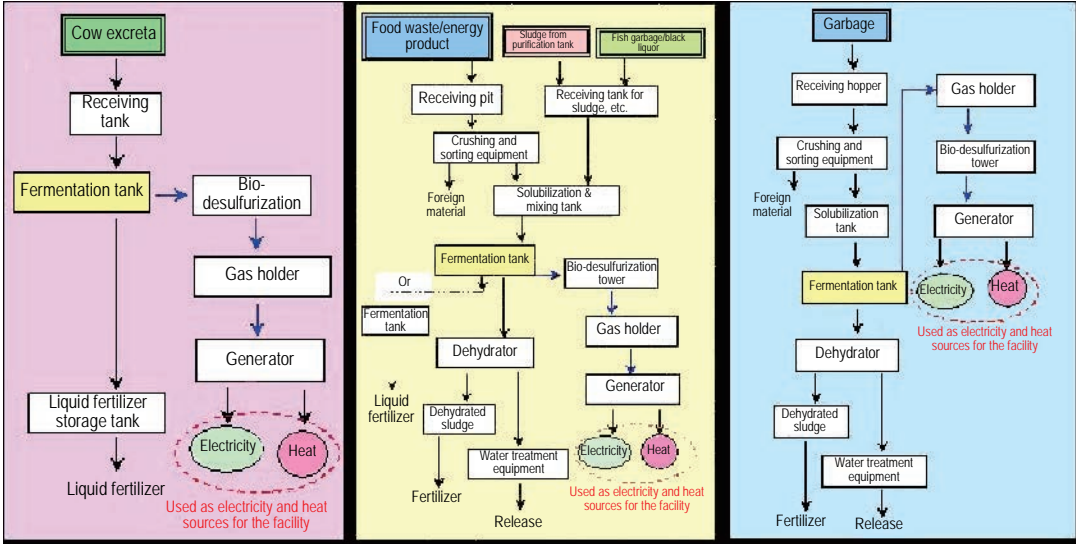


Technical Information Sheet

1. Name of technology	Bio gas utilization technology
2. Type of technology	<p>This technology uses unused biomass (garbage, sludge, livestock excreta, etc.) to recover energy by methane fermentation.</p> <p>This technology is used to acquire energy such as purified gas, heat, and electric power using bio gas.</p>
3. Description of technology	<p>[Objective and application of the technology] This technology is used to acquire regenerated energy from unused biomass.</p> <p>[Characteristics of the technology]</p> <ol style="list-style-type: none"> (1) Prevention of river pollution, groundwater pollution, air pollution, soil pollution, and other pollution and reduction of global warming gas emissions (shift from fossil fuel to biomass fuel) (2) Various system flows available according to the type of biomass (3) Utilization of fertilizer with fermentation liquor as well as acquisition of energy (4) Generation of electricity and city gas through gas purification <p>[Delivery record] Domestic: 13 facilities Overseas: 3 facilities</p> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1; padding-right: 10px;"> <p>Objective, application, characteristics, delivery record, and price of technology</p> </div> <div style="flex: 3;">  <p>The image contains three flowcharts illustrating different bio-gas utilization systems:</p> <ul style="list-style-type: none"> Cow excreta (left): Cow excreta → Receiving tank → Fermentation tank → Bio-desulfurization → Gas holder → Generator → Electricity/Heat (Used as electricity and heat sources for the facility) → Liquid fertilizer storage tank → Liquid fertilizer. Food waste/energy product (middle): Food waste/energy product → Receiving pit → Crushing and sorting equipment → Foreign material → Fermentation tank → Bio-desulfurization tower → Gas holder → Generator → Electricity/Heat (Used as electricity and heat sources for the facility) → Dehydrator → Dehydrated sludge → Water treatment equipment → Fertilizer → Release. There is also a path from Receiving pit to Receiving tank for sludge, etc., which goes to Solubilization & mixing tank, then to Fermentation tank, then to Bio-desulfurization tower, then to Gas holder, then to Generator, then to Electricity/Heat (Used as electricity and heat sources for the facility), then to Dehydrator, then to Dehydrated sludge, then to Water treatment equipment, then to Fertilizer, then to Release. Garbage (right): Garbage → Receiving hopper → Crushing and sorting equipment → Foreign material → Solubilization tank → Fermentation tank → Bio-desulfurization tower → Gas holder → Generator → Electricity/Heat (Used as electricity and heat sources for the facility) → Dehydrator → Dehydrated sludge → Water treatment equipment → Fertilizer → Release. </div> </div> <p>[Price and other inquiries] Please contact the office and person in charge below.</p>
4. Classification of technology	
(1) Applicable fields	Municipal solid waste treatment, Industrial waste treatment
(2) Target waste	Food waste/raw garbage, Other
(3) Services provided	Plant construction
5. Countries to which this technology can be provided	Korea, China, Southeast Asia
6. Keywords	Methane fermentation, biomass raw material, gas power generation, bio-desulfurization, liquid fertilizer utilization
7. Contact information	<p>MITSUI ENGINEERING & SHIPBUILDING CO., LTD.</p> <p>Takehiko Ogura, Energy Solutions & Public Infrastructure Sales Department, Engineering Headquarters</p>