#### Environmental technology and products PR for Business Matching Seminar in Jakarta, Indonesia

(ICETT #: Prepared: June 26, 2017

# Company name: JAPAN ALSI CO.,LTD.

Representative name : KIYOHARU FUJINO / Mr.

Business Field:

Manufacture and sale of water treatment chemicals and plants; operation management of water treatment plants by commission; environmental analysis; and others.

Area of Specialty:

- Decomposition and treatment of waste fluid by means of microorganisms
- Reduction of residual sludge resulting from treatment of living organisms
- Inexpensive treatment of high concentration waste fluid
- 4. Reduction of running cost incurred by treatment of discharged water

# Technology / Product / Service PR Item No.1

(Category / name) Aerobic and anaerobic circulation type highly functional microorganism treatment device "BIOALSI"

#### [Characteristics, performance and applicable areas]

- 1. Space saving and energy conservation were realized by means of a system in which anaerobic circulation, aerobic circulation, and sedimentation are integrated together.
- 2. Significant reduction of residual sludge is feasible due to excellent treatment capacity.
- The BOD removal capacity increased to three or 10 times higher compared to conventional active sludge treatment.
- In the case of water treated by microorganisms, not only is it possible to stably secure water quality level at which resulting water can be discharged into rivers, but also reuse of discharged water is realized.
- 3. It is possible to treat high concentration waste fluid. Concentrated waste fluid (such as water-soluble cutting oil and mold release agents) is treated in such a way that anaerobic treatment and aerobic treatment are alternately repeated.

#### [Appeal Points]

- 1. The operation management cost is inexpensive. It is not necessary to draw off residual sludge or to drain water. Sludge disposal cost is not incurred. No chemicals are required. The amount of electricity used is low. The number of pumps is small. It is not necessary to permanently station operation managers, with the result that the labor cost can be reduced.
- 2. Advanced operation skill, knowledge, or training is not required: Unmanned automatic operation equipment is aimed at. The number of operationally manipulated devices required is reduced. Operational manipulation is subjected to full-automatic programming. A remotely monitored system using the Internet is established.
- 3. No special chemicals are required: Discharged water quality can be secreted even if downstream advanced treatment using materials such as activated carbon or coagulating sedimentation agents is not carried out.

#### [Types of businesses interested in Indonesia in the future]

- A:)Export and sale of products (B)Local manufacturing of products (at its own factory, factory of cooperating company or other)
- C:\Seeking business partners for technical matters, etc. (including joint research)

#### [Detailed description of business expecting to the potentials in Indonesia]

- 1. Lease of equipment, Management for operation and maintenance of equipment
- 2. Sales, Installation, Assembly and Test working for equipment

[Business type/line of company/organization that are targeted as possible business partner(s)]

Public water and sewer treatment stations, automobile manufacturing-related plants, food manufacturing plants, etc.

[Record of Installation / Actual Performance] (Use Application) Plant wastewater treatment

[In Japan] Honda Motor Co., Ltd.; Nissan Motor Co., Ltd.; Sekisui House Ltd.; [Overseas]DAISIN Korat; Komatsu Ltd.; Kyowa Manufacturing Co., Ltd.; Tokyo Food Co., Ltd.; AQLI Foods Corporation; Cosmo Foods Co., Ltd.; Showaseika Co., Ltd.; Aichi Machine Industry Co., Ltd.; Nipro Pharma Corporation; F-tech Inc.; Taiyo Kagaku Co., Ltd.; Tsukishima Foods Industry Co., Ltd.; NTN; and Yamaha Motor Co., Ltd.





Frozen Food Plant, Company A

patents



Automotive Parts Plant, Company E



SUKSES MAKMUR CO., LTD. (Indonesia)

Main proprietary • Microorganism Reaction Tank and Discharged Water Treatment Method (PCT/JP2012/55806)

- Microorganism Reaction Tank (PCT/JP2012/55809)
- •Method of Treating Activated Sludge and Method of Modifying Existing Discharged Water Treatment Equipment Using Said Method (PCT/JP2012/55810)
- •Method of Treating Activated Sludge and Method of Modifying Existing Wastewater Treatment Equipment Using Said Method (PCT/JP2012/55812)

# Technology / Product / Service PR Item No.2

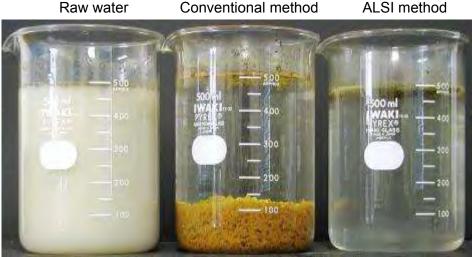
# [Category / name] Organic Polymer Flocculant "ALSI FLOC N100 Series"

#### [Characteristics, performance and applicable areas]

In order to properly carry out stable living organism treatment operation with regard to industrial waste liquid treatment, it is important to properly perform pretreatment. In this connection, flocculation reaction treatment based on chemicals should be carried out. Relevant pretreatment chemicals are manufactured and sold by our company. ALSI FLOC N100 Series products are, unlike conventional ordinary organic flocculants (such as PAC and aluminum sulfate), not only capable of significantly reducing the amount of sludge generated due to chemicals (flocculants), but also able to flocculate concentrated waste liquid. In this connection, it has so far been regarded as difficult to flocculate concentrated waste liquid. Furthermore, water pretreated by means of ALSI FLOC N100 Series products can be subjected to microorganism treatment more easily than in cases where conventional organic flocculants are used. Earth-friendly and economic treatment can be realized.

