Company Profile
kobelco eco-solutions

KOBELECO ECO-SOLUTIONS CO., LTD.
To create a healthy environment and life for future generations through our innovative thinking.

In our home country, people are living a safe and peaceful life. However, problems such as climatic aberration and aging infrastructure are emerging. If we look around the world, we are facing a series of issues that threaten our daily lives, such as global warming, exhaustion of natural resources, deletion of water resources, and forest destruction, among others.

Here is the role we wish to play. We will work hand-in-hand with our customers and exchange in-depth discussions to provide the best solution. With our technology and innovative thinking, we will remove people’s concerns and anxieties about the future. We are committed to securing not only our “present” life, but also our “future” life, and to contributing to our society and community with our manufacturing (monozukuri) capabilities and environmental technology.

We, Kobelco Eco-Solutions, strive to create a sustainable, healthy environment and life for future generations, and to secure a society that lives in harmony with the earth.

Pursue
We pursue patiently to capture and reveal the crux of issues.

Challenge
We strive to exceed expectations in realizing value with our creativity and our technological advantages.

Accomplish
We accomplish our goals faithfully with a sense of mission and passion.

With these three values, we support a healthy environment and life for future generations.
Water Treatment Business
Design, manufacturing, procurement, construction, O&M services and sales

Water Treatment
- Water treatment plant (tap water) / Sewage treatment plant
- Sludge treatment / Sludge volume reduction equipment
- Sludge incineration / Melting / Recycling system
- Wastewater treatment facilities
- Industrial water processing system
- Water treatment system for liquid crystals and semiconductors
- Pure water production equipment
- Leachate treatment system
- Seawater desalination system

Biomass
- Biogas upgrading system
- Biogas technology for the injection into the natural gas grid
- Methane fermentation and power generation facilities

Cooling Tower
- Cooling tower for district heating and cooling
- Super-low-noise cooling tower
- Industrial cooling tower

Technological Development
- Water treatment / Sludge treatment
- Cooling tower
- Waste treatment and recycling
- Biomass utilization

Environmental Analysis
- Potable water and sewage sludge
- Wastewater from factories, research centers, etc.
- Industrial waste (PCB, metals, organics, etc.)

Environmental Restoration
- Process equipment
- New business development & technological innovation

New Business
- Hydrogen related business
- Algae (Euglena) related business
- Wood biomass power generation related business

Process Equipment
Design, manufacturing, sales, and repair of devices and equipment

Process Equipment for Chemical and Food Industries, etc.
- Glasslined equipment
- Mixer / Dryer
- Polymerizer / Reactor
- Evaporator

Waste Treatment Business
Design, manufacturing, procurement, construction, O&M services and sales

Waste Treatment and Waste to Energy (Incinerator)
- Grate type incineration
- Fluidized-bed furnace

Detoxification of PCBs
- Sodium pulverulent process “SP Process”
- Solvent extraction and decomposition process “SED Process”
- Plasma melting technology for PCB-contaminated waste

New Business Development
- Hydrogen related business
- Algae (Euglena) related business
- Wood biomass power generation related business

Process Equipment
Design, manufacturing, sales, and repair of devices and equipment

Process Equipment for Chemical and Food Industries, etc.
- Glasslined equipment
- Mixer / Dryer
- Polymerizer / Reactor
- Evaporator

Biomass
- Biogas upgrading system
- Biogas technology for the injection into the natural gas grid
- Methane fermentation and power generation facilities

Technological Development
- Water treatment / Sludge treatment
- Cooling tower
- Waste treatment and recycling
- Biomass utilization

Environmental Analysis
- Potable water and sewage sludge
- Wastewater from factories, research centers, etc.
- Industrial waste (PCB, metals, organics, etc.)

Environmental Restoration
- Process equipment
- New business development & technological innovation

New Business
- Hydrogen related business
- Algae (Euglena) related business
- Wood biomass power generation related business

Process Equipment
Design, manufacturing, sales, and repair of devices and equipment

Process Equipment for Chemical and Food Industries, etc.
- Glasslined equipment
- Mixer / Dryer
- Polymerizer / Reactor
- Evaporator
Water Treatment (Tap water)

Supplying clean, safe, and drinkable water with optimal systems aligned with the purpose and size of each plant

Water Purification Plant

Water purification is a vital life-sustaining process to supply clean water reliably every day. We design a suitable water treatment plant according to changes in water quality and demand, and offer an appropriate system plan including maintenance work. We also meet the demand for advanced treatment to produce safer and more delicious water using cutting-edge technology.

