



Proposal of High Concentrated Industrial Waste Liquid Reduction System in Vietnam

 KYOWAKIDEN Industry Co., Ltd.



KYOWAKIDEN Group is specialized in environmental creation and take our commitment to providing safer and more comfortable lives.

Company Name : KYOWAKIDEN Industry Co., Ltd
Address : Nagasaki, Japan
Establishment : June, 1948
Employees : 490 (KYOWA Group 720)

Business Field



**Water Purification, Recycling,
Seawater Desalination,
Sewage Treatment, Wastewater Treatment**

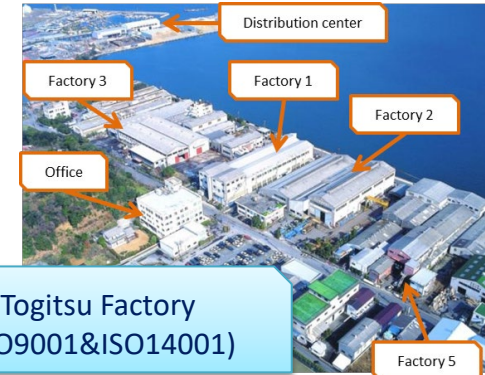


**Energy saving, Micro-Grid, Information,
Software, Control and Monitoring**

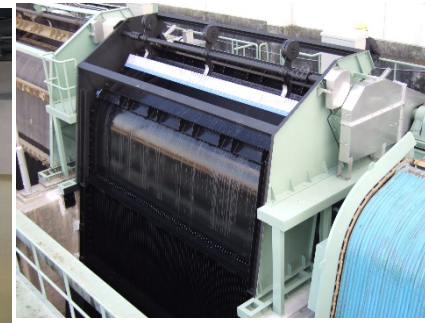


KYOWA will supply EPC and O&M services with QCDS.

**Diagnosis · Maintenance (Motor, Pump etc.),
Disaster Response ,O&M**



Togitsu Factory
(ISO9001&ISO14001)





Headquarter in Vinh Long

Establishment	: 2015
Location	: (HQ) Ving Long Province (Sales Office) Ho Chi Minh City
Employee	: 49 (Japanese 2)
Business Area	: Vietnam and South East Asia



Ho Chi Minh Sales-office

Business Field

Design(Mechanical/ Electrical/ Construction)

- Mechanical Design(2D/3D) for Water Treatment
- Electrical Design(Structure/System)
- Construction Design
- *Japanese is available.
- *Manufacture at cooperating factories in Vietnam.



Environment Engineering

- Industrial wastewater treatment device
- Water purification equipment
- High concentrated waste liquid reduction system
- Small size seawater desalination equipment