#### [Appeal Points]

1. In the case of the ALSI method, as for the treatment of "waste coolant fluid" (cutting oil) generated from automotive parts manufacturing plants, it is possible to reduce n-Hex and COD in treated water while decreasing the amount of sludge generated.



BOD 15,000 mg/L BOD 10,000 mg/L BOD 9,000 mg/L COD 7,800 mg/L COD 5,200 mg/L COD 4,800 mg/L

After flocculation treatment After flocculation treatment

Ferric chloride 3,000 ppm ALSIFLOC N110 150 ppm Caustic soda 1,000 ppm ALSIFLOC 101 25 ppm

Polymer flocculant 3 ppm

Respiratory activity 5 mg O/g-ss•hr 10mg O/g-ss•hr 29 mg O/g-ss•hr

2. Discharged water for rolling oil (Metal processing manufacturer)

a. Conventional method: [Aluminum sulfate] + [Hydrated lime] + [Polymer flocculent]

Annual chemical cost is 1,520,000 yen. Sludge disposal cost is 12,880,000 yen.

The total cost is reduced by 73%.

b. ALSI method : [ALSIFLOC N110] + [ALSIFLOC 102]

Annual chemical cost is 5,210,000 yen. Sludge disposal cost is 2,880,000 yen.

Respiratory activity indicates microorganism treatment performance. Generally, living organism decomposability is regarded as good if respiratory activity is 15 or more. In the case of water treated by the ALSI method, this value is 29. That is, this water can be easily subjected to living

organism treatment.

#### [Types of businesses interested in Indonesia in the future]

- A: Export and sale of products (B:) Local manufacturing of products (at its own factory, factory of cooperating company or other)
- C:)Seeking business partners for technical matters, etc. (including joint research)

#### [Detailed description of business expecting to the potentials in Indonesia]

Product export and sales, on-site production, and search for tie-up partners in terms of technology etc.

#### [Business type/line of company/organization that are targeted as possible business partner(s)]

Public water and sewer treatment stations, automobile manufacturing-related plants,

food manufacturing plants, etc.

#### [Record of Installation / Actual Performance] (Use Application)

Plant wastewater, flocculants for primary treatment of waste fluid, and dehydrating polymers

# [In Japan] [Overseas]

Topy Fasteners, Ltd; Toyota Automatic Loom Works, Ltd.;

DAISIN Korat NMT Bangkok

Honda Motor Co., Ltd.; Nissan Motor Co., Ltd.; Aichi Machine

Industry Co., Ltd.; Sekisui House Ltd.; Yanmar; Aisin Chemical

Co., Ltd.; Denso Corporation; Trix; F-Tech Inc.; Toyotomi Kiko

Co., Ltd.; NTN;

and many other automobile-related companies and food plants

# Main proprietary patents

- Oil-Water Separating and Flocculating Agents, and Oil-Water Separating and Flocculating Methods (Patent No. 4171648)
- Flocculants and Flocculation Method (Patent No. 4033946)
- Organic Flocculants, and Method of Treating Discharged Water by Using Organic Flocculants (Patent No. 4076605)

#### Other Special Mentions

- The discharged water treatment plant for Indofood Tsukishima was exported from Japan in June 2015 and operation was started in April 2016.
- By commission from JICA, investigations were made, in 2016, with the aim of creating a proposal regarding introduction of BIOALSI into public sewage treatment stations in Indonesia.
- 3. In 2016 and 2017, the "BIOALSI System" was subjected by JETRO to New Major Export Nation Consortium Expert Assistance (Indonesia, Taiwan, and Thailand).
- 4. In 2017, our company was selected by JICA as an entity commissioned to conduct business in which the following was to be implemented: introduction off BIOALSI into the development of household wastewater treatment infrastructure in the Republic of Indonesia; penetration of BIOALSI into this republic; and verification of .this device.

Company Profile		
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Business activities that have been conducted in Indonesia:  (A) Export and sale of products (B) Local manufacturing (C) Seeking a business partner for technological matters (D): Seeking an information source (local business coord (Space for describing other business:	of products (at its s, etc. (including j	own factory, factory of cooperating company or other joint research)