Open Siphon Filter

The open siphon filter is a gravity type open filtration facility that uses a siphon mechanism. Automatic switching between filtration, backwash processes, and water dumping is achieved by utilizing a separate backwash storage tank and siphon. The downsizing of the large automatic valve and pump capacity makes maintenance work simpler. Open type filtration facilitates easy cleaning surveillance, ensuring safe and reliable filtration.

Up-flow Bio Contact Filter

Using granular activated carbon as a filter material, microorganisms efficiently remove the source of foul odors (such as substances that cause musty smells), ammonia nitrogen, manganese (a cause of black water), surfactants, and other contaminants in raw water, to create safe, drinkable water.

Membrane Filtration System for Water Purification

This water purification system, developed by integrating our advanced water purification and membrane filtration technology, can reduce the number of maintenance personnel needed thanks to its simple flocculation control. The system can be applied to a wide range of uses, from water purification to seawater desalination, since it can remove various materials ranging from suspended solids to ionic substances, by selecting the most suitable membrane type.

Auto Siphon Filter

This is a rapid gravity filter that enables fully automated operation with no need for automatic valve operation or flow control for filtration or backwash processes. This filter eliminates the need for a wash water pump and electric power, thus reducing maintenance work.

Water Treatment (Sewage)

Aiming for the Harmonious Coexistence of People and the Environment

Our abundant track record creates high reliability

Sewage treatment plant

Our wide range of technology can propose various solutions such as efficient removal of COD, removal of nitrogen or phosphate to solve the problem of eutrophication, desalination of recirculated water, energy savings etc. We have designed and supplied many sewage treatment plants and advanced wastewater treatment plants to prefectures, cities, towns, villages and housing complexes nationwide and have contributed to the improvement of community life as a reliable plant supplier.

Non-metallic sludge-gathering system

All the parts which are in contact with liquid are made of high-quality plastic materials. In many sewage disposal plants, long life and maintenance-free circumstances in a corrosive environment are realized.

PABIO TUBE

This equipment has achieved high oxygen transfer efficiency and low pressure loss by utilizing special silicon rubber with excellent durability. Stopping the air supply closes the membrane slit and prevents increased pressure loss due to clogging. This equipment is suitable for situations where the airflow fluctuates, such as when operating with low airflow volume with intermittent aeration or when aeration is halted. The LCC will be less since it is possible to replace just the membranes.

Our wide range of technology can propose various solutions such as efficient removal of COD, removal of nitrogen or phosphate to solve the problem of eutrophication, desalination of recirculated water, energy savings etc. We have designed and supplied many sewage treatment plants and advanced wastewater treatment plants to prefectures, cities, towns, villages and housing complexes nationwide and have contributed to the improvement of community life as a reliable plant supplier.

Non-metallic sludge-gathering system

All the parts which are in contact with liquid are made of high-quality plastic materials. In many sewage disposal plants, long life and maintenance-free circumstances in a corrosive environment are realized.

PABIO TUBE

This equipment has achieved high oxygen transfer efficiency and low pressure loss by utilizing special silicon rubber with excellent durability. Stopping the air supply closes the membrane slit and prevents increased pressure loss due to clogging. This equipment is suitable for situations where the airflow fluctuates, such as when operating with low airflow volume with intermittent aeration or when aeration is halted. The LCC will be less since it is possible to replace just the membranes.

PABIO Mix

Efficient mixing in the tank is made possible using a specially shaped Hyperboloid mixer. As mixing near the bottom of the tank is performed by low-speed rotation, considerable energy savings are realized with minimum energy consumption. It has a simple structure where two types of mixing impellers are available; one of which is a single-body type, and the other is an eight-blade type that is easy to install even if the opening of the reaction tank is small.

PABIO Mix

Efficient mixing in the tank is made possible using a specially shaped Hyperboloid mixer. As mixing near the bottom of the tank is performed by low-speed rotation, considerable energy savings are realized with minimum energy consumption. It has a simple structure where two types of mixing impellers are available; one of which is a single-body type, and the other is an eight-blade type that is easy to install even if the opening of the reaction tank is small.
It contributes to reducing and recycling of sewage sludge

The spread of sewage systems throughout Japan has caused a national demand for sewage treatment. Along with offering a safe and hygienic water environment, Kobelco Eco-Solutions contributes to the development of a recycling oriented society by actively engaging in volume reduction and recycling of raw sludge that utilizes the latest technology including our steadfast incinerating and melting know-how.

