



International
Waste Industries

A large industrial facility, likely a waste-to-energy plant, featuring massive green cylindrical combustion chambers, a complex network of pipes, and a worker in a blue hard hat and yellow safety vest standing on a platform. The scene is brightly lit, showing the scale of the machinery.

Waste Combustion & Waste to Energy Systems

We are committed to being part of the solution to humanity's effect on the environment: Protecting our environment while powering our future!

Who is IWI

International Waste Industries (IWI) is a full service designer, and manufacturer of waste combustion and waste-to-energy (WTE) systems. We're also a complete systems integrator from waste sorting to Air Pollution Control (APC) systems.

Why IWI

IWI personnel will evaluate your waste stream and design a system best suited for your needs.

IWI is committed to high quality standards, health and safety policies, and ethical business practices, as well as excellence in engineering, manufacturing, and innovation.

IWI systems are installed indoors or outdoors throughout the world, from deserts to seaports and from the tropics to the arctic providing exceptional functionality and service, regardless of the weather.

Commitment to Excellence

All IWI equipment is designed and manufactured in the USA. They are modular by design and factory built to keep installation simple and economical. The majority of all piping and wiring is completed at the factory, thus simplifying utility connections to a single point hook-up. All systems are also tested to the fullest extent possible prior to shipment, assuring a minimum amount of time for start-up.



Environmental Compliance

Our systems offer the Best Available Control Technology (BACT) to comply with the most stringent air quality regulations around the world, such as the US EPA and EU standards.

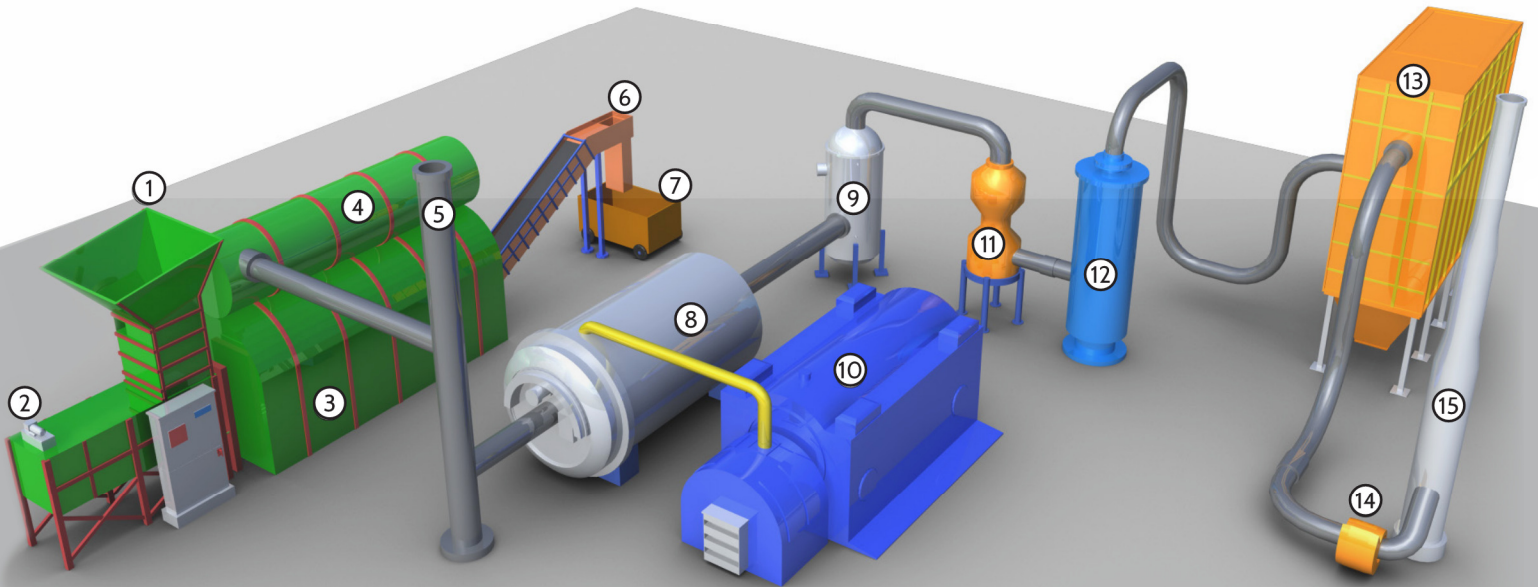
Turnkey Systems

Turnkey projects are one of our strengths. Working in conjunction with your personnel, IWI's engineering and field service groups will coordinate design, fabrication, factory testing, site modification, installation, start up, field testing, operator training and commissioning.



