



GTS designs and manufactures a wide range of energy systems for industrial applications worldwide. From small package heaters to turnkey energy systems, GTS can handle all of your heating and electrical energy needs.

GTS Energy Technology offers solutions for thermal energy & process heating needs

- City Industry Garbage Treatment & Electrical Power Plant
- Gas and Oil Fired Thermal Fluid Systems
- Low Temperature Process Bath Heaters
- NUK High-Pressure Steam Generators
- Direct Fired and Convection Process Heaters
- Waste energy recovery system
- Wood Fired Skid Packages
- Total Energy Systems for Board Plants
- Biomass and Garbage Fired Power Station
- Renewable/Clean Treatment and Electrical Power Plant  
(Solar/Wind/Geothermal etc.)

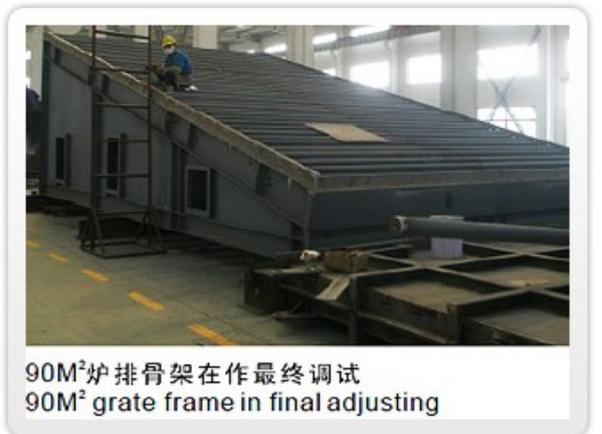
GTS is committed to being the best in the industry, providing solutions that consistently achieve the objectives for which they were designed. We welcome the opportunity to address your electrical power/thermal energy and process heating application needs and engineering project.



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GTS' products and systems can be found in USA, China, Thailand, Indonesia, Malaysia, India, Canada, Germany, Sweden, Norway, Russia, UK, Spain, Brazil etc.

GTS provides full range services for world energy market, including the introduction of GTS' product lines to heating electrical/energy market and the manufacturing/sourcing of the all products.