**Screw press dehydrator**

It contributes to reducing and recycling of sewage sludge

It contributes to reducing and recycling of sewage sludge

**Advanced Two-stage Incinerator**

Enhanced Screw Press Dehydrator

With sludge trending toward a higher concentration of volatile total solids (VTS), it is becoming more difficult to dehydrate. Our dehydrator is able to remove water content by optimizing the coagulation method to form flocs and then applying an appropriate force to press them. This method is highly effective in dewatering sludge, achieving low water content by optimizing the coagulation structure, economical and highly-efficient dehydratation, and the ability to remove ammonia.

**Steel Digester Tank**

We aim to promote wider use of digester tanks. We have reduced construction costs by making them out of steel, and ensure stable operation and lower maintenance costs by installing sensors to visualize the situation inside the tank. The steel digester tank is a technological outcome of the “Breakthrough by Dynamic Approach in Sewage High Technology” (B-DAISY) Project promoted by Japan’s Ministry of Land, Infrastructure, Transport and Tourism in 2011. The first tank for actual commercial use ordered by the public sector in Japan is now in operation.

**Cooling Tower**

**Biomass**

We are working hard to live together with the environment, using our biotechnology

We are working hard to live together with the environment, using our biotechnology

Carbon Neutral Energy

**Bio Natural Gas**

(Bioenergy by Greenenergy, NZ)

Our Biogas Upgrading System purifies digester gas generated during the treatment of sewage sludge to produce high purity gas equivalent to City gas 12A (96% or more methane).

Our Biogas Upgrading System is characterized by its low cost solution realized by the utilization of effluent water from sewage treatment facilities, simple purification processes and equipment structure, economical and highly-efficient desulfurization, and the ability to remove silane.

**Effective use of renewable energy**

Effect of use of biogas (digester gas) for power generation and heat supply

Biogas CHP Plant

Biomass has been recognized as a new energy to replace fossil fuels, and its adoption and utilization is being encouraged. Fossil fuels release carbon dioxide into the atmosphere and reserves are limited, but biomass helps to reduce the generation of greenhouse gases. Furthermore, the adoption of cogeneration means that biomass can be used as secondary energy for power generation and water heating.

**Effective use of renewable energy**

Biomass CHP Plant

In industries which require cooling water, such as the power, steel, and chemical industries, and for building and district heating and cooling, re-circulation use of cooling water by wet cooling towers is promoted.

We continue to develop more compact and more efficient cooling towers through theoretical calculations, building a small pilot units in our research center, and actual heat exchange proof tests with full scale cooling towers.

**Heat Exchange Technology (Gas & Liquid)**

In industries that use large amounts of water, various methods have been tried to make effective use of water. One of the most effective methods is the recirculation of cooling water through cooling towers. Our cooling towers contribute to the recycling of water resources.

**Cooling Tower**

We are the biggest manufacturer of cooling towers, with a track record of 5000 or more units sold worldwide.
We provide a total factory solution according to the customer needs, by combining the technologies and broad expertise of our entire group
Waste Treatment

Contributing to harmony between society and the Earth by providing green waste treatment technologies

Grate Type Incineration

“Grate Type Incineration” is the oldest and most widespread domestically used waste treatment technique. Age-old techniques are constantly evolving to promote the realization of a resource recycling oriented and low carbon society.

The distinctive features of our grate stoker system are its highly-efficient heat recovery and maintenance-free grates. It also has an excellent reputation as a robust furnace that can handle a wide range of waste matter, including plastics, shop oil and sludge.

Fluidized Bed Gasification and Melting Furnace

Our waste treatment facility “Fluidized Bed Gasification and Melting Furnace” is constantly evolving.

This system can reduce the burden on the final disposal site and inhibit the generation of greenhouse gases since, by harnessing the energy in the waste, ash can be turned into slag without using fossil fuels. The slag may be put to effective use as road aggregate or secondary concrete products. In addition, metals such as iron and aluminum can be retrieved in an unoxidized state from the waste and utilized as recycled resources.

Our company can provide highly reliable facilities, based on the extensive experience we have amassed from constructing 17 commercial plants and 18 years of operation in Japan.

Fluidized Bed Furnace

We have created a next-generation fluidized bed gasification furnace that combines fluidized bed technologies with gasification technologies developed in the gasification and melting furnace field.

