

Corporate name	METAWATER Co., Ltd.
Business description	1. Manufacturing and sales of electrical and mechanical equipment for water, wastewater and solid waste treatment systems 2. Engineering, design and construction of water, wastewater and solid waste treatment plants 3. Operation & maintenance service and management of water, wastewater and solid waste treatment plants
Establishment	April 1, 2008
Paid-in capital	7.5 billion yen
Head office	Shiroyama Trust Tower, 4-3-1 Toranomom, Minato-ku, Tokyo 105-6029, JAPAN
Branches	Hino, Nagoya, Chita, Kobe
Sales Offices	Tokyo, Sapporo, Sendai, Yokohama, Nagoya, Osaka, Hiroshima, Fukuoka
R&D Offices	Aichi•Handa, Chiba•Ichikawa, Tokyo•Hino and Minatoku
Overseas Offices	North America, Europe, China, Korea, Viet Nam

METAWATER

CORPORATE GUIDE



METAWATER Co., Ltd.

<http://www.metawater.co.jp/eng/>

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METAWATER Co., Ltd.

METAWATER, A Leading Company in the Century of Water

Corporate Philosophy

Water is a limited resource on our planet.

Creating a cycle of water is critical for the future of the earth.

As a leading engineering company with a core competence in advanced technologies, we aim to provide optimal water treatment solutions.

Our ultimate goal is to create a society in great environment with safe water and sustainable water supplies.

We will make continuous effort in taking on new challenges to achieve our goal.

Since METAWATER was established, its corporate mission has been to contribute to the creation and maintenance of safe and stable water environments. For more than fifty years, we have made key contributions in the area of water resources. METAWATER solutions have helped reduce global warming, enabled the recycling of valuable resources, and supported efforts to improve responses to natural disasters. This has been part of our effort to meet new needs in changing times in Japan. METAWATER is recognized as a leader in the water treatment field due to its proven record of achievement in providing breakthrough technologies in water and wastewater treatment.

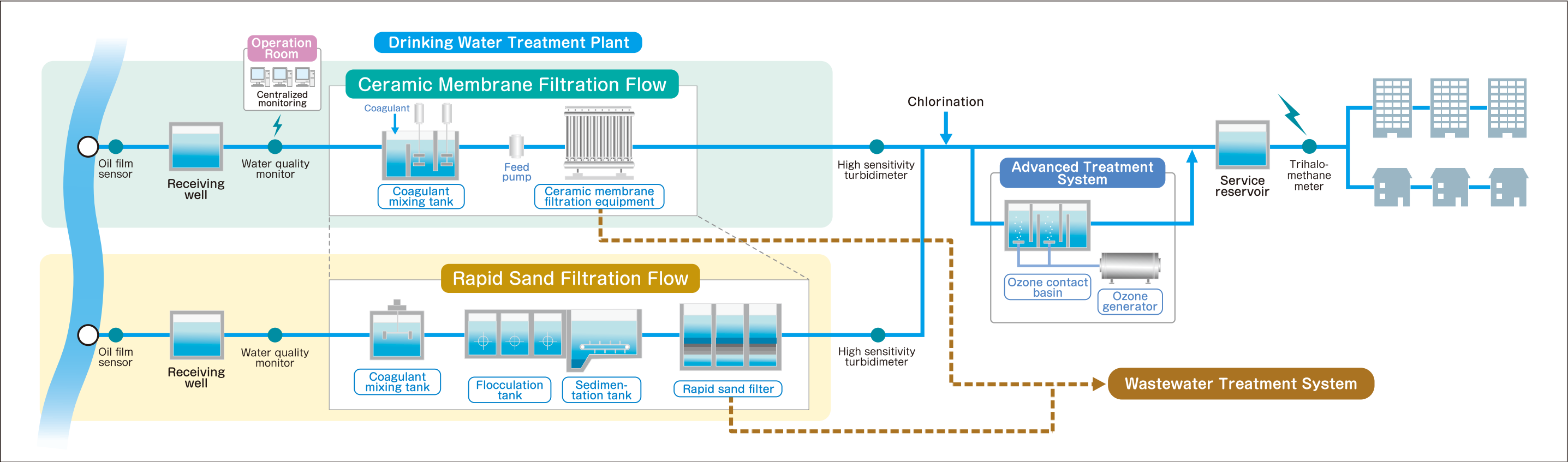
In recent years, METAWATER's proprietary ceramic membrane filtration system has paved the way for new-generation solutions that save energy and space and reduce costs and maintenance expenses in the water treatment field. This innovative system currently holds more than 30% of the membrane filtration market for public water treatment in Japan. We are also active in private finance initiatives (PFI), working with government entities to ensure that all local communities have ready access to safe and high-quality potable water.

Our commitment to the public is equally strong outside Japan. METAWATER works closely with customers to deal directly with the actual conditions in each locale to solve problems specific to individual communities to offer solutions not only tailored to unique requirements, but also designed to meet the demands of the current age.