导热油辐射炉及对流炉在待运输状态  
Radiation/convectional Thermal Fluid Heater



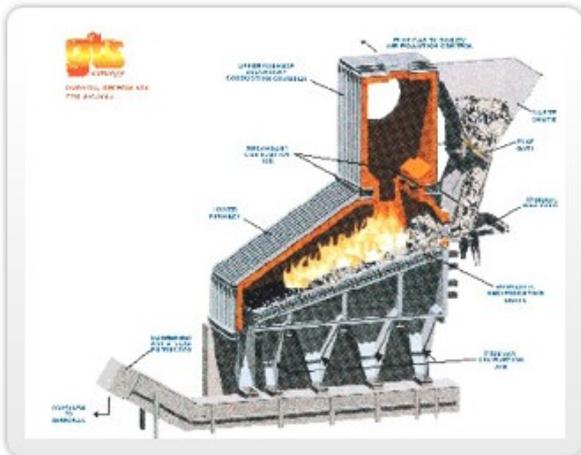
除尘器  
Dust collector



生产中的对流导热油炉  
Convectional thermal oil heater in process



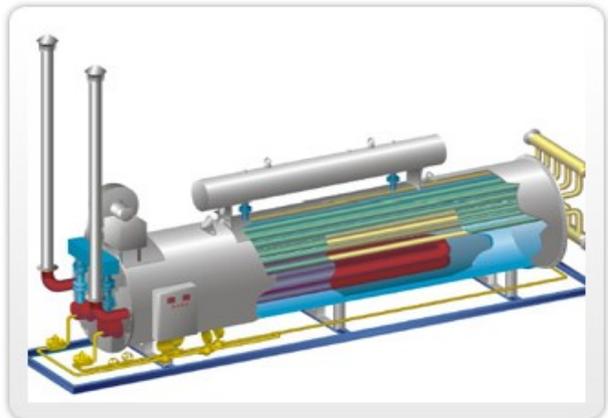
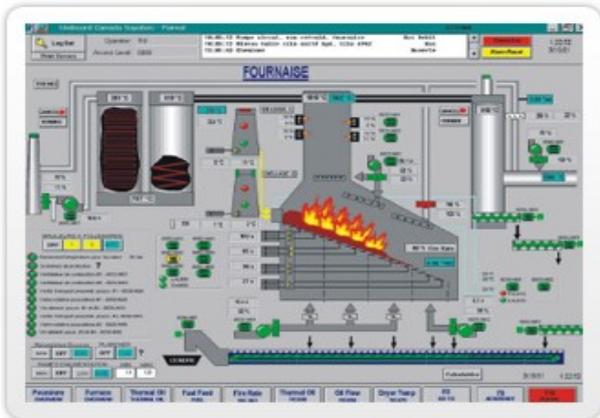
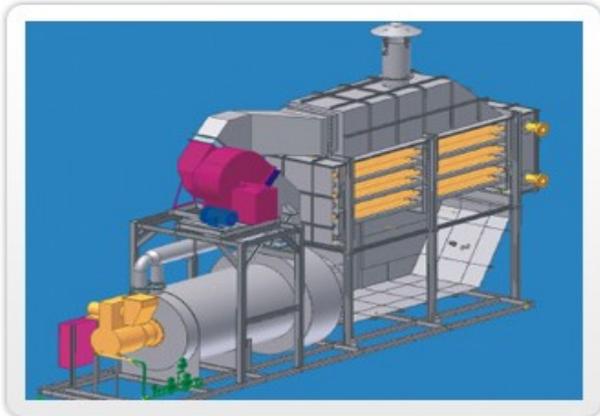
550KW汽轮发电机组  
550KW Turbine generator



Today, GTS is universally recognized as one of the leading companies in the market of process heating systems for industrial applications. With its staff of highly knowledgeable and experienced engineers, GTS is capable of handling Thermal/Electricity project as small as 1,000,000 Kcal/hr to as large as 100,000,000 Kcal/hr and as small as 500KW to as large as 50,000KW.

GTS is fully integrated company that is capable of providing the complete product design, various engineering and technical services, manufacturing

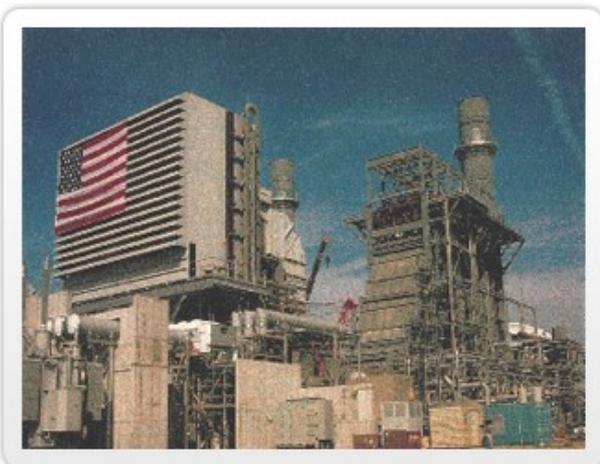
various types of non-standard products and experienced service engineering on-site technical services team. GTS supplies its products to a diverse range of industries, including the Wood/Board Manufacturing, Oil and Gas, Power, Chemical, Textile, Food, Plastics and many more.



All the products were extremely successful, and after many years of operation, GTS became an industry leader in Gas, Oil and Solid Fuel fired Thermal/Electrical systems for industrial applications.

GTS was established and specializing in waste fired electrical/thermal energy system for the industry, using the reciprocating grate furnace. GTS was the first to use the reciprocating grate furnace in the North American and China panel board market.

Since those products were introduced, GTS has added Process Bath Heaters, High Pressure Steam Generators, Direct Fired Convection Process Heaters, with Engineered Skid Packages, to its initial product line.