Its distinctive features are enhanced boiler efficiency attained by converting waste into highly-combustible gas at the sand layer and burning it at high temperatures with a low air ratio at the freeboard, and a high-temperature high-pressure boiler (6MPa 450℃) achieved by leveraging the desalination efficiency of the fluidized bed. It offers technologies that are suitable for simple, safe, highly energy-efficient regional energy centers.

After-Sales Services

We provide a wide variety of after-sales services to respond to various customers’ needs.

Inspection, Repair, Improvement

Leveraging our experience, culminated over many years through the operation and maintenance of numerous facilities, we provide services that minimize life cycle cost and ensure the stable operation, steady performance, and long-useful lives of facilities.

We swiftly provide highly specialized services through our network, which extends to regions all across Japan.
**Detoxification of PCB and Dioxin**

**We offer PCB Detoxification Technologies to support the future where society lives in harmony with the Earth**

Liquid PCB Decomposition Technology “SP Process”

Although widely used for industrial products and industrial applications in the past, polychlorinated biphenyl (PCB) has been deposited for more than 30 years in an untreated condition, even after its toxic effects on the human body became clear and its production was stopped, and no effective processing method has been developed. PCB detoxification system “SP process” removes chloroform from PCBs and dioxins by chemical reaction of sodium and PCB. The process is adopted by The Chugoku Electric Power Co., Inc. Insulating Oil Recycling Center and Hokkaido PCB Waste Treatment Facility.

PCB Wastes Decontamination Technology “SED Process”

PCBs are widely used for transformer and capacitor, etc. of electrical apparatus, and adhered to the cases and components of these products. The SED process is a pre-treatment technique that disassembles electrical apparatus, removes PCBs with solvent washing and heating drying under vacuum. Combination with the SP process completes an integrated treatment technology for handling electrical apparatus containing PCBs. The process is adopted by Toyota PCB Waste Treatment Facility and Hokkaido PCB Waste Treatment Facility.

**New Business**

**We aim to realize decarbonization, sustainability, and healthy and comfortable lives**

**Hydrogen related business**

Manufacturing CO2-free hydrogen using renewable energy

**High-purity Hydrogen Oxygen Generator (HHOG)**

The High-purity Hydrogen Oxygen Generator (HHOG) directly electrolyzes deionized water and generates high-purity hydrogen gas on site without using any toxic chemicals. More than 200 HHOG units have been adopted by not only domestic customers but also overseas customers, as factory equipment, including for metal works, semiconductors, and chemical industries. In addition, HHOG has been used in many pilot projects utilizing renewable energy technologies, such as converting electricity made by photovoltaic generators into carbon-free hydrogen.

**Algae (Euglena) related business**

Developing proprietary functional compounds for healthy and comfortable lives.

**Wood biomass power generation related business**

Contributing to the global environment through renewable energy

**Wood biomass power plant**

Fukui Green Power Co., Ltd.

In 2016, Fukui Green Power Co., Ltd. launched a wood biomass power plant at Kubo-no-Eco Solutions’ plant that continues to enjoy smooth and stable operations. The company is helping improve and preserve forests by reducing CO2 emissions through carbon neutral power generation and promoting the use of thinned forest undergrowth.
**Detoxification of PCB and Dioxin**

We offer PCB Detoxification Technologies to support the future where society lives in harmony with the Earth

---

**Liquid PCB Decomposition Technology “SP Process”**

Although widely used for industrial products and industrial applications in the past, polychlorinated biphenyl (PCB) has been deposited for more than 30 years in an untreated condition, even after its toxic effects on the human body became clear and its production was stopped, and no effective processing method has been developed. PCB detoxification system “SP process” removes chlorine from PCBs and dioxin PCBs by chemical reaction of sodium and PCB. The process is adopted by The Chugoku Electric Power Co., Inc. Insulating Oil Recycling Center and Hokkaido PCB Waste Treatment Facility.

**PCB Wastes Decontamination Technology “SFD Process”**

PCBs are widely used for transformer and capacitor, etc. of electrical apparatus, and adhered to the cases and components of these products. The SFD process is a pre-treatment technique that dismantles electrical apparatus, removes PCBs with solvent washing and heating drying under vacuum. Combination with the SP process completes an integrated treatment technology for heating drying under vacuum. Combination with the SP process completes an integrated treatment technology for handling electrical apparatus containing PCBs. The process is adopted by Toyota PCB Waste Treatment Facility, Plant for Hokkaido PCB Waste Treatment Facility.

