

Demonstration Project for the practical use of Local Energy Production and Local Consumption technology with high-efficiency Anaerobic digestive system

Project Members

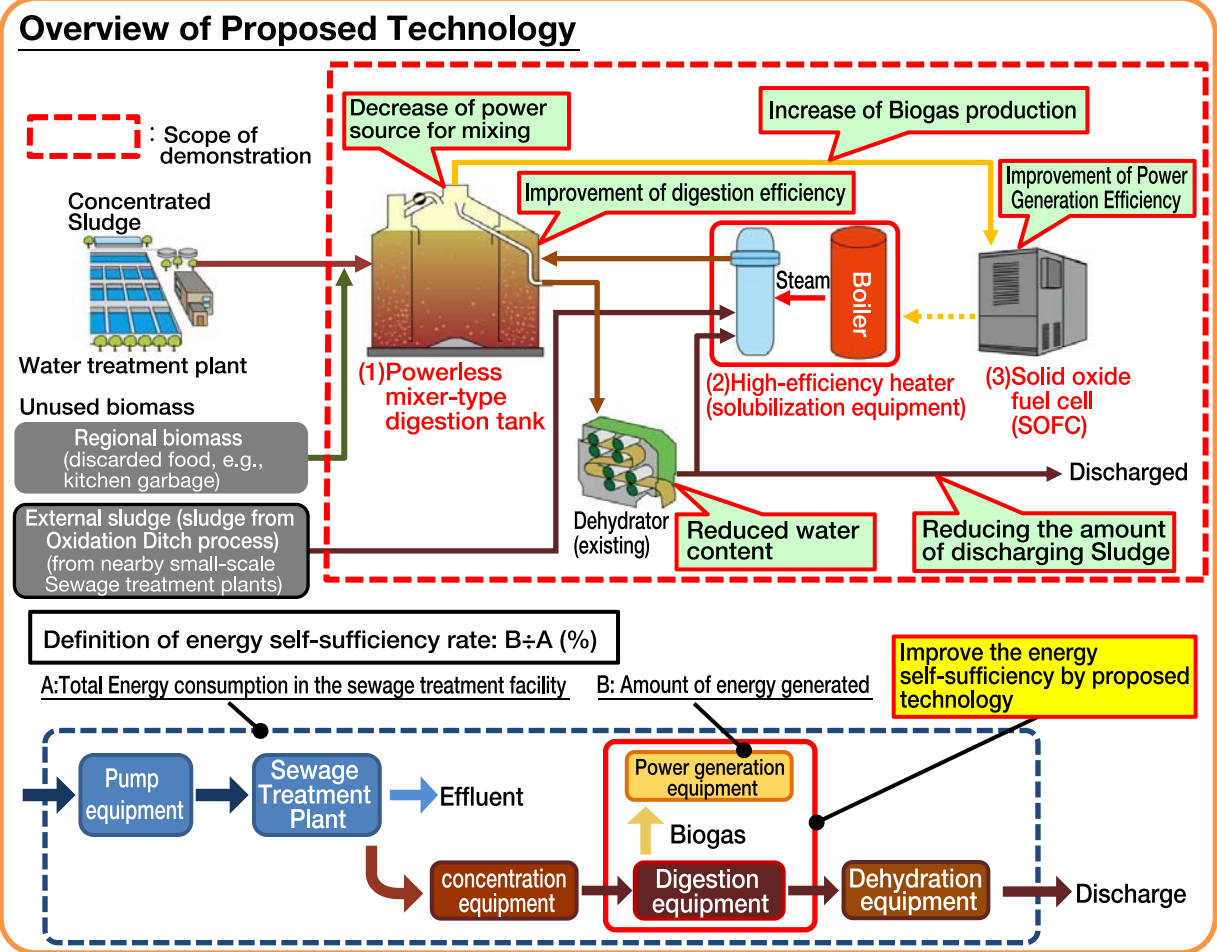
Joint research organization formed by Mitsubishi Kakoki Kaisha, Kyushu University, Japan Sewage Works Agency and Karatsu City

Demonstration Field

Karatsu City Sewage Treatment Center in Saga Prefecture

Demonstration Overview

Demonstrate the practical use of unused Biomass such as food waste, Automatic hydraulic mixing digestion tank, thermal hydrolysis system which increase the generating quantity of Biogas, High-Efficiency digestion system with Fuel Cell having high power generation efficiency, and the improvement of processing performance and Energy recovery rate.



Features of Proposed Technology Innovation

(1) Automatic hydraulic mixing digestion tank

- No power is required for mixing inside of digester by using produced Biogas pressure.
- Expecting the improvement of maintenancibility and reducing of running cost as a structure which have any mechanical facilities in the digester.

(2) High-efficiency heater (Thermal Hydrolysis system)

- Expecting to reduce the digesting duration by heat hydrolyzed act of Thermal Hydrolysis system
- Expecting to improve the digestion efficiency and increase of biogas production.
- Expecting to reform sludge and reducing water content of dewatered sludge.
 - Reducing the disposal amount of dewatered sludge

(3) Solid Oxide Fuel Cell (SOFC)

- Expecting to improve the power generation efficiency.
- Precious metals are not required for electrode catalyst.