**Quality in Design, Manufacturing and Customer Service**

GTS designs and manufactures the finest electrical/thermal energy systems available in the world today. GTS maintains complete quality control over all phases of production, from design through manufacturing, installation and startup.



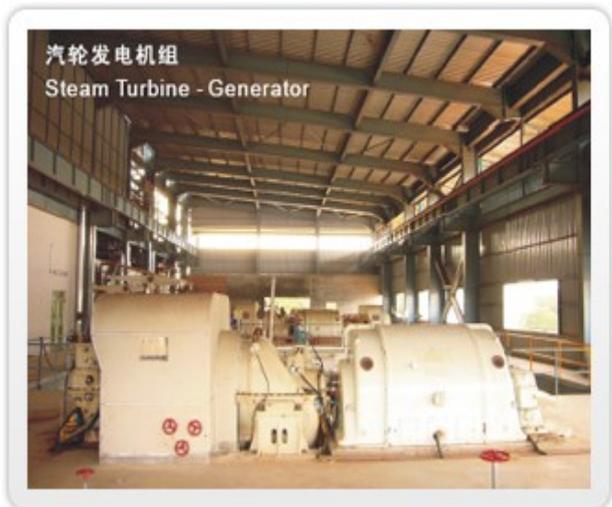
### GTS' Commitment to Customer Fully Satisfaction

We have engineers in a variety of disciplines who understand and have experience in many process industries. We work with customers from the design phase of a project to its complete installation and startup. The GTS Energy field service department employs the most highly trained and experienced service personnel in the industry. Our service department is ready to assist you 24 hours a day, 7 days a week. GTS Energy is committed to being the best in the industry. Our

thermal energy systems continue to meet or exceed the demands of the applications for which they are designed. Feel free to speak to any of our customers and let them tell you about their experience with GTS Energy.

### Spare Parts

GTS' spare parts department stores a wide range of spare parts in sufficient quantities to handle all of your equipment spare parts needs at any time. In addition, GTS' spare parts department is able to manage your spare parts inventory to make sure that you avoid costly downtime at the same time keeping your inventory levels in check, and upgrades as they become available.



### Site Service

GTS service technicians boast a combined field-experience of many years in process heating equipment service. This ensures that your equipment will always be serviced by qualified people. GTS service is available within 24 hours if necessary. GTS' equipment service department offers commissioning and start-up support, operator training, regular maintenance support, telephone support, on-site inspection and trouble shooting for all of our product lines.



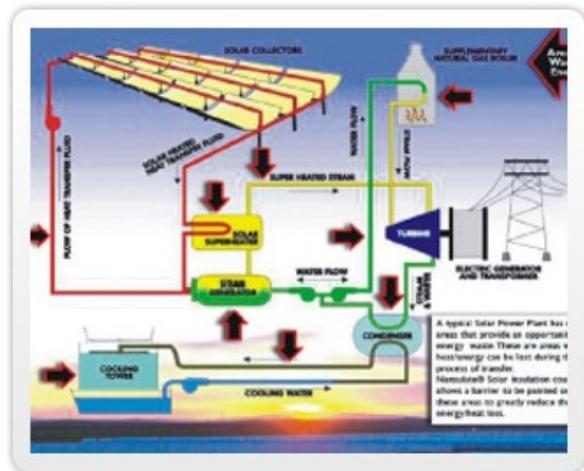
## GTS Energy Integrated System: Changing Broad-spectrum Waste into Clean Energy

Through decades of application and continuous improvement of GTS combustion technology, GTS reciprocating grate combustion system is always the preferred and high-efficiency waste combustion processing system in terms of low-heating value, high-moisture and high-ash waste fuels. All the wastes with different sizes and shapes generated by paper industry, garbage disposal and composited board industry can be burned in our reciprocating grate combustion system. Moreover, the long-term failure-free operation is another preeminent advantage of GTS reciprocating grate combustion system.

