SHINKA

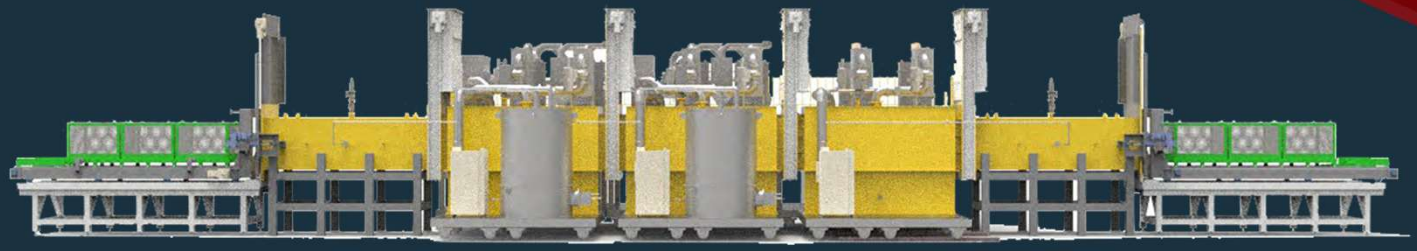
MAKE A CHANGE

Powering Tomorrow
from Today's Waste

JOB CUBE

Recyclable resource extraction system by pyrolysis

PRODUCT INFORMATION



We create our future

We extract recyclable resources from “discarded materials” and generate energy, contributing to the industries that need it.
Together with our partner companies, we are realizing the “Circulars Implementation Flow” — dismantling retired structures; sorting, transporting, storing, recycling and reusing industrial resources; producing renewable fuel through the pyrolysis system “JOB CUBE;” generating and storing energy from renewable fuel; and re-supplying energy to primary industries.

Company Profile

About Company

Trade name	**SHINKA Corporation**
Headquarters	154-2 Chayanoshita, Hosei-cho, Toyohashi-shi, Aichi, 441-3115, Japan
Directors	Masakatsu Komoto, Representative Director Katsushi Nishida, President Masaaki Komoto, Executive Vice President Masahiro Doi, Managing Director
Business Activities	1. Research and development of recycling processing systems 2.Design, manufacture, sales, installation, and maintenance of pyrolysis systems 3. Consulting services related to environmental business 4. Plant-related maintenance and upkeep services 5. Development, design, manufacture, sales, and maintenance of power generation and storage facilities using renewable energy 6. Any and all business incidental or related to the preceding items
Capital Stock	JPY 10 million
Establishment	August 2024

[Headquarters Laboratory]

[Plant]


[Agricultural Experiment Station]

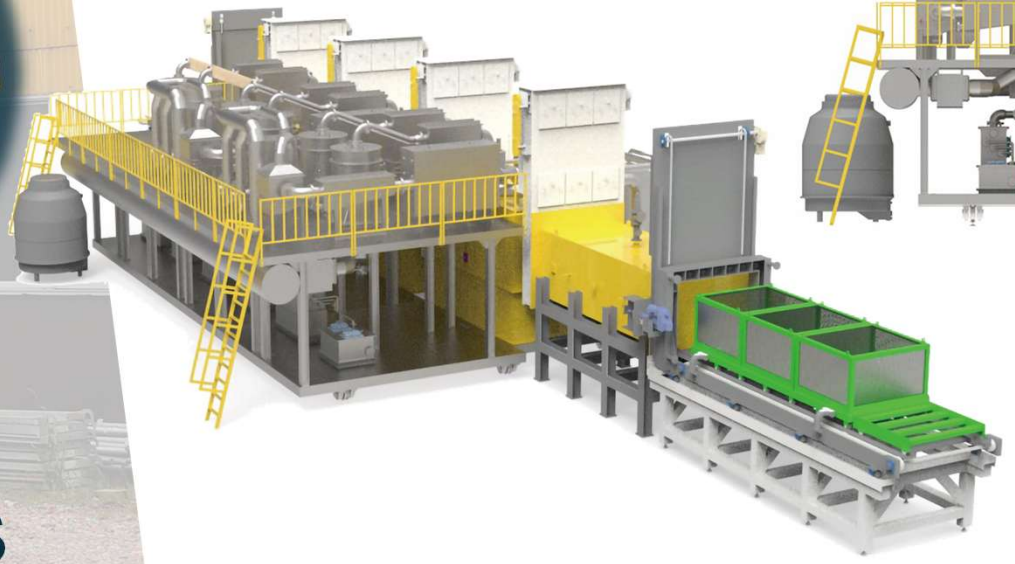
[Headquarters Building]