High Concentrated Industrial Waste Liquid Reduction System

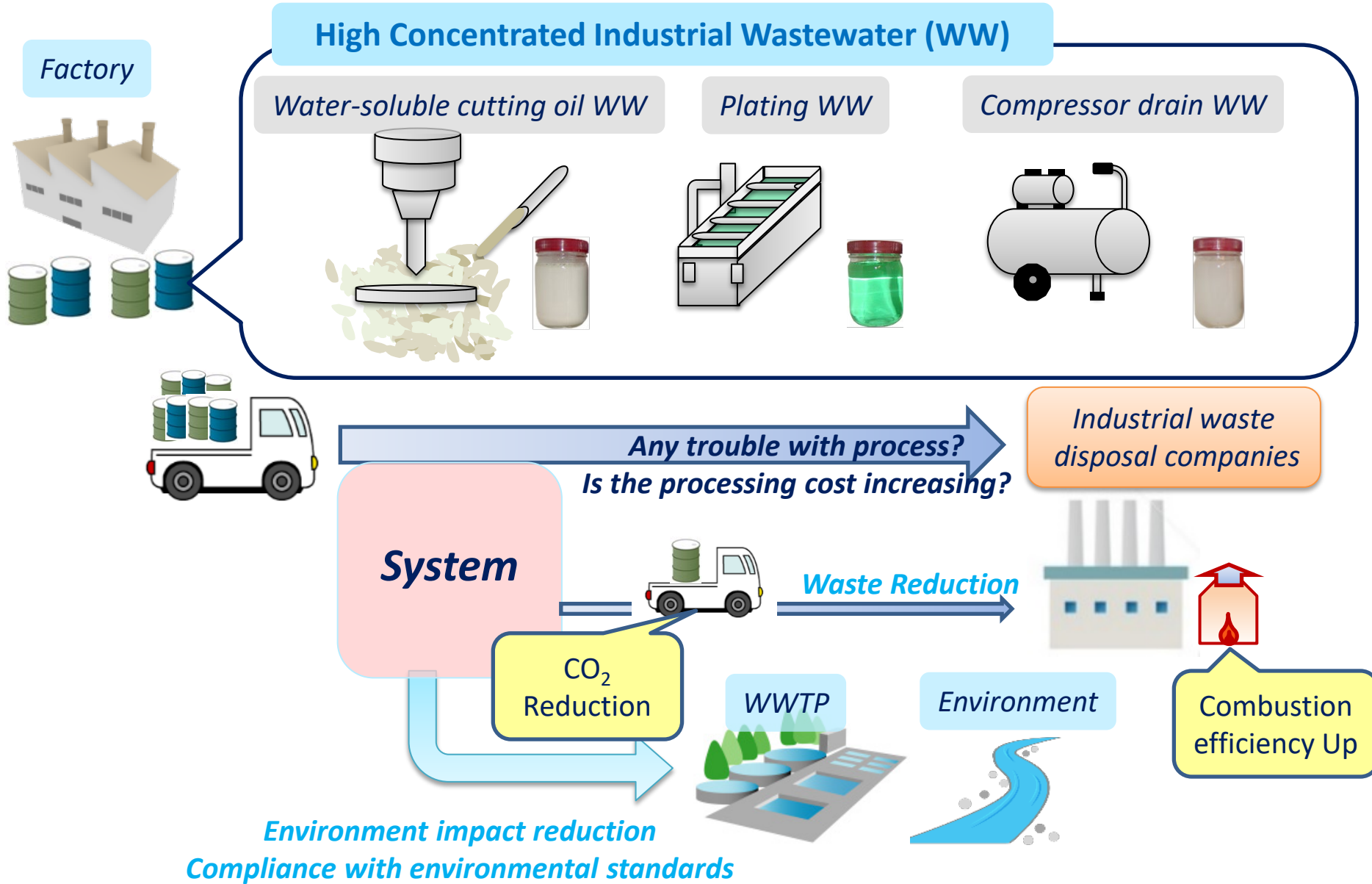


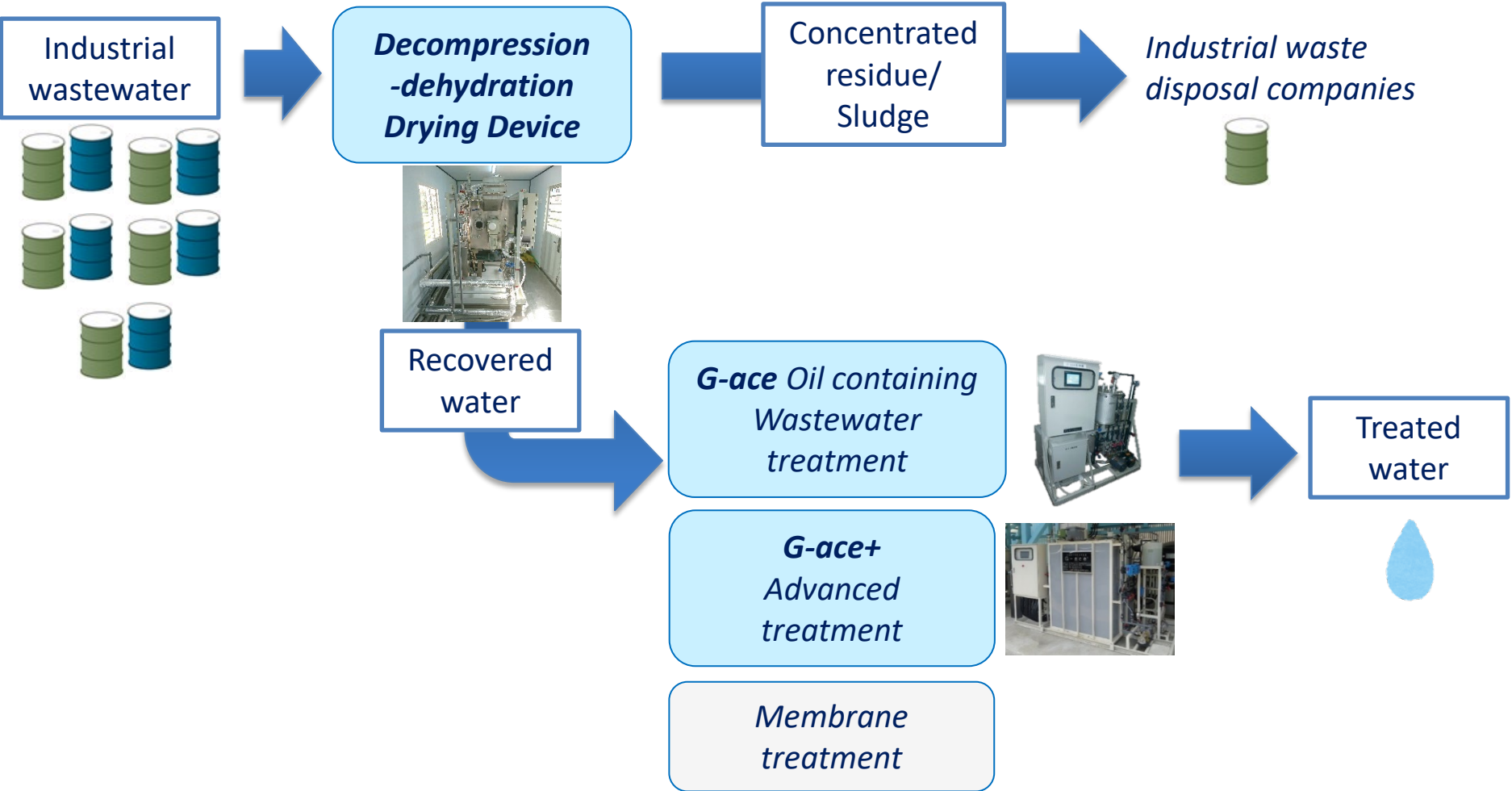
meets the following customer needs;

