

Sewage and Wastewater Treatment

Bio Wastewater Treatment Equipment "BIOALSI™"

Japan ALSi Co., Ltd. (Komono-cho, Mie pref)

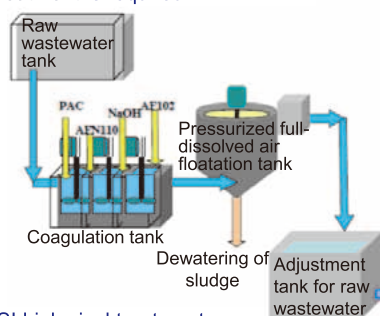
Outline

- Development of BIOALSI, an internal circulation type anaerobic-aerobic biological treatment equipment with high performance and efficiency for treating a high concentration of wastewater.
- No need of a sludge dewatering equipment become possible in treatment of wastewater because of no generation of excess sludge.
- Unmanned automatic operation become possible in treatment of wastewater.

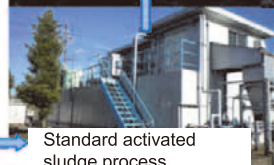
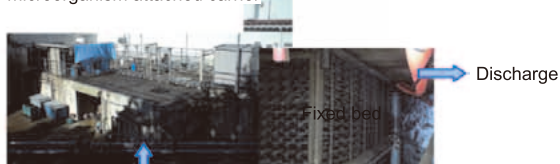
Characteristics

1. Space saving and energy saving by use of an integrated anaerobic-aerobic sedimentation system.
2. A high treatment rate results in significant reduction of the amount of waste generated with no formation of excess sludge.
 - BOD removal capacity is 3-10 times greater than the conventional activated sludge treatment process.
 - The amount of CO₂ formed is low because of biological treatment of wastewater.
 - Water processed by BIOALSI consistently keeps the quality not only to be discharged into rivers but also to be recycled.
3. Can be used for treatment of a high concentration of waste fluid
 - Anaerobic and aerobic treatment are alternately repeated for treating a high concentration of waste fluid such as water-soluble metal cutting oil and mold release agents.

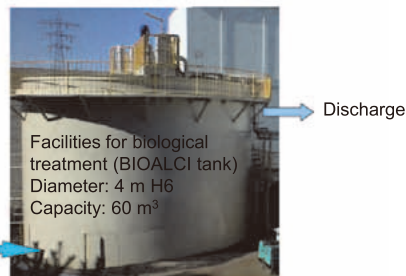
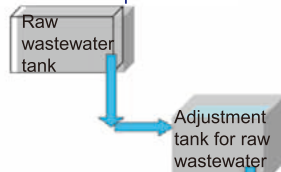
General biological treatment:
pre-treatment is required.



Activated sludge process with
microorganism attached carrier



ALSi biological treatment: pre-
treatment is not required.



BIOALCI installed at "N"
pharmaceutical company
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pharmaceutical company

Introduction Examples

- Automobile manufacturers in Japan and overseas, industrial machinery manufacturers, food processing plants.
- Wastewater from emulsifier manufacture plant : chemical company and toiletry manufacturing company
- Wastewater from meat processing plant : meat production company
- Wastewater from edible oil making plant : chocolate manufacturer and margarine manufacturer
- Wastewater in metal cutting : automobile manufacturer/wastewater related to mold release agent : auto parts manufacturer :

Chocolate manufacturer of
"T food" company



Die-casting plant of
"S" company



Frozen food processing plant of
"A" company



Automobile production plant of
"A" company



Effects

Examples	Before installation	After installation of BIOALSI system
Waste fluid of coolant at "A" automobile manufacturing company	Annual cost for incineration: 60 million yen	Treatment by BIOALSI: 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 BIOALSI. Cost reduction in treatment of sludge to 1 million yen, 1/25 of the cost before installation.
Waste fluid of plating 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.

Technical Development

- Patented in US, European countries, China, and Korea.
- No generation of dewatered sludge cake (0 ton/year) for last 10 years at waste water treatment facilities where 1,100 tons of the dewatered sludge cake were annually generated.
- Establishment of the technology on unmanned automatic operation and remote monitoring control system.

Measures for market development

- Establishment of NIPPONALSI Thailand, Ltd. in Thailand, September 2011 and installation of BIOALSI in Japanese auto parts manufacture plant, which is under test.
- From 2013, very active in marketing and sales of not only the wastewater treatment equipment but also ALSI FLOC N100TR, an organic polymer coagulant for wastewater treatment. Promoting overseas expansion as the comprehensive manufacturer of water treatment in Asia starting with Thailand.

Company Outline

Representative : Representative Director Kiyoharu Fujino
 Capital : 80 million yen, Number of employees : 30
 Major products : Designing, manufacture, and installation of wastewater treatment facilities
 URL : [http:// www.japan-alsi.co.jp/](http://www.japan-alsi.co.jp/)

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