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Waste-To-Energy System



- | | | | | |
|--------------------|-------------------------------|---------------------|---|-----------------------|
| ① Feed Hopper | ④ Secondary Chamber | ⑦ Ash Cart | ⑩ High Pressure Steam Turbine And Generator | ⑬ Dry Baghouse Filter |
| ② Automatic Loader | ⑤ Emergency Bypass | ⑧ Waste Heat Boiler | ⑪ Venturi Scrubber | ⑭ I.D. Fan |
| ③ Primary Chamber | ⑥ Wet Ash Drag Chain Conveyor | ⑨ Economizer | ⑫ Packed Tower | ⑮ Conditioned Exhaust |

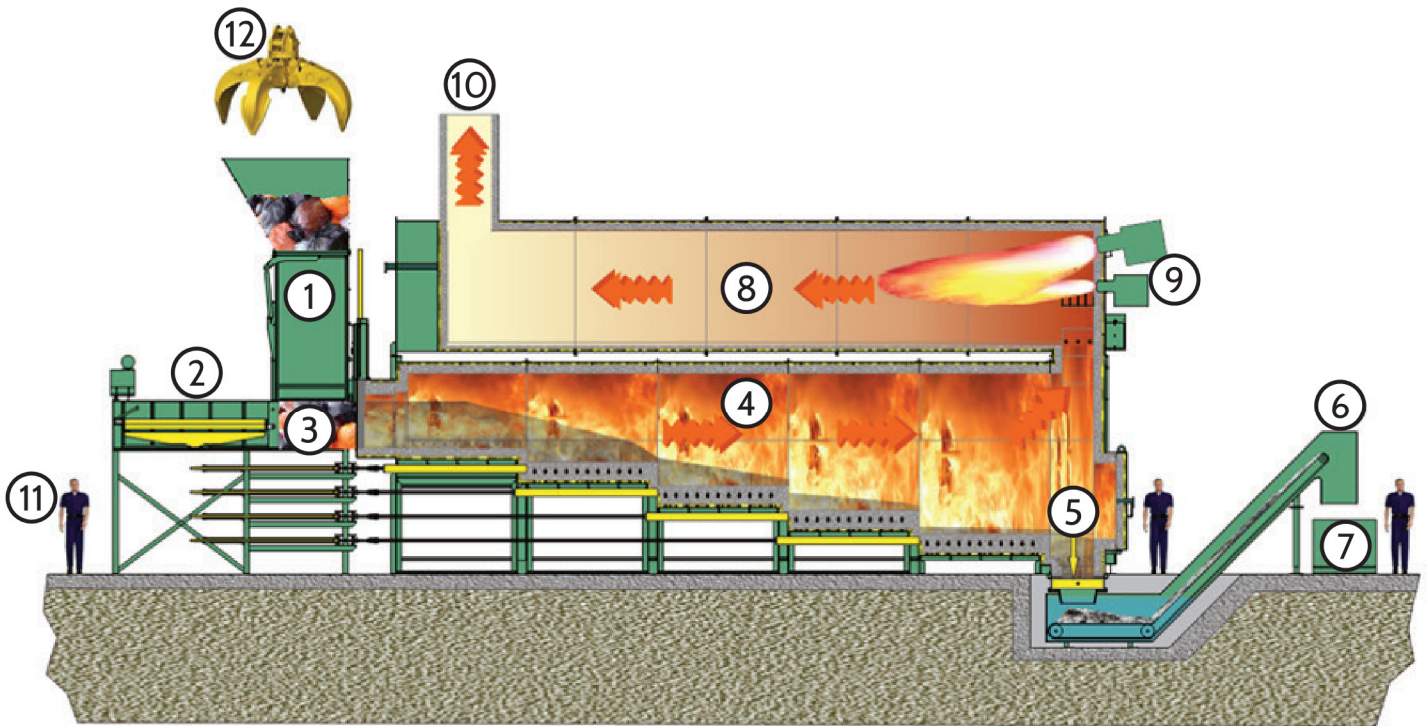


Renewable Energy

Rising energy costs can be offset with an IWI Dual Reactor System when integrated with a heat recovery system. IWI systems offer a proven solution to cost effective waste disposal and renewable energy plants.