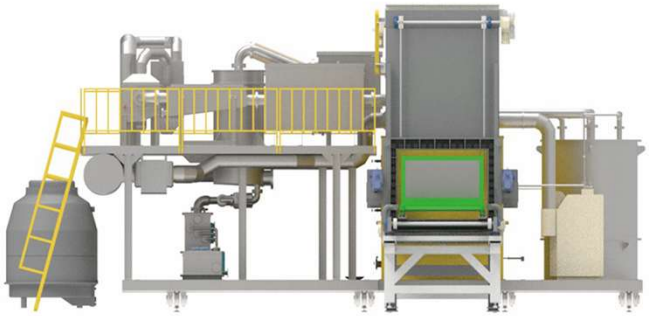
SHINKA
MAKE A CHANGE

System Features

- **No Combustion (No Incineration)**
- **Regeneration of Renewable Resources**
- **Reduction of Operating Costs**
- **Safety Considerations**
  - Oxygen-Free, Pressure-Free
- **Secondary Use of Extracts**
  - Generator
  - Boiler
  - Burner
- **A modular structure allows for flexible design and planning to reduce operating costs according to throughput.**

JOB CUBE is a revolutionary system that uses superheated steam instead of incineration to accelerate the thermal decomposition of waste, thereby restoring the original energy or raw material potential of the processed materials.
We have established a technology to convert waste into “oil” and “charcoal.” This system operates oxygen-free and air-pressure-free, minimizing waste and reducing operating costs while ensuring safety.