Drinking Water Treatment for a Stable Supply of Safe, High-Quality Water

Our goal is to provide a stable supply of safe and high quality potable water. To this end, METAWATER takes charge of the design, manufacture, installation, operation and maintenance of various treatment systems used at drinking water treatment plants. We are also specialists in electrical equipment and systems for water treatment plants. In addition, we offer compact packaged ceramic membrane filtration systems to meet overseas client's specific needs for both stationary and mobile applications.



Ceramic Membrane Filtration System

The unique features of ceramic membrane element, such as high mechanical strength and resistance to chemicals, facilitate the ideal system design that meets the needs of every water treatment plant.

- Safe and high quality water
- Stable operation
- High water recovery rate
- Easy operation & maintenance
- Low operation cost



Ceramic membrane element

Packaged filtration systems



Stationary system

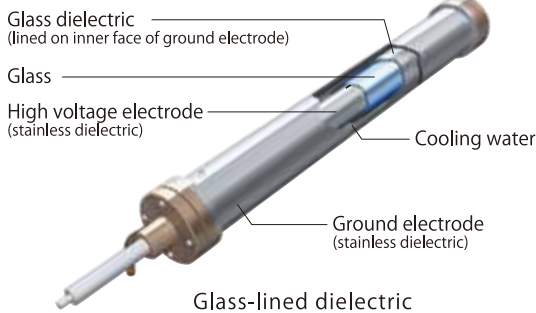


Mobile system

Ozone Generation System

With more than 100 units delivered and in operation to date, METAWATER's ozonation system demonstrates its product development capabilities and client acceptance. This system features a glass-lined ozone generator tube with remarkably low breakage rates, coupled with an advanced high-efficiency, low-harmonics power supply system that provides our clients with utmost in assured performance.

- High-efficiency ozone generator tube
- System design assuring high reliability
- Harmonic control



Glass-lined dielectric

Electrical Equipment

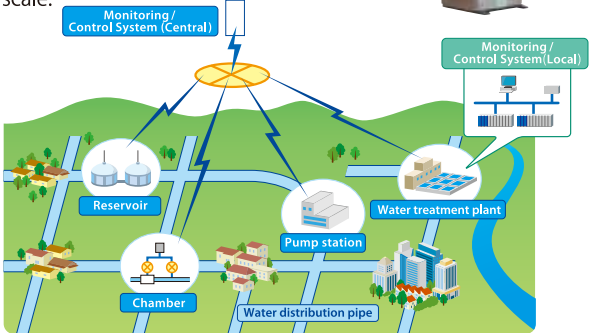
An Extensive Line of Products

- Electrical panels
- Power receiving systems
- Transformers
- VFD equipment
- Operation monitoring and control systems



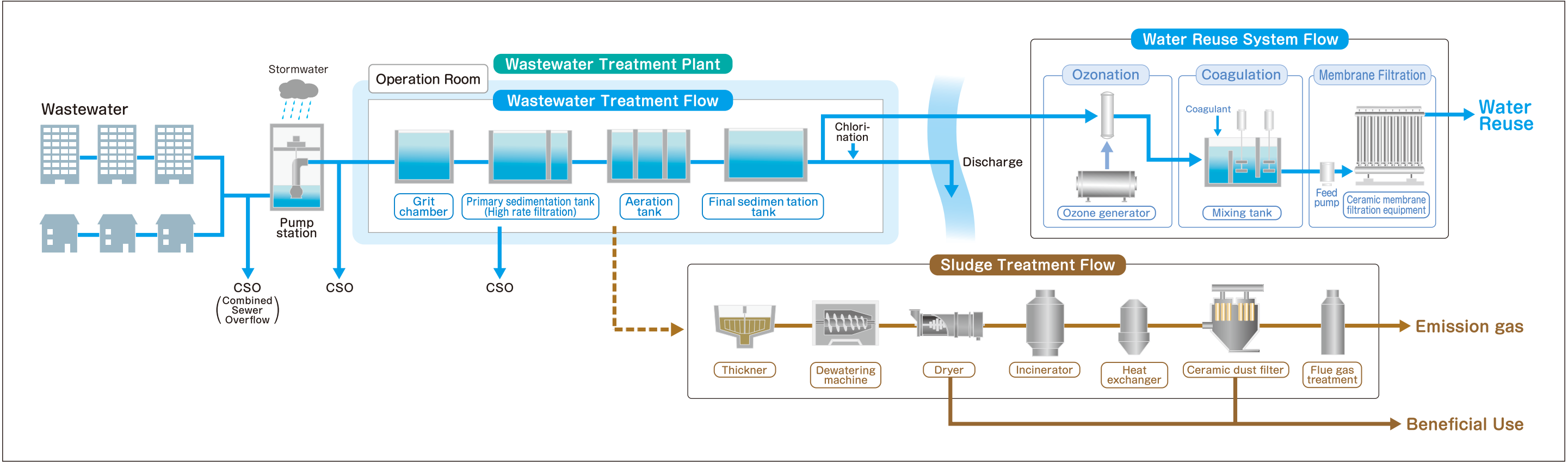
Monitoring System

METAWATER also provides monitoring systems that allow constant surveillance of entire facilities, from the smallest to the largest in scale.