---

**New Business**

We aim to realize decarbonization, sustainability, and healthy and comfortable lives

---

**Hydrogen related business**

Manufacturing CO₂-free hydrogen using renewable energy

**High-purity Hydrogen Oxygen Generator (HHOG)**

The High-purity Hydrogen Oxygen Generator (HHOG) directly electrolyzes deionized water and generates high-purity hydrogen gas on-site without using any toxic chemicals. More than 100 HHOG units have been adopted by not only domestic customers but also overseas customers, as factory equipment, including for metal works, semiconductors, and chemical industries.

**Algae (Euglena) related business**

Developing proprietary functional compounds for healthy and comfortable lives.

**Food ingredient (Euglena) / Paramylon EOD-1**

Paramylon EOD-1 is a polysaccharide produced as an intracellular storage material only by the Euglena EOD-1 strain, a proprietary material for which we have patents in over 10 countries worldwide. Through human clinical trials, our research has confirmed such effects as improved immune response, reduced mental and physical fatigue sensation, alteration in the balance of the autonomic nervous system, and improved sleep quality. In animal trials, we confirmed such effects as control over the elevation of blood sugar and the lowering of LDL cholesterol.

**Wood biomass power generation related business**

Contributing to the global environment through renewable energy

**Wood biomass power plant**

Fukui Green Power Co., Ltd.

In 2016, Fukui Green Power Co., Ltd. launched a wood biomass power plant at Kobelco Eco-Solutions’ plant that continues to enjoy smooth and stable operations. The company is helping improve and preserve forests by reducing CO₂ emissions through carbon neutral power generation and promoting the use of thinned forest undergrowth.
Process Equipment

Our original technologies are suitable for High-Quality manufacturing

We manufacture glasslined equipment and various other equipment and facilities as the core of production processes for the chemical industry field. We contribute to a wide range of industries, such as fine chemicals, pharmaceuticals, electric materials and petrochemicals, wherever high-quality production technology is required.

Most advanced production base

The production base of our company, Harima Plant, has established high-quality, speedy and economical production systems with the most advanced facilities like the world’s largest class furnace and advanced technical capabilities. The facility is ASME U, ISO 9001, and ISO 14001 certified, and holds a Chinese manufacturing license for pressure vessels. We manufacture outstanding products based on our superb quality assurance system. In addition, our glass-lining plant established in Vietnam ensures response to our globalizing customers.

Glasslined Equipment

Corrosion resistant material and surface treatment technology

Glass lining is utilized for various reaction processes in the chemical industry and other industries. We have a wide range of products, such as low-elution and high thermal conductive glasses as well as #9000 highly-corrosion-resistant glasses as our main products.

Our full lineup can respond to any technological issue
We strive to advance our people- and eco-friendly technologies to meet the needs of a new era

We focus our efforts on the development of new technologies which protect the abundant natural environment and people’s comfortable lives.
Our latest technologies are applied to our new products and services to meet complex needs. Furthermore, to rack up more achievements for our technologies, we carry out joint research programs with customers, data collection and analysis in full-scale plants and experiments in pilot plants.

Waste Treatment and Recycling
To help meet the pressing need for reduced CO2 emissions, we pursue development aimed at improving the performance of key components for incinerators and gasification facilities as well as the application of AI and ICT to save labor.

AI and ICT Technologies
We use AI and ICT to address a wide range of issues, for example, we use deep learning to predict emissions gas concentrations from waste incineration and to analyze sources of said waste and use image recognition to detect abnormalities.

Improvement of Power Generation Efficiency
We are working to improve power generation efficiency at waste-to-energy plants. This requires boiler steam to reach higher temperatures and pressures, making high-temperature corrosion of boiler tubes an issue. We are testing and analyzing the corrosion resistance of materials in commercial plants.

Numerical Analysis Technology
We use CFD simulations for more efficient technological development and are working to advance our simulation technology by applying new methods and models. The resulting simulations are used to, for example, enhance the performance of fluidized bed gasification and combustion facilities and grate type incinerators.

Process Equipment
As a top manufacturer of glass lining and various devices, we develop unique products that upturn common knowledge with cutting-edge technologies to meet diversifying needs.

Environmental Analysis
To support technological development for better environment

We can propose solutions to various needs based on the abundant experience for water treatment technology which we have accumulated over many years. A wide range of analyses such as water, waste and soil are conducted. We continue our efforts to improve technology to contribute to society with our most advanced measurement technology.