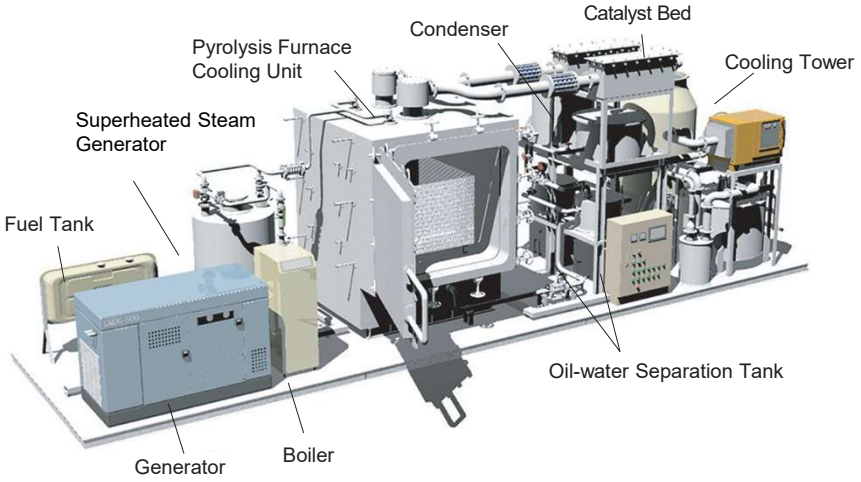




Mechanism of JOB CUBE

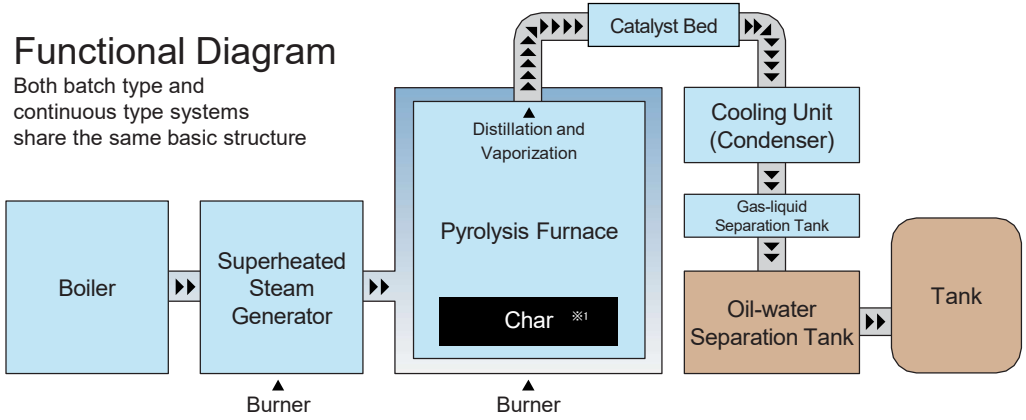
Recyclable resource extraction system by pyrolysis

This system is operated under oxygen-free conditions (oxygen concentration in the furnace: 1% or less) and under non-pressurized conditions (at or below 1 atm).



Functional Diagram

Both batch type and continuous type systems share the same basic structure



※1 Carbonaceous materials, inorganic substances, metals, etc. remain

●Conventional Incinerators

The structure supplies the air necessary for combustion. When trash burns, oxygen in the air combines with some of the materials (carbon) to produce carbon dioxide.

JOB CUBE

Recyclable resource extraction system by pyrolysis

The furnace is designed to thermally decompose waste by steam, without combustion. No greenhouse gases (CO2, dioxin, etc.) are generated since the waste is not burned and the furnace is oxygen-free.

Features of the Superheated Steam Pyrolysis Furnace

It treats waste not by combustion but by steam pyrolysis.

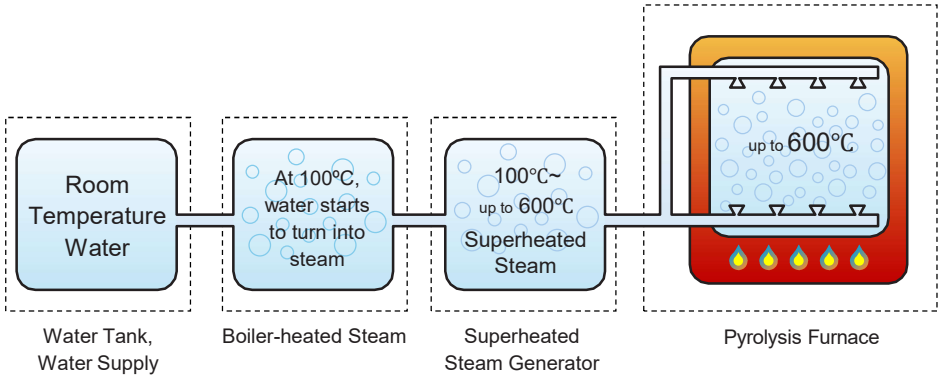
Superheated Steam

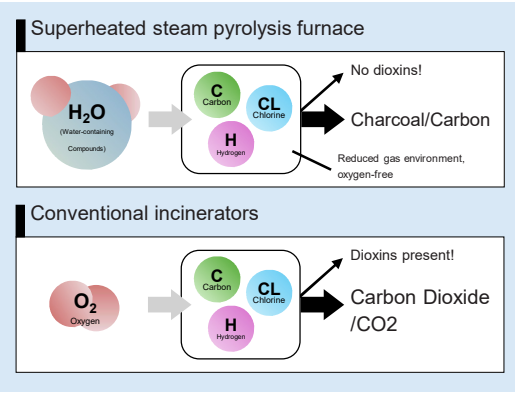
When water is boiled in a kettle, a clear area is seen between the spout of the kettle and the white steam. This is a gas called steam.

Further heating of the steam results in superheated steam above 100ºC.

By using this superheated steam to heat the surface or interior of the loaded material, it is possible to vaporize components of the material, such as certain solid or resinous materials.

This is pyrolysis by superheated steam.

