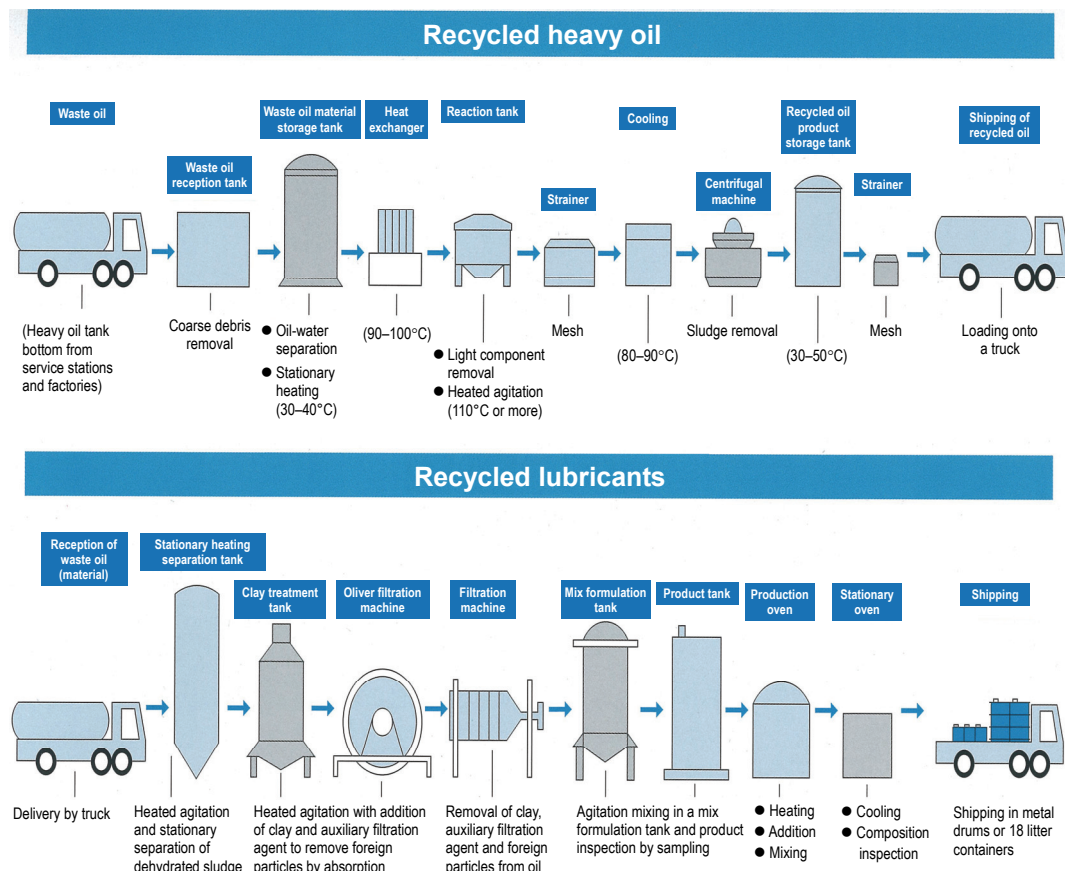


Technical Information Sheet

1. Name of technology	Comprehensive recycling technology for waste oil
2. Type of technology	Promotion of recycled heavy oil, lubricants and chemical products (concrete separating compound, etc.) produced with waste oil as raw materials to achieve cost reduction and contribute to the effective utilization and preservation of limited resources.
3. Description of technology	
Objective, application, characteristics, delivery record, and price of technology	[Objective and application of technology] A technology to manufacture recycled heavy oil, lubricants and chemical products (concrete separating compound, etc.) with waste oil (waste engine oil, waste lubricants and waste transmission oil) discharged from factories and car repair shops as raw materials. Because a portion of the raw materials we deal with is hazardous substances—including dangerous substances—we carry out thorough preliminary sample inspections when we receive these materials. We also handle reception containers (metal drums, etc.) using a bar-code management system to ensure safe and proper operations.