Wastewater Treatment, the Key to Healthy Water Cycles

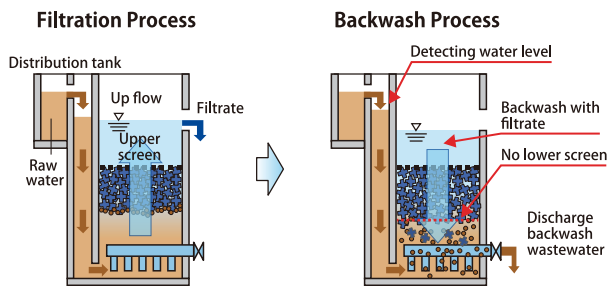
METAWATER supplies a wealth of equipment and systems for optimal treatment. Our water reuse system produces high-quality reclaimed water from wastewater and our sludge treatment system reduces sludge volume and treats sludge for beneficial use. The company's unique high-rate filtration system provides efficient wastewater treatment at low cost and serves as a key element in combined sewer overflow control. We also engage in the design, manufacture, construction, operation and management of wastewater and sludge treatment plants.



High-Rate Filtration System for CSO Treatment

The high-rate filtration system provides upflow filtration for CSO (Combined Sewer Overflow) using our unique floating media to improve removal efficiency. It can also be used as a primary sedimentation tank, as an effective way to reduce the footprint.

- **High treatment capacity**
 - ▶ Treatment capacity: 1000 m³/m²/day
 - ▶ Removal efficiency: SS70% (100% when the particle size is 1 mm or more)
- **Easy operation and maintenance**
 - ▶ Easy operation (compatible with unattended operation)
 - ▶ Less power-driven equipment
- **Low running costs**
 - ▶ No Chemical required
 - ▶ Less power consumption



Sludge Drying and Incineration System

Incineration/gasification system

- Complete biosolids combustion based on extensive experience with FBC technologies.
- Ensures low emissions of particulate pollutants and GHGs.
- Conserves/generates electric power through efficient heat recovery.
- Phosphorus recovery from incineration ash.



Drying/carbonizing system

- Uses dried sludge and carbide as fuel in coal boilers and waste incinerators.
- Rotary direct/paddle indirect dryers produce effective agitation and drying, without circulation of dried sludge particles.
- Kiln and fluidized bed carbonization furnaces produce sludge carbides for fuel and fertilizer.

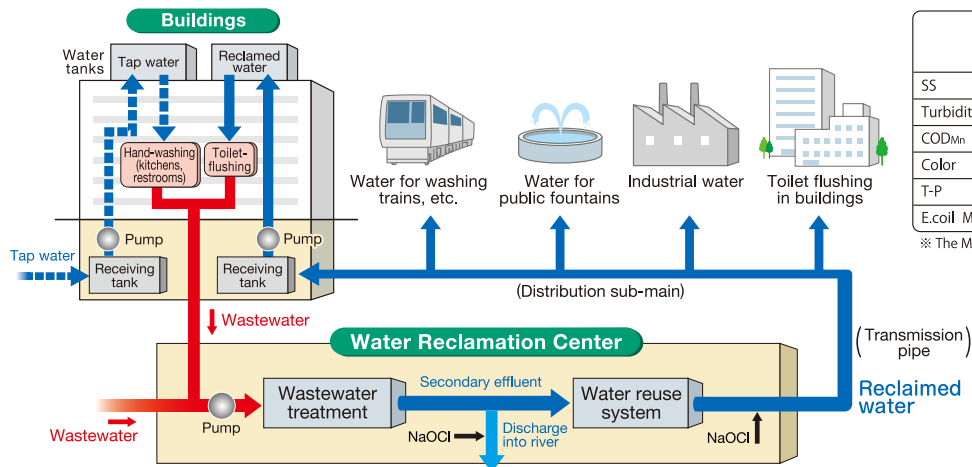


Water Reuse System

METAWATER's water reuse system produces excellent reclaimed water from secondary effluent. Ceramic membrane filtration combined with pre-ozonation and coagulation generates triple synergy effect for high quality, safe and low cost reclaimed water.



- Safe, high-quality treated water
- Space-saving, high-rate filtration
- Very durable membranes that are easy to manage and maintain



	Secondary Effluent	Reclaimed water from Water reuse system	Standards of water for recreational use (from MLIT data)
SS mg/L	0-2	< 1	—
Turbidity degree	1-3	< 0.1	< 2
COD _{Mn} mg/L	7-13	2-6	—
Color degree	10-24	0-3	< 10
T-P mg/L	0.1-1.3	< 0.1	—
E.coli MPN/100mL	150-4600	N/D	N/D

※ The Ministry of Land, Infrastructure and Transport