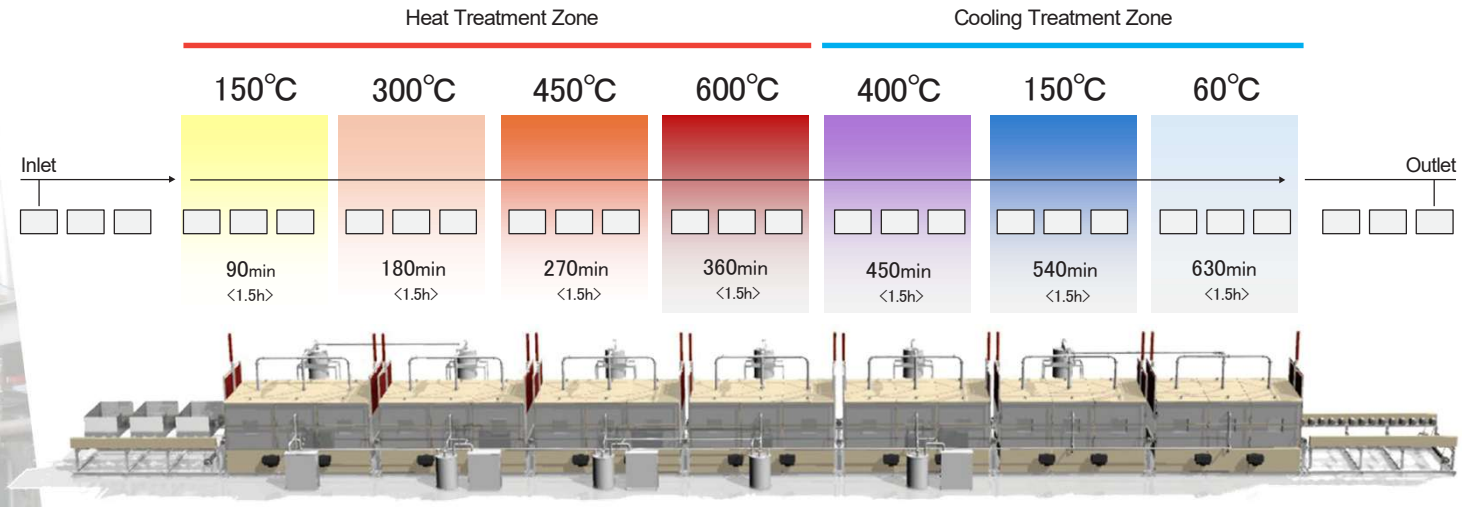




JOB CUBE

Recyclable resource extraction system by pyrolysis

In the continuous type, the temperature can be set for each module (furnace), and the nature of the oil to be extracted (light oil, heavy oil, etc.) can be separated. Automatic operation conveys the loaded material from the inlet to the outlet. The use of buckets (*) makes it possible to efficiently perform loading operations and residue disposal. * The size and number of buckets vary depending on the system type.



Modular Plant Connection System

Timetable for 7-Module Continuous Bucket System

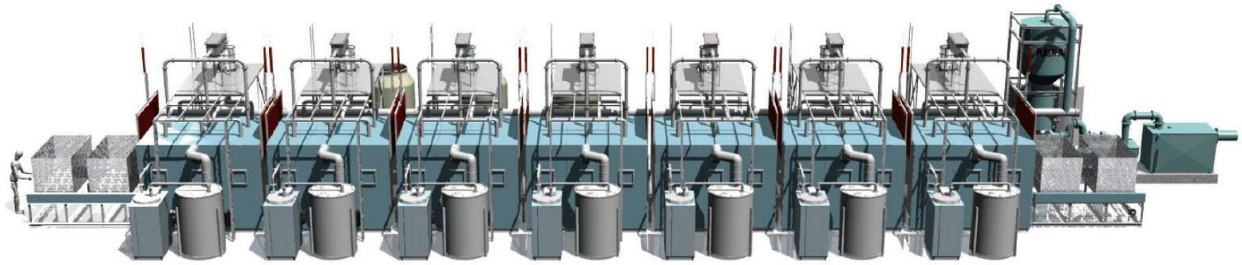
Processing Time per Module: 7-Module System