Reduce the amount of industrial waste(liquid) and Reduce the cost!

Process properly according to the environmental rules!

What for is the system?



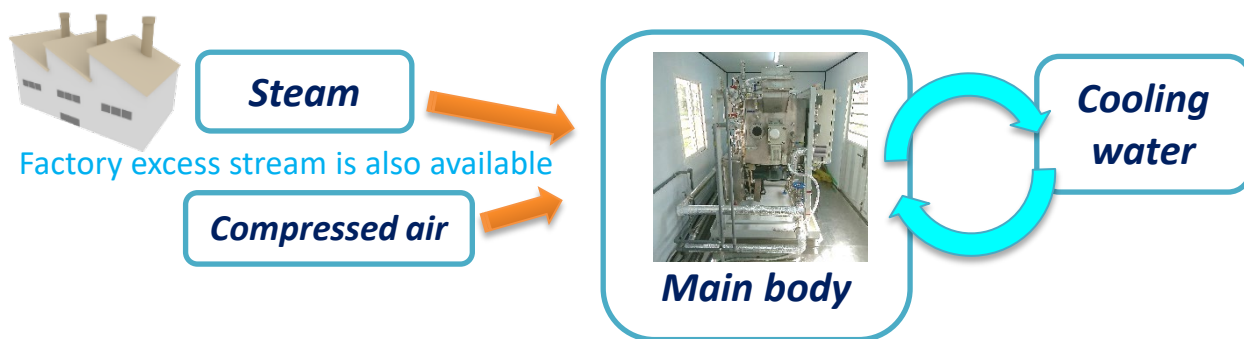
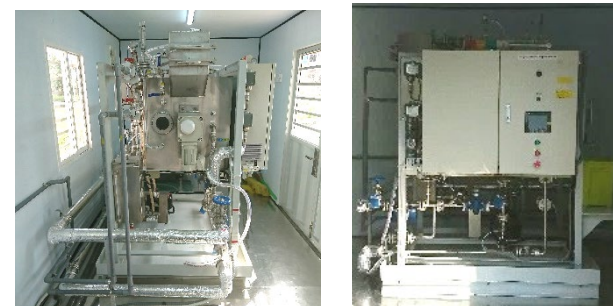


Decompression-dehydration Drying Device

Technology: Dehydration / concentration by heating
 Separation by decompression distillation

Specification: 25 L/h ~ 1250 L/h

Treatment Flow: Supply > Distill > Discharge "Auto-operation"

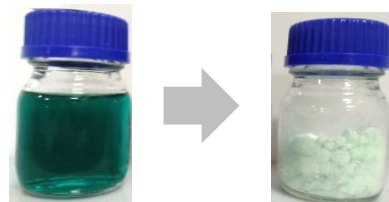


- Water-soluble cutting oil wastewater
- Alkaline degreasing wastewater
- Plating wastewater
- Washing wastewater
- Sludge after filter press
- RO concentrated liquid etc.

■ Solidification

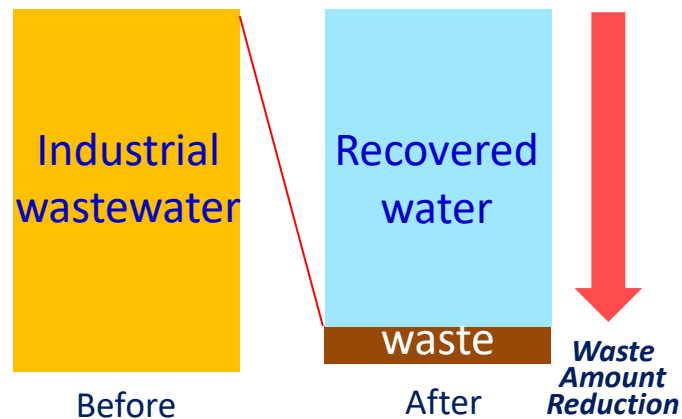


<Salty water>



<Nickel plating water>

■ Max 99% concentration



G-ace

Oil containing Wastewater treatment

Technology: Oil Separate by Floating and Ozone micro bubble
Floating sludge removal

