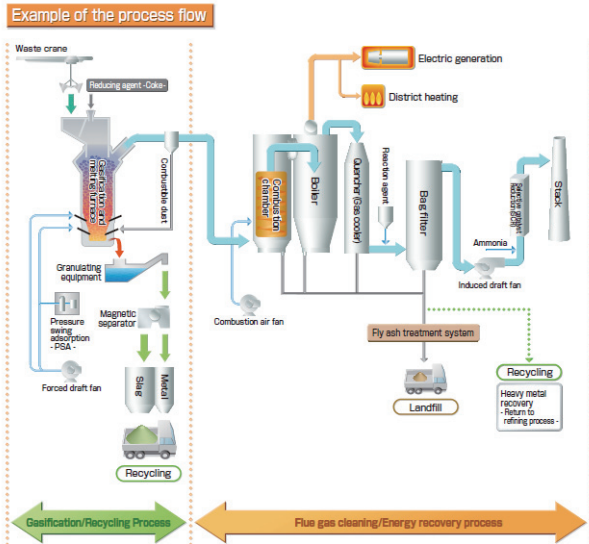


Technical Information Sheet

1. Name of technology	DMS : Direct Melting System (shaft furnace type gasification and melting furnace) for Municipal Solid Waste
2. Type of technology	This technology is used for drying and gasifying wastes, melting ash content and recycling ash content by gasification and high temperature melting of the shaft furnace.
3. Description of technology	<p>[Objective and application of the technology] Gasifying , melting , and recycling various types of wastes, such as Municipal Solid Waste</p> <p>[Characteristics of the technology]</p> <ol style="list-style-type: none"> (1) The high quality molten materials are all recycled, minimizing the amount of final waste disposal(landfill). (2) Can be used for various types of waste (without pretreatment) (3) Utilization of recovered thermal energy (high efficiency power generation) (4) High environmental performance (dioxins, etc.) (5) This gasification technology has been proven by over 30 years of operation <p>Example of the process flow</p>  <p>[Delivery record] From the time the operation of the first plant started in 1979, 40 orders have been received. 35 plants have already been constructed (including 2 plants in Korea) and 5 plants are under construction (as of November 2011). Capacity per line: Min. 40 t/d, Max. 300 t/d (Existing Maximum total capacity per plant: 720 t/d)</p> <p>[Price and other inquiries] NIPPON STEEL & SUMIKIN ENGINEERING CO.,LTD. Overseas Marketing Section, Environmental Solution Division KAWAI Noboru Tel (direct): +81-3-6665-2812 E-mail: kawai.noboru@eng.nssmc.com</p>
4. Classification of technology	
(1) Applicable fields	Municipal solid waste treatment, Hazardous waste treatment
(2) Target waste	Paper/cardboard, Waste plastic, Plastic bottles, Glass bottles, Steel cans, Aluminum cans, Styrene foam, Food waste/raw garbage, Construction waste, Electric home appliances, Waste tires, Medical waste, Other
(3) Services provided	Plant construction, Sales of machinery and equipment, Waste treatment service, Technical cooperation/licensing, Consulting
5. Countries to which this technology can be provided	Japan and other countries
6. Keywords	Gasification, MSW (Municipal Solid Waste), Material recycle, Melting
7. Contact information	NIPPON STEEL & SUMIKIN ENGINEERING CO.,LTD. Overseas Marketing Section, Environmental Solution Division KAWAI Noboru Tel (direct): +81-3-6665-2812E-mail: kawai.noboru@eng.nssmc.com

Objective, application, characteristics, delivery record, and price of technology