[Characteristics of technology]

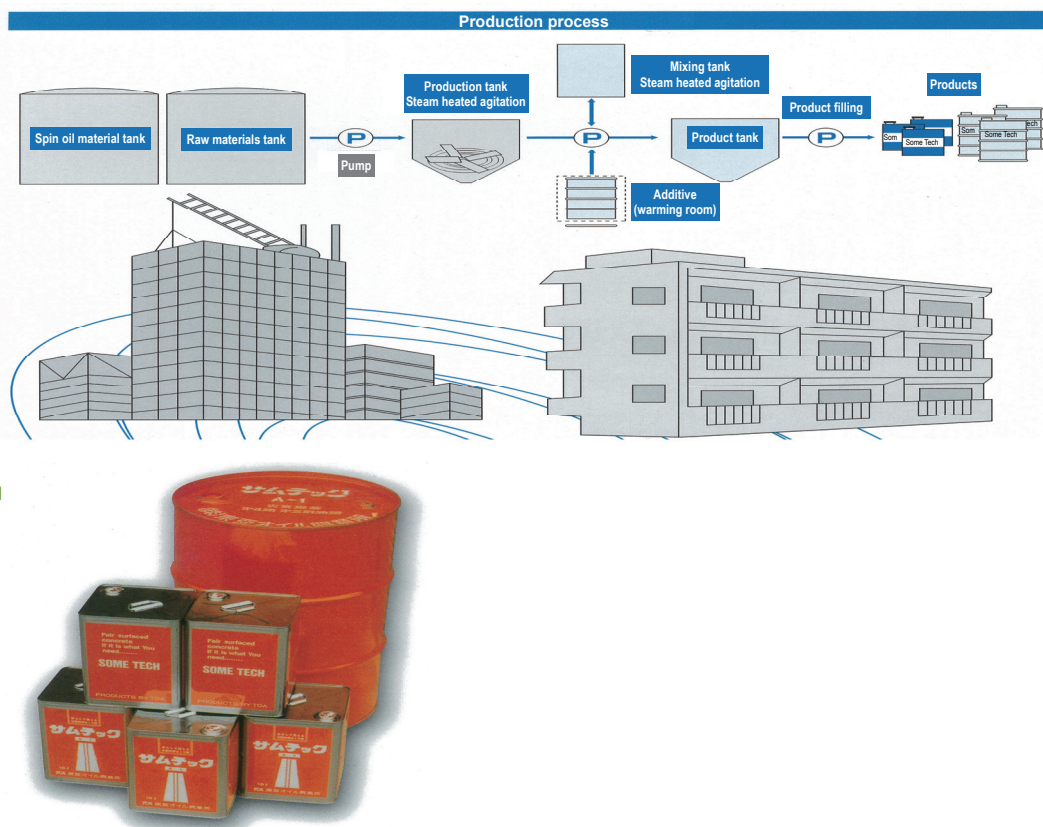
- ① As a pioneer of waste oil recycling, we provide recycled heavy oil with high quality equivalent to Bunker A as well as recycled lubricants by utilizing our accumulated technologies and expertise.



	Reaction	Burning point	Kinetic viscosity	Moisture content	Sulfur content	Gross heat value
Recycled oil (general standards)	Neutral or alkaline	70°C or more	50 CST or more	1.0% or less	1.0% or less	10,000 kcal or less
Bunker A	Neutral	60°C or more	20 CST or more	0.3% or less	0.5% or less	—
Our product	Neutral	70°C to 130°C	15 to 30 CST	0.5% or less	0.5% or less	10,500 kcal or less
Bunker B	Neutral	60°C or more	50 CST or more	0.4% or less	3.0% or less	—
Bunker C	Neutral	60°C or more	250 CST or more	0.5% or less	3.5% or less	—

- ② Chemical products (concrete separating compound, etc.) using recycled oil are blended with our original fatty acids and functions as a chemical reaction type mold release agent that enables a concrete structure to have beautiful white finishing.

This concrete separating compound is also an environmentally-friendly product allowing formworks to be easily removed, thereby improving their shelf life.



[Delivery record]

Recycled oil manufacturing facility	Separation of oil and water	(capacity 60 m ³ /day)
	Recycled oil production	(60 kL/day)
Storage facility	Waste oil material tank	180 m ³ × 2 units
	Recycled heavy oil tank	120 m ³ × 1 unit
	Waste oil reception pit	2.5 m ³ × 2 units

[Price and other inquiries]

Hiroiku Sugimoto, Corporate Development Department
TEL: +81-47-485-7189, FAX: +81-47-482-7090

4. Classification of technology	
(1) Applicable fields	Industrial waste treatment, Collection, transportation, storage, Recycling
(2) Target waste	Waste oil (waste lubricants including waste engine oil)
(3) Services provided	Plant construction, Waste treatment service, Technical cooperation/ licensing, Consulting
5. Countries to which this technology can be provided	Asian countries
6. Keywords	Recycle, waste oil, waste lubricants, waste transmission oil, recycled heavy oil, recycled lubricants, building works, civil engineering works, concrete, separation agent, cost reduction, resource conservation
7. Contact information	Toa Oil Kogyosyo Co., Ltd. Hiroiku Sugimoto, Corporate Development Department TEL: +81-47-485-7189, FAX: +81-47-482-7090