### GTS Integrated Waste Heat Recovery System: An Appropriate Energy System Meeting Your Demand

According to your actual application, our system can change the waste heat generated by burning wastes into various reusable energies, including:

- The heat of heat transfer fluid, used for medium and high temperature heating process;
- Steam, used for process heating and power generation;
- Clean medium and high-temperature flue gas, used for direct heating or drying process.



The heat transfer fluid furnace system (including radiation and convection sections) specially designed and manufactured by GTS can recycle the waste heat efficiently and decrease the scale formation of pipeline to the minimum. Through many-year reliable service, GTS heat transfer fluid furnace system's performances have been proved, and the system has become the standard and model of biological waste renewable energy recycling system.

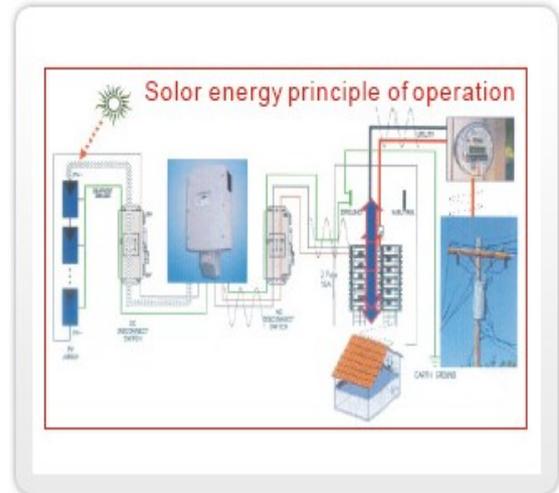
The waste heat boiler is used to generate: The saturated steam used for process heating; superheated steam; or low and medium-pressure steam. Such steam also can be transmitted to turbine generator to generate electricity. According to different steam volumes, boilers can be assembled in the factory or on site. As for corrosivity or easy scaling, the waste heat boiler will adopt special anticorrosive or low-scaling design.

GTS System's Preeminent Environmental Protection Performance:

Ultra Low-Emission Engineering Design

With regard to the environmental protection, GTS energy system adopts the latest control technology and equipment for environmental protection to meet your demands on environmental protection during waste processing. The details are as follows:

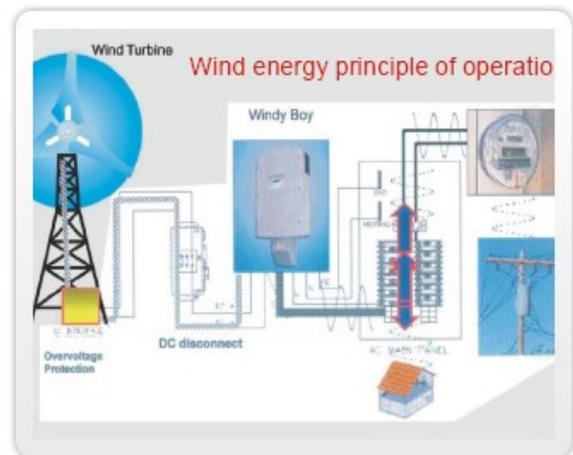
- Control the combustion through the subsection proportioning and flue gas circulation to reduce the emission of CO, VOC and Nox. Besides, SNCR can be adopted to control the emission of NOx;
- Conduct the clean combustion processing of waste water from glue making/waste gas from hot press;
- Adopt the dry and damp-dry humid system to control the emission of granules or acid gas.



GTS' Plentiful Experience

GTS Energy was incorporated in America in 1986. By 2009, GTS had designed and installed 119 energy systems, regarding wood wastes as the major fuel, around the world. Such achievements mainly benefit from our staff, their excellent technology and their earnest, abundant experience and outstanding capabilities in project management manufacturing and after-sale service.

During the whole implementation of the project from the initial design to completion, GTS Energy owns the all-around resources required by each stage. We always keep improving our factory meeting ASME standard. Cooperating with clients, our employers find out the optimum processing way from clients' view to conduct the feasibility analysis of project economics through project design, manufacturing, installation and debugging; in this way, we provide clients with a suitable energy system to meet their demands on energy system.