ENT	1	2	3	4	5	6	7	OUT	Unloading Time
○①○									
○②○	○①○							Startup Loss (No Unloading)	
○③○	○②○	○①○							
○⑤○	○③○	○②○	○①○						
○①○	○⑤○	○③○	○②○	○①○					
○⑥○	○①○	○⑤○	○③○	○②○	○①○				
○⑦○	○⑥○	○①○	○⑤○	○③○	○②○	○①○			
○⑧○	○⑦○	○⑥○	○①○	○⑤○	○③○	○②○	○①○		
○⑨○	○⑧○	○⑦○	○⑥○	○①○	○⑤○	○③○	○②○	○①○	0h
○⑩○	○⑨○	○⑧○	○⑦○	○⑥○	○①○	○⑤○	○③○	○②○	
○⑪○	○⑩○	○⑨○	○⑧○	○⑦○	○⑥○	○①○	○⑤○	○③○	
○⑫○	○⑪○	○⑩○	○⑨○	○⑧○	○⑦○	○⑥○	○①○	○⑤○	
○⑬○	○⑫○	○⑪○	○⑩○	○⑨○	○⑧○	○⑦○	○⑥○	○①○	
○⑭○	○⑬○	○⑫○	○⑪○	○⑩○	○⑨○	○⑧○	○⑦○	○⑥○	6h
○⑮○	○⑭○	○⑬○	○⑫○	○⑪○	○⑩○	○⑨○	○⑧○	○⑦○	
○⑯○	○⑮○	○⑭○	○⑬○	○⑫○	○⑪○	○⑩○	○⑨○	○⑧○	
○⑰○	○⑯○	○⑮○	○⑭○	○⑬○	○⑫○	○⑪○	○⑩○	○⑨○	
○⑱○	○⑰○	○⑯○	○⑮○	○⑭○	○⑬○	○⑫○	○⑪○	○⑩○	12h
○⑲○	○⑱○	○⑰○	○⑯○	○⑮○	○⑭○	○⑬○	○⑫○	○⑪○	
○⑳○	○⑲○	○⑱○	○⑰○	○⑯○	○⑮○	○⑭○	○⑬○	○⑫○	
○㉑○	○⑳○	○⑲○	○⑱○	○⑰○	○⑯○	○⑮○	○⑭○	○⑬○	
○㉒○	○㉑○	○⑳○	○⑲○	○⑱○	○⑰○	○⑯○	○⑮○	○⑭○	18h
○㉓○	○㉒○	○㉑○	○⑳○	○⑲○	○⑱○	○⑰○	○⑯○	○⑮○	
○㉔○	○㉓○	○㉒○	○㉑○	○⑳○	○⑲○	○⑱○	○⑰○	○⑯○	
○㉕○	○㉔○	○㉓○	○㉒○	○㉑○	○⑳○	○⑲○	○⑱○	○⑰○	
○㉖○	○㉕○	○㉔○	○㉓○	○㉒○	○㉑○	○⑳○	○⑲○	○⑱○	24h

JOB CUBE Series

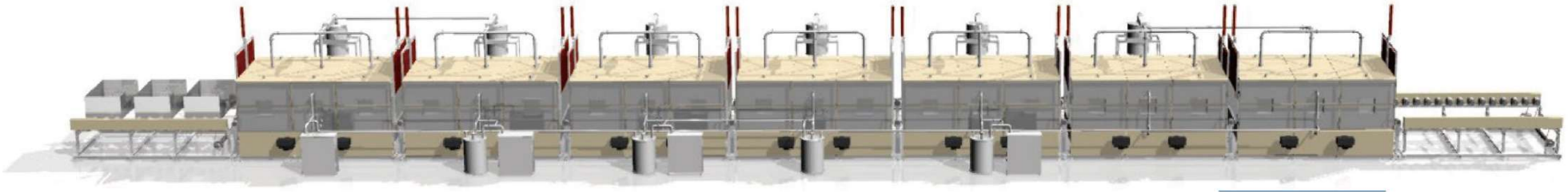
Recyclable resource extraction system by pyrolysis