Specification: 50, 100 250 L/h

Treatment Flow: Floating separation > Sludge removal “Auto-operation”

- **Washing wastewater after cutting process**
- **Compressor drain liquid**
- **Washing water of Engine or motor etc.**



G-ace+

Advanced treatment

Technology: Decomposition of organic
by High-efficiency biological treatment and MBR membrane

Specification: 50, 300, 500 L/h

Feature: Strong against raw water fluctuations and stable treatment performance

- **Advanced treatment of G-ace treated water**
- **Wastewater requested to be discharged etc.**

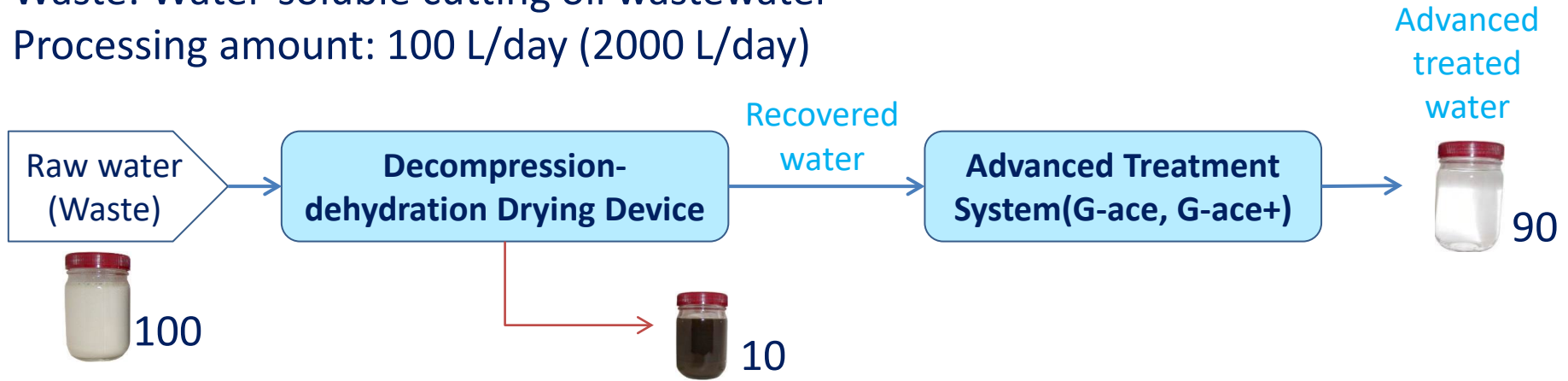


*Other Membrane treatment,
Chemical treatment*



Customer: Car parts manufacturing factory (China)

Waste: Water-soluble cutting oil wastewater

Processing amount: 100 L/day (2000 L/day)

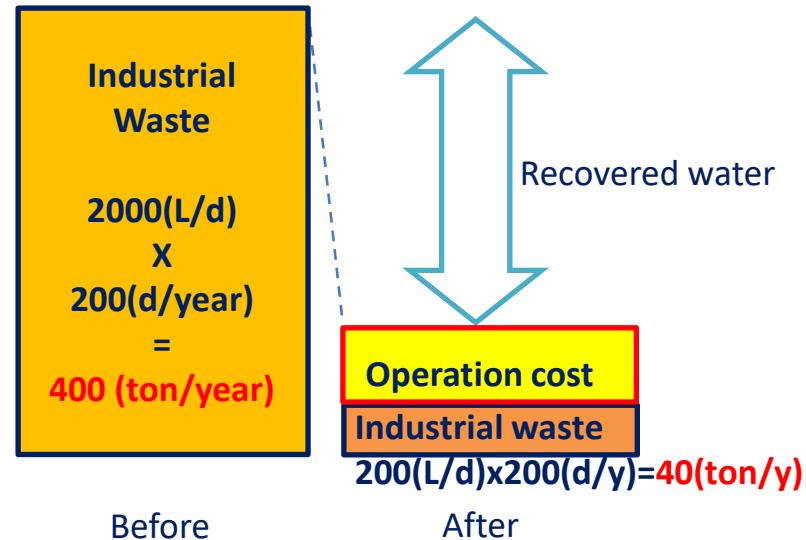


- Water Quality -

	Raw water 	Recovered water	Advanced treated water 
pH	8.97	10.58	6-9
CODcr	99,300	3,690	< 110
BOD	28,000	1,000	<30
SS	115	13	<100
n-Hex (Oil)	28,000	606	<8

Unit: mg/L without pH

- Cost Benefit-




Before

After

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Thank you for your attention!

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