

Adaptation to the water environment and contribution to sustainable plant development through water-saving plants

We propose a water-saving plant that reduces the amount of water taken and wastewater by combining:

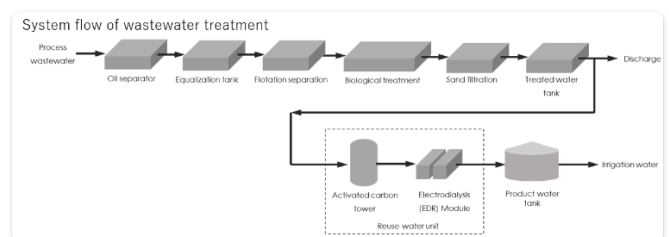
- Selection of water, drainage, cooling water, and heat medium systems considering water source constraints and water balance of the entire plant
- Use of wastewater

Even in areas where there are concerns about restrictions on the use of water sources and depletion risks in the future, the concept of water-saving plants can be used to reduce the long-term impact on the surrounding water environment and enable sustainable plant development.

Example:

- Air-cooled plants that do not have a circulating cooling water system in the plant by cooling process fluids and equipment such as rotating machinery using an air-cooled heat exchanger.
- A part of treated water whose wastewater generated in the process is below the release water quality standard is highly treated with activated carbon adsorption tower and electro dialysis type desalination equipment, and reused as irrigation water in the plant.
- Concentrated water generated when groundwater is treated with a reverse osmosis membrane is reused as general water and fire extinguishing water.

Photo (left):Oman's oil refinery, Photo (right):Wastewater treatment system flow



Company Name

JGC GLOBAL Corporation

Type

- Climate-resilient development planning

Company Web Page

<https://www.jgc.com/en/>

Form

- Engineering

Technology Web Page

<https://www.jgc.com/en/projects/014.html>

Sector - Category - Sub-Category

- Water Environment, Water Resources
 - Wastewater treatment
 - Others

Cost Range (K USD)

- 100 - 1,000
- 1,000 - 10,000
- 10,000 >

Countries with Track Record

- Indonesia, Oman, Saudi Arabia, Qatar, Kuwait

Track Record

- Introduced in developing countries by themselves

Potential User

- Policy makers
- Private sector

SDGs

- 6. Clean water and sanitation
- 9. Industry, Innovation, and Infrastructure

Target of Adaptation

- Quality of Life, Industry

Adaptation Measures Levels

- Protect

Time Scale

Current, Future (Short Term)