When IWI systems are coupled with a superheated boiler and high efficiency steam turbine it can be readily utilized to convert waste to electricity. Control is the key to effective waste-to-energy conversion. IWI heat recovery and renewable energy systems include integrated controls to maintain optimum combustion pressure and temperature - maximizing the efficiency of the waste-to-energy process.

Dual Reactor Pyrolytic Thermal Combustion System



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|--------------------|-------------------------------|---------------------|-------------------|
| ① Feed Hopper | ④ Primary Chamber | ⑦ Ash Cart | ⑩ Emergency Stack |
| ② Automatic Loader | ⑤ Guillotine Door Ash Gage | ⑧ Secondary Chamber | ⑪ Man, 6ft/1.8m |
| ③ Solid Waste | ⑥ Wet Ash Drag Chain Conveyor | ⑨ Ignition Burners | ⑫ Grapple |

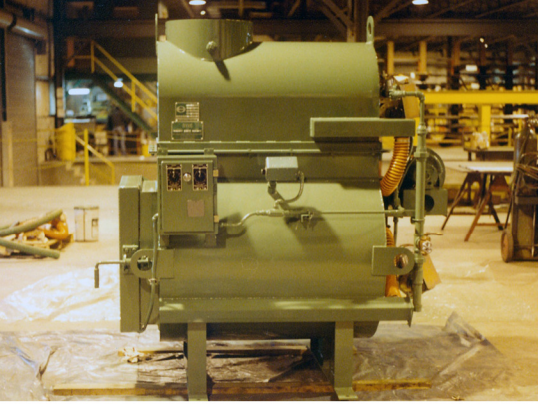
How IWI's System Works

The IWI system utilizes a two-stage combustion process. In the first stage, waste is thermally destroyed in an oxygen starved atmosphere, also known as pyrolysis. In the second stage, these combustible gases are ignited and completely burned.

The two-stage process has the ability to destroy a wide variety of materials in a non-polluting manner. Moisture and hydrocarbons are driven off leaving only a small amount of dry sterile ash.

As waste is fed into the primary chamber of the Dual Reactor System, it is exposed to very high temperatures. Burning of a small portion of the waste with a controlled quantity of air flowing up through the bed of trash produces the desired operating conditions. Unlike conventional incinerators, air velocities in the primary chamber are very low, thereby minimizing ash disturbance and particulate carryover. The pyrolysis gases are ducted to the secondary chamber.

The unique Dual Reactor System secondary chamber combines additional combustion air with the pyrolysis gases, creating a vortex action. As the gases begin to mix, positive ignition occurs resulting in complete combustion of all hydrocarbons. The combined effect of optimum turbulence, correct temperature, and adequate retention time insures maximum combustion efficiency.



System Features & Options

✓ HMI Control Systems

All of the IWI systems and integrated equipment are monitored and automated by IWI's proprietary Human Machine Interface (HMI) Control System.

✓ Air Pollution Control

The APC neutralizes acid gases, removes particulate matter and can also capture heavy metals and other toxic compounds that are not destroyed during the combustion process.

✓ Ash Gate

This is a unique feature of IWI which maximizes the efficiency of the system.

✓ Waste Handling Systems

A wide range of intermediate handling devices can be supplied by IWI, such as waste sorting equipment, cart dumpers, belt conveyors, skip loaders, live bottom storage hoppers, articulated grapple arm, or overhead crane and grapple.

✓ Automatic Loading

The hydraulically operated ram loading system assures maximum efficiency and the utmost in operator safety.

✓ Automatic Ash Removal

When large quantities of ash will be generated or a system is to run continuously, automatic ash removal is a logical choice for full system performance.

✓ Liquid Injection

IWI offers a variety of Liquid Injection Systems to meet the customers needs.