Connection Systems: Type S, Type L



JOB CUBE Type S, Connection Type

*Connection of 4 to 9 modules is supported

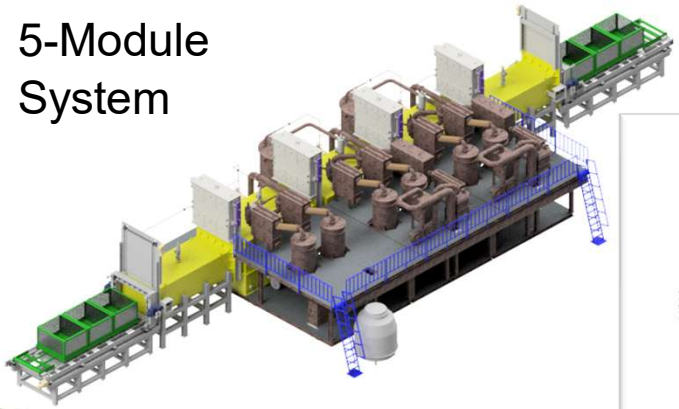


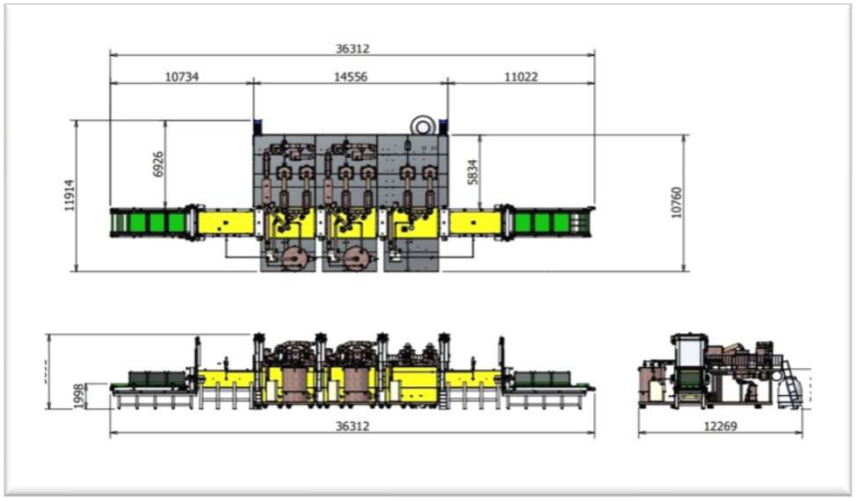
JOB CUBE Type L, Connection Type

* Connection of 4 to 9 modules is supported

* The number of modules to connect can be changed according to the customer's site conditions or needs.
If you wish to use a system of a single furnace (batch), it can also be manufactured as a single furnace (batch system).

