

Technology for producing next-generation sewage sludge solid fuel emitting no greenhouse gas

Verification test performed by

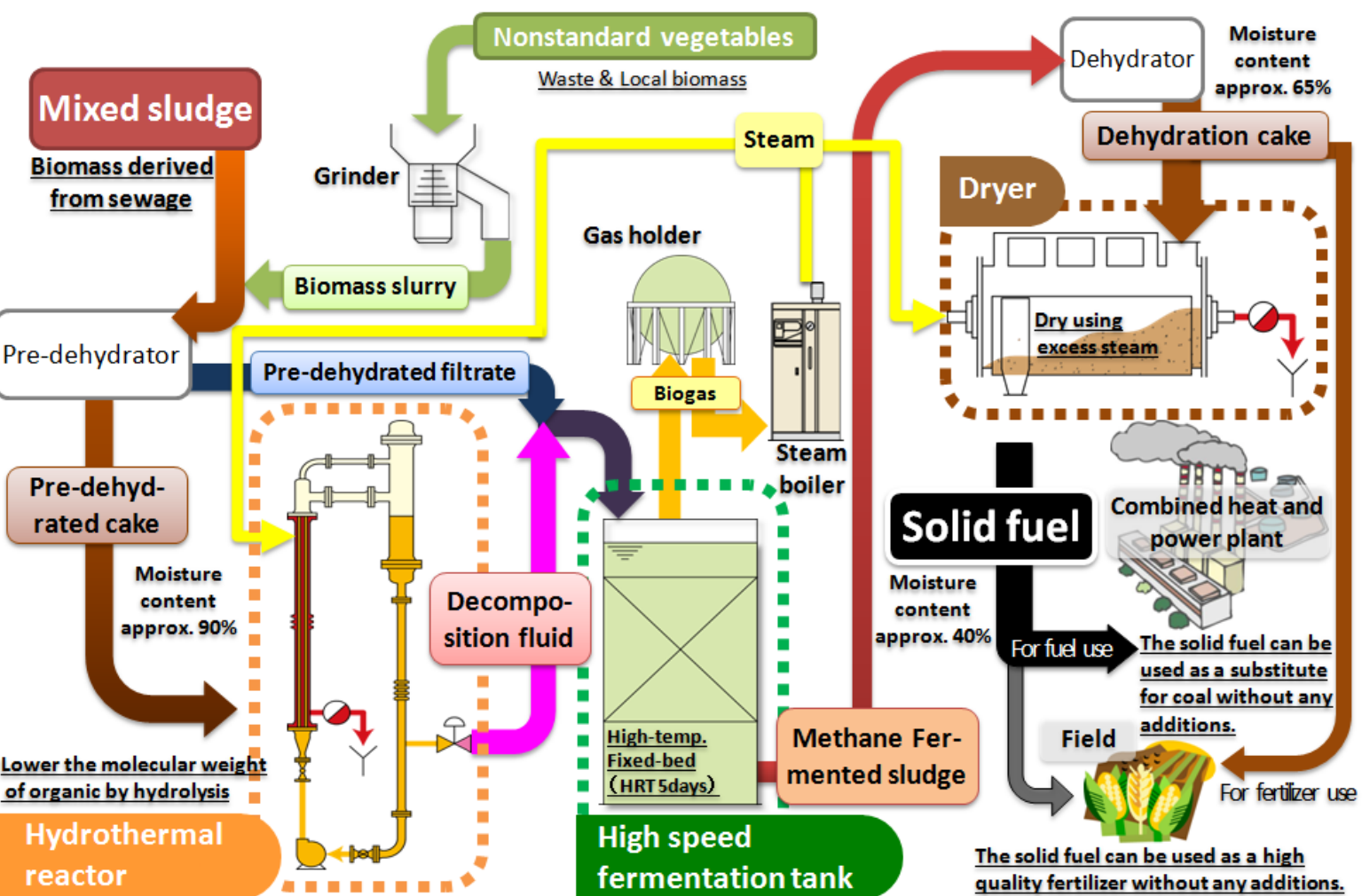
Consortium between Nagasaki City, Nagasaki Institute of Applied Science and Mitsubishi Nagasaki Machinery Mfg. Co.

Testing site

East Sewage Treatment Facility, Nagasaki City

Purpose of verification test

Testing of system technology combining Pre-dehydration (Adjusting moisture content of mixed sludge and regional biomass), Hydrothermal treatment (Lower the molecular weight of organic by hydrolysis), High speed methane fermentation (High temperature fermentation) and Dehydration / Drying (Fuelization)



High-powered continuous hydrothermal reactor dehydrates degradable organic matter, excess sludge, and so forth into carboxylic acids. They are further converted into digestive gas, leaving persistant organic matter such as paper that can be used as solid fuel.

○ The solid fuel produced in this way can be used as fertilizer without any additions, thereby contributing to the conservation of phosphorus resources.
 ○ It will significantly reduce sludge treatment costs that have been borne all along by local governments.