-Our Analysis Service Covers:
1. Potable water and sewage sludge
2. Wastewater from factories, research centers, etc.
3. Environmental standard items
4. Industrial waste (PCB, metals, organics, etc.)
5. Inspections of tap water filter materials, ion-exchange resins, slag, etc.

We are engaged in the algae business using biological technologies we developed in the water treatment field. We are also developing applications for metallic sodium dispersion, and other various technologies aimed at making effective use of CO2.

Biomass Fuel Technology
Turmoil carbon neutrality needs, we developed a process for converting local biomass, such as sewage sludge, into bio-fuel.

Sludge Incineration Technology
We developed an eco-friendly and energy-generating incineration system with high energy efficiency using incineration waste heat.

New Business Development & Technological Innovation
We explore and develop technologies especially focused on energy saving and generation.

Water Treatment / Sludge Treatment, Biomass Utilization

Environmental Analysis
Simple analysis method for key small amounts of PCBs in oil testing

Pre-treatment equipment

Electron microscope photo of paramylon

Metallic sodium dispersion (SD) reactor agent

Electron microscope photo of Euphiona EDD-1 strain

Using the excellent reactivity of our metallic SD, we are developing technologies to create effective chemicals and products.

Environmental Analysis
To support technological development for better environment

We can propose solutions to various needs based on the abundant experience for water treatment technology which we have accumulated over many years. A wide range of analyses such as water, waste and soil are conducted. We continue our efforts to improve technology to contribute to society with our most advanced measurement technology.

- Our Analysis Service Covers:
1. Potable water and sewage sludge
2. Wastewater from factories, research centers, etc.
3. Environmental standard items
4. Industrial waste (PCB, metals, organics, etc.)
5. Inspections of tap water filter materials, ion-exchange resins, slag, etc.
Keep the Earth Sky-blue

KOBELCO ECO-SOLUTIONS CO., LTD.

URL: http://www.kobelco-eco.co.jp

Head Office:
4-78, 1-chome, Wakinohana-cho, Chuo-ku, Kobe, 651-0072, Japan
(San-nomiya Grand Building)
(Sumitomo Fudosan Osaki Garden Tower)
2-21, 2-chome, Isogami-dori, Chuo-ku, Kobe, 651-0086, Japan
*The switchboard number is for all divisions.

Tokyo Branch Office:
(Sumitomo Fudosan Osaki Garden Tower)
1-1, 1-chome, Nishishinagawa, Shinagawa-ku, Tokyo, 141-0033, Japan
TEL:  +81-3-5931-3700  FAX: +81-3-5931-5700

Osaka Branch Office:
(Midosuji Mitsui Building)
1-3, 4-chome, Bingomachi, Chuo-ku, Osaka, 541-8536, Japan
TEL: +81-6-6206-6751  FAX: +81-6-6206-6760

Kyushu Branch Office:
(Shinkansen Hakata Building)
1-1, Hakataeki Chuo-gai, Hakata-ku, Fukuoka, 812-0012, Japan

Harima Plant:
19, Nijima, Harima-cho, Kako-gun, Hyogo, 675-0155, Japan

Technical Research Center:
1-4, 1-chome, Murotani, Nishi-ku, Kobe, 651-2241, Japan
TEL: +81-78-992-6500  FAX: +81-78-997-0550

Sales Office:
Sapporo, Sendai, Nagoya, Fukui

London Office:
Building 3, Chiswick Park, 566 Chiswick High Road, London, W4 5YA, United Kingdom
TEL: +44-208-849-5558

Phnom Penh Office:
Level 5, OHK Tower, Street 110 and Corner Street 90, Phum 3,
Sangkat Sirh Chak, Khan Doun Penh, Phnom Penh, Kingdom of Cambodia
TEL: +855-23-232-051

KOBELCO ECO-SOLUTIONS VIETNAM CO., LTD.

Head Office:
31st Floor, Pearl Plaza, 561A Dien Bien Phu Street, Ward 25,
Binh Thanh District, Ho Chi Minh City, Vietnam
TEL: +84-28-3899-1355  FAX: +84-28-3899-1525

Hanoi Branch Office:
12th Floor, 789 Building, 147 Hoang Quoc Viet Street,
Nghia Do Ward, Cau Glay District, Ho Nai City, Vietnam
TEL: +84-24-3762-1940  FAX: +84-24-3762-1942

Long Duc Plant:
Lot I-1, Long Duc Industrial Park, Long Duc Ward,
Long Thanh District, Dong Nai Province, Vietnam
TEL: +84-251-320-1050  FAX: +84-251-320-1051

Information in this catalog such as values, photographs, evaluation is listed for the purpose of explaining the general features and performance of our products only, and it does not guarantee anything as a result. In addition, the information contained in this catalog is subject to change without notice, so please contact our sales offices above for the latest information.
Company Name: Kobelco Eco-Solutions Co., Ltd.