5-Module System

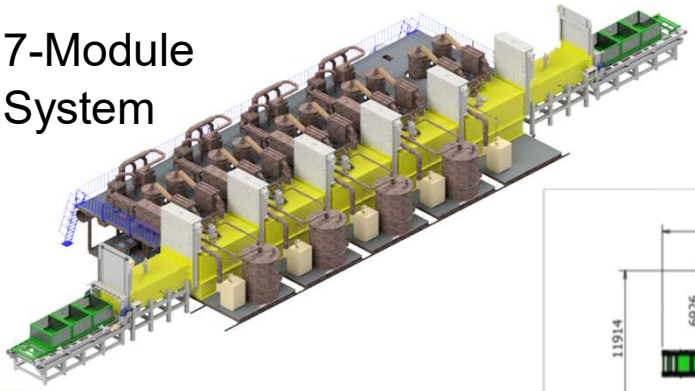




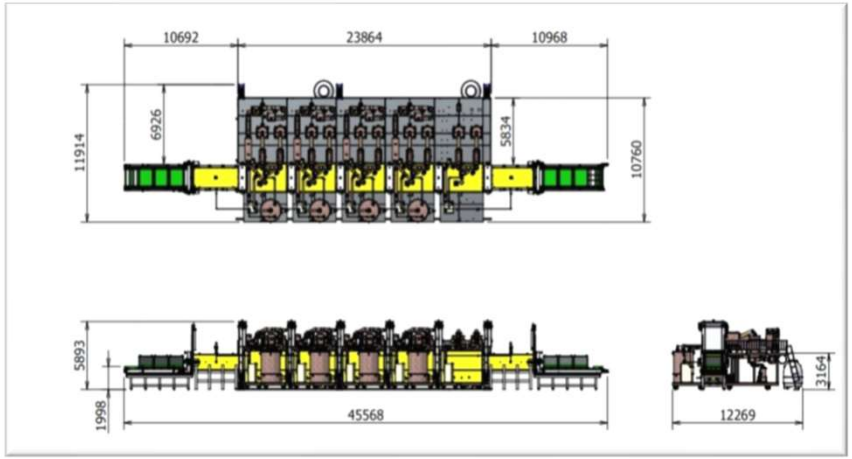
Connection Series / Scale

(L-Shape Standard Type)

7-Module System



This system JOB CUBE, consists of multiple modules in series.
JOB CUBE's dedicated processing buckets vary depending on the nature of the product you are handling.

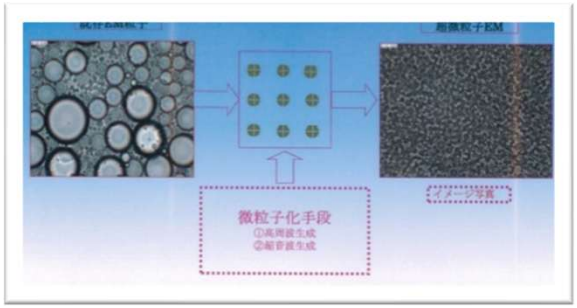


JOB CUBE Options

Recyclable resource extraction system by pyrolysis

Hoists

A plate is press-bent into a U-shape and combined with another plate to form a box girder.
It is widely used as a girder for monorail- and double-rail-type hoists.
*Designs can be customized to suit your work site.



60 ℓ ～600 ℓ/hour

FETmix

(Water Injection Device)

The extracted oil is mixed with water or wastewater suitable for emulsion fuel and used as fuel for burners, boilers, and generators.

JOB CUBE options include hoists, generators (diesel engines), FETmix, and energy storage devices.

JOB CUBE Options

Recyclable resource extraction system by pyrolysis

100kw ～ 600kw ／ hour

25kw ～ 60kw ／ hour

Generators

(Diesel Engines)

*Will be prepared upon request.

*Electricity generated in-house is efficiently “stored” to preserve precious energy. In emergencies, power can be supplied to hospitals and evacuation centers. It also supports both local industries and the general public. Reliable electricity can help save lives.

Energy Storage Devices

(Contribute to off-grid electrification)

From small to large energy storage devices, we provide tailored solutions based on your usage.

JOB CUBE options include hoists, generators (diesel engines), FETmix, and energy storage devices.

SHINKA
MAKE A CHANGE

[Information from SHINKA Corporation]

If you would like to see our equipment and systems, please fill out the designated “Tour Request Form.” Currently, applications can be made via the URL below. If you wish to request an experiment, please contact our representatives.

https://shinka.world/

At Fujimi Recycling Center, we sort and recycle all types of industrial waste.

Fujimi Recycling Center

SHINKA Laboratory

At SHINKA Laboratory, we conduct daily experiments on “pyrolysis systems” to recycle as much waste as possible into resources and fuels.

JOB CUBE

Recyclable resource extraction system by pyrolysis

Circular's Call for Supporters

As part of our commitment to a better future, we are seeking input and ideas from individuals and companies who support the circular economy approach we are pursuing. Please contact our representatives for details.

SHINKA

MAKE A CHANGE

https://shinka.world/

TEL：0532-75-2357

MAIL：shinka18@tees.jp

Website

Circular's PR Video

SHINKA Corporation does not have any distributors or sales agents.
Please contact us directly for further information. For more information, please visit our website.