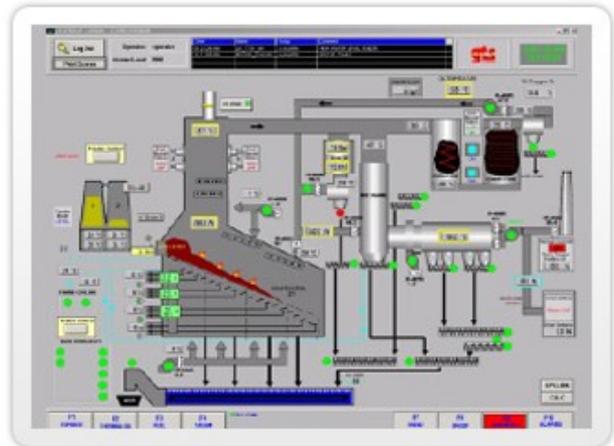
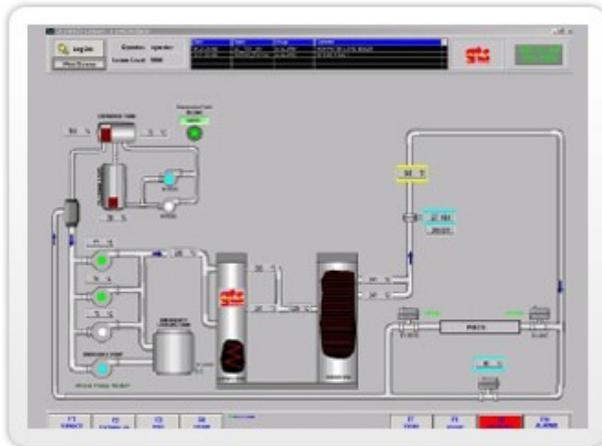


GTS' Commitment: to Satisfy Clients

Satisfying clients is our working orientation as well as our final target of continuous pursuit. No matter the support for replacing spare articles and parts, support for maintaining equipment, site service and training or the continuous improvement of existing system, we will attempt to do our best to enable our energy system to be more stable and high-efficiency to provide reliable energy supply for your production line and other parts of your factory. To become the best supplier of economy/technology in this field is the consistent pursuit of GTS Energy staff. At present, GTS Energy can provide you with the following products:

- Energy system changing wooden, biological and urban garbage, etc. into the reliable heat/electricity;
- The whole energy plant for composite board factory;
- The heat transfer fluid heating supply system adopting wooden wastes and biomass as the fuel;
- The heat transfer fluid heating supply system adopting fuel gas and fuel oil as the fuel;
- The supply system for recycling various waste heat and changing into clean energy;
- NUK natural circulation high pressure steam generator;
- Medium and high pressure/medium and high temperature process heatexchanger of salt, oil, steam, water and various media;
- Medium and high pressure/medium and high temperature process heatexchanger of salt, oil, steam, water and various media;

If you are interested in the above products, do not hesitate to contact with us. We will provide you with GTS Energy's special technology, abundant experience and great achievements in the above products in details. Also, you can directly contact with our clients to acquire the detailed operating information of various systems.



### **Brief Features of GTS Energy System:**

GTS energy system is a high-efficiency energy system, as well as the most universally used energy system in the composite board industry around the world. The system not only help the composite board factory change waste material into valuable energy, but also help a factory dispose huge quantities of waste water/gas on the premise of non-pollution while producing energy, which saves cost for waste water processing equipment.

GTS energy system can directly drive the steam turbine generator unit to fulfill the biomass power generation and also directly drive the industrial steam turbine to drive fans, water and oil pumps, etc. The whole energy system is controlled by the most advanced computer system and PLC hardware to fulfill the real-time control for combustion process and adopts the most maneuverable computer (man-machine direct interaction) screen control mode.