Head Office: 4-78, 1-chome, Wakinohama-cho, Chuo-ku, Kobe 651-0072 Japan

Capital: 6.02 billion Yen

Business Description:

### Water Treatment Segment (Design, manufacturing, procurement, construction, O&M services and sales)
- Water treatment
  - Treatment facilities for industrial water, city water and sewage
  - Treatment facilities for ultrapure water, pure water, industrial water and wastewater
- Biomass
  - Recycling system for organic waste such as sewage sludge and food
- Cooling towers
  - Industrial / air conditioning cooling towers

### Waste Treatment Segment (Design, manufacturing, procurement, construction, O&M services and sales)
- Waste treatment / recycling
  - Municipal waste incineration / melting facilities
    - (Grate type incinerator, fluidized-bed furnace, fluidized-bed gasification and melting furnace)
- Detoxification of PCBs
  - PCB waste treatment facilities

### Chemical / Food Process Equipment Segment (Design, manufacturing, sales, and repair of devices and equipment)
- Process equipment
  - Glasslined equipment
  - Polymerizers, reactors
  - Evaporators
  - Mixers / dryers

### Related to New Businesses
- New businesses
  - Hydrogen related business
  - Algae (Euglena) related business
  - Wood biomass power generation related business

### Related to Technology Development
- Technology development
  - Technology development related to water and sludge treatment, cooling towers, waste treatment / recycling, biomass utilization, environmental restoration, process equipment, new fields, and innovative technologies
- Environmental analysis
  - Water quality inspections related to water supply and sewer systems; water quality inspections related to factories, research centers, and other facilities; and certifications related to industrial waste, such as PCBs, metals, and organic materials

Licenses and certificates:

- Minister’s construction business license by the Ministry of Land, Infrastructure and Transport
  (Civil work business, building work business, electric work business, piping work business, machinery installation business, telecommunications business, water service engineering business, cleaning facility installation business, demolition business),
- First-class architect office registration, environmental measurement proof office registration,
- ASME code “U stamp”
- ISO 9001 certification
- ISO 14001 Approved
- ISO55001-certified (For the organization name and scope of registration, please refer to the certificate of registration and annex to certificate on the Our Company website.)

Affiliated Companies:

- Kobelco Eco-Maintenance Co., Ltd.
- E.R.C. TAKAJO Co., Ltd.
- TOYOTA ENVIRONMENT SERVICES CO., LTD.
- Kakogawa Environment Service Co., Ltd.
- Fukui Green Power Co., Ltd.
- KOBELCO ECO-SOLUTIONS VIETNAM CO., LTD.

URL: http://www.kobelco-eco.co.jp
**Message from the President**

We, Kobelco Eco-Solutions Group (“KES”), are actively and extensively engaged in the environmental business as one of the group entities in the engineering business segment of the KOBELCO Group (the “Group”). Our business fields include those related to water and wastewater treatment, waste treatment, and the supply of cooling towers for industrial or public use. We are playing an important role in the Group’s challenging mission to achieve carbon neutrality as well.

We also have a chemical / food processing equipment business, which has a long track record since KES’s foundation back in 1946. We have been meeting a wide range of our customers’ manufacturing needs through the supply of our glass-lined equipment.

Under the three-year FY2021–2023 medium-term business plan, KES will devote its efforts to gaining a foothold on a path to new heights by implementing a balanced strategy that seeks the “strengthening of competitiveness for existing business” as well as “active investment in growth fields.”

As for the former, “strengthening of competitiveness for existing business,” we will pursue such activities as: (i) contributing to the reduction of CO2 emissions by way of promoting power generation utilizing sewer sludge and waste materials, (ii) pursuing the research and development of unique technologies in the chemical / food processing equipment business, and (iii) establishing a solid business foundation that extends to global markets.

As for the latter, “active investment in growth fields,” we will pursue such activities as: (i) further involvement in the overseas infrastructure development of water supply facilities and waste power generation plants, (ii) the provision of core technologies that help communities and customers reduce CO2 emissions and use renewable energy and hydrogen, and (iii) the development of new businesses.