✓ Waste Heat Recovery

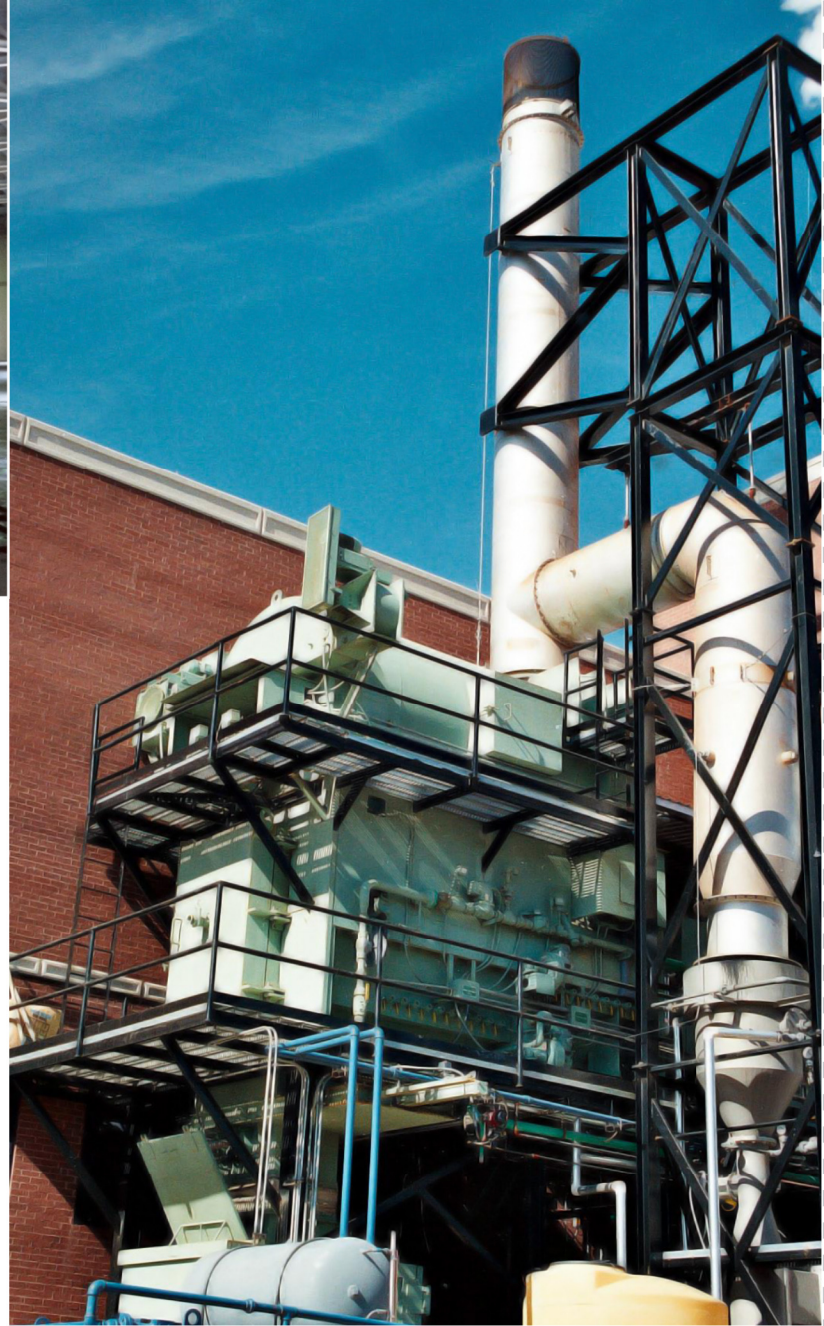
High temperature flue gases are a practical source from which to transfer energy to steam, hot water, or hot air by using waste heat recovery boilers.

✓ Renewable Energy

IWI systems offer a proven solution to cost effective waste disposal and renewable energy plants.

✓ Waste Compaction & Recycling Systems

IWI can integrate compaction and recycling systems as part of, or in addition to, any project.



IWI Dual Reactor Systems

IWI Dual Reactor Systems can be customized to your needs with individual units from 50kg/hr to multiple module units up to 500 tons/day.

IWI Dual Reactor Systems

- ✓ Fixed hearth
- ✓ Rotary Kiln
- ✓ Mobile & Containerized units
- ✓ Small batch operation
- ✓ Continuous feed

Applications

- ✓ Hospital Waste
- ✓ Industrial Waste
- ✓ Municipal Solid Waste (MSW)
- ✓ Hazardous Waste
- ✓ Pathological Waste
- ✓ Infectious Waste
- ✓ Biomass Waste
- ✓ Sludge Waste
- ✓ Liquid Waste

Industries

- ✓ Health
- ✓ Municipalities
- ✓ Industrial
- ✓ Military
- ✓ Airports
- ✓ Agriculture
- ✓ Seaports



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