	Annual cost for treatment of waste: 22 million yen and outsourcing of treating the waste of plating fluid and sludge.	Waste can be treated within the plant and cost reduction for treatment of the waste to 4 million yen , 1/6 of the cost before installation.
Waste fluid of metalworking coolant	Annual cost of treatment of waste: 18 million yen for an inorganic coagulant and treatment of the dewatered sludge cake and oily sludge.	Cost reduction for treatment of sludge to 4 million yen , 1/5 of the cost before installation by use of BIOALSIL and ALSIL FLOC in combination.