Our corporate vision is “To Support a Future society that lives in harmony with the earth.” In order to realize this vision, we will contribute to achieving the SDGs through our businesses and to creating a healthy environment and lifestyles through our innovative thinking.

President, Representative Director, **Takao Ohama**

---

**HISTORY**

- **Nov. 1946**: Our company started out as Glass-lined Product Department of Kobe Steel Ltd. when a Glass-lined Plant was constructed on the premises of the Kobe Steel Yamanote Plant. Manufacturing of glass-lined product and sales for export were commenced from the following year.

- **Jun. 1954**: Kobe Steel Ltd. made a technical tie-up with a US company Pfaudler, and spun off the Glass-lined Product Department and incorporated it as an independent company named “Shinko Pfaudler Co.,Ltd.” with 90 million yen capital jointly invested by Kobe Steel and Pfaudler.

- **Dec. 1957**: Shinko Pfaudler entered into water treatment equipment business.

- **Mar. 1962**: Shinko Pfaudler entered into cooling tower business.

- **Nov. 1962**: Shinko Pfaudler entered into sewage and organic waste water treatment equipment business.

- **Jul. 1976**: Harima Factory was completed and commenced its operation.

- **Aug. 1978**: First sewage sludge incineration plant was delivered.

- **Mar. 1982**: First municipal waste incineration plant was delivered.

- **Oct. 1989**: Shinko Pfaudler Co.,Ltd. was renamed to Shinko Pantec Co.,Ltd.

- **Apr. 1992**: All manufacturing functions were put together into the Harima Factory, which then changed its name to Harima Manufacturing Plant. Technology Laboratory was set up in the Kobe High-tech Park. (Nishi Ward, Kobe City)

- **Aug. 1994**: Shinko Pantec was listed in the Second Section of the Osaka Securities Exchange. (Current Tokyo Stock Exchange)

- **Jan. 1999**: Environment Analysis Center was set up, and started analytical services for specified chemical substances and microchemical substances.

- **Feb. 2001**: New headquarters was completed.

- **Oct. 2003**: The environmental business unit of Kobe Steel, Ltd. was consolidated into Shinko Pantec Co., Ltd., which was renamed to Kobelco Eco-Solutions Co., Ltd.

- **Jun. 2005**: SD supply business for PCB detoxification facilities started at Harima Manufacturing Plant. Waste Management Final Disposal Site started its business.

- **Dec. 2005**: Contract awarded by Kobe City for the first domestic “bio-gasification facilities” for refining biogas from sewage sludge with a high methane concentration.

- **Apr. 2008**: “Eco Station” at the Harima-Nada Plant in Kobe City, a facility for supplying biogas started its operation.

- **Jun. 2008**: SD supply business for PCB detoxification facilities started at Muroran SD Production Plant. Vietnam Office was opened. (Ho Chi Minh City)

- **Apr. 2009**: Waste Management Final Disposal Site started its business.

- **Jan. 2010**: Dusseldorf Office was opened.

- **Oct. 2010**: Injection of biogas from sewage into utility gas pipelines started at the Harima-Nada Plant in Kobe City. (First case in Japan)

- **Nov. 2010**: Overseas affiliate, KOBELOCO ECO-SOLUTIONS VIETNAM CO., LTD. was established in Ho Chi Minh City, Vietnam.

- **Jul. 2013**: Kobelco Eco-Solutions was listed on the second section of Tokyo Stock Exchange. Vietnam overseas affiliate opened a Hanoi branch office.


- **Oct. 2014**: Maintenance business was acquired from Kobelco Eco-Maintenance Co., Ltd.

- **Oct. 2015**: Opened an office in Cambodia. (Phnom Penh city)

- **Nov. 2015**: “Notification of Commencement of Business” was filed in regard to production and sale of Euglena. (Food ingredient)

- **Apr. 2016**: Wood biomass power generation plant started its operation at Ono City, Fukui Prefecture.

- **Jan. 2017**: Sales of Kobe Euglena started.

- **Jul. 2018**: MICAREA Co., Ltd. was established. (at Kobelco Eco-Solutions Head Office)

- **Jun. 2019**: The waste treatment facility business unit of IHI Enviro Corporation was merged into Kobelco Eco-Solutions Co., Ltd.

- **Sep. 2019**: Opened an office in the UK. (London)