The equipment is featured with the combustion efficiency of above 95% (without the loss of water-cooling system, it doesn't require any expensive and low-efficiency water/gas heat exchange system).

The core of furnace grate system is made up of high-quality heat resisting steel alloy, which enables the fire grate to work under the temperature of above 1000°C without any water cooling system. This special alloy material is very hard and wearable (which is incomparable by carbon steel).

More reliable and safer performance is depending on the omission of water-cooled furnace wall and fire grate system, and even the expensive automatic diesel emergency startup water pump/cooling device under the loss of water and power.

It is suitable for adopting various waste fuels such as waste wood, bark, agricultural and industrial wastes, and even domestic wastes.

It is featured with the automatic cleaning function of the fire grate system, besides, any blocking or entrapment of metal pieces cannot break the fire grate, which ensures the reliability of stable and long-term combustion process. This feature is incomparable by the whole fire grate system.

Adopting the separate over lapping fire grate, if fulfill the most uniform air supply to guarantee the minimum fly ash and complete combustion of fuels.

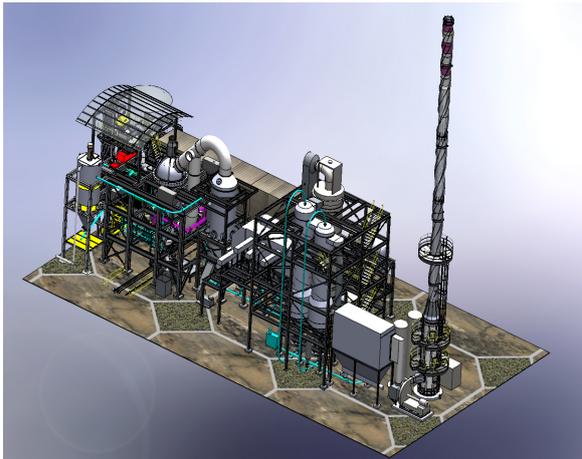
Thanks to the adoption of separate over lapping fire grate, so the whole furnace grate's distortion due to overheating cannot occur, so it is not necessary to adopt multiple-furnace splicing structure to meet the heating demand of large factories like water cooling fire grate system. The excellent engineering design enables GTS combustion furnace system to lower the maintenance/repair workload to the minimum level.

## Plasma Gasification Technology

Plasma solid waste gasification project is the scientific research project cooperated between Shanghai Solid Waste Disposal Center and GTS Technology (Shanghai) Co., Ltd. The project uses the most advanced plasma high-temperature gasification technology (approximately 3000 to 5000 Celsius).



The job site of plasma solid waste gasification

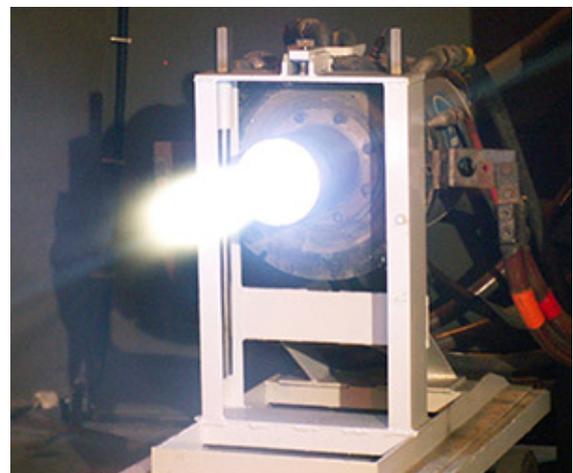


3D Aerial view of plasma gasification project

Treatment object: Solid waste medical waste, industrial waste, hazardous waste and incineration fly ash.

Capacity: 30t/day.

The major difference between plasma gasification and traditional incineration treatment is during the treatment process, the syngas and heat recovery can be efficiently used for power generation and the final emissions from the system is non-toxic and harmless vitreous slag which Plasma torch can be directly used as building material or other high-value byproducts.



Plasma torch