



**SUGIMAT**

*Efficient Engineering Solutions*

**BIOMASS AND WASTE-TO-ENERGY**

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## Efficient Engineering Solutions

Sugimat is a family business with more than 40 years of experience in the heat generation and specialized in the development of custom projects.

We are dedicated to the design, construction and installation of turnkey energy solutions with steam, hot water, molten salts and thermal oil boilers through the use of renewable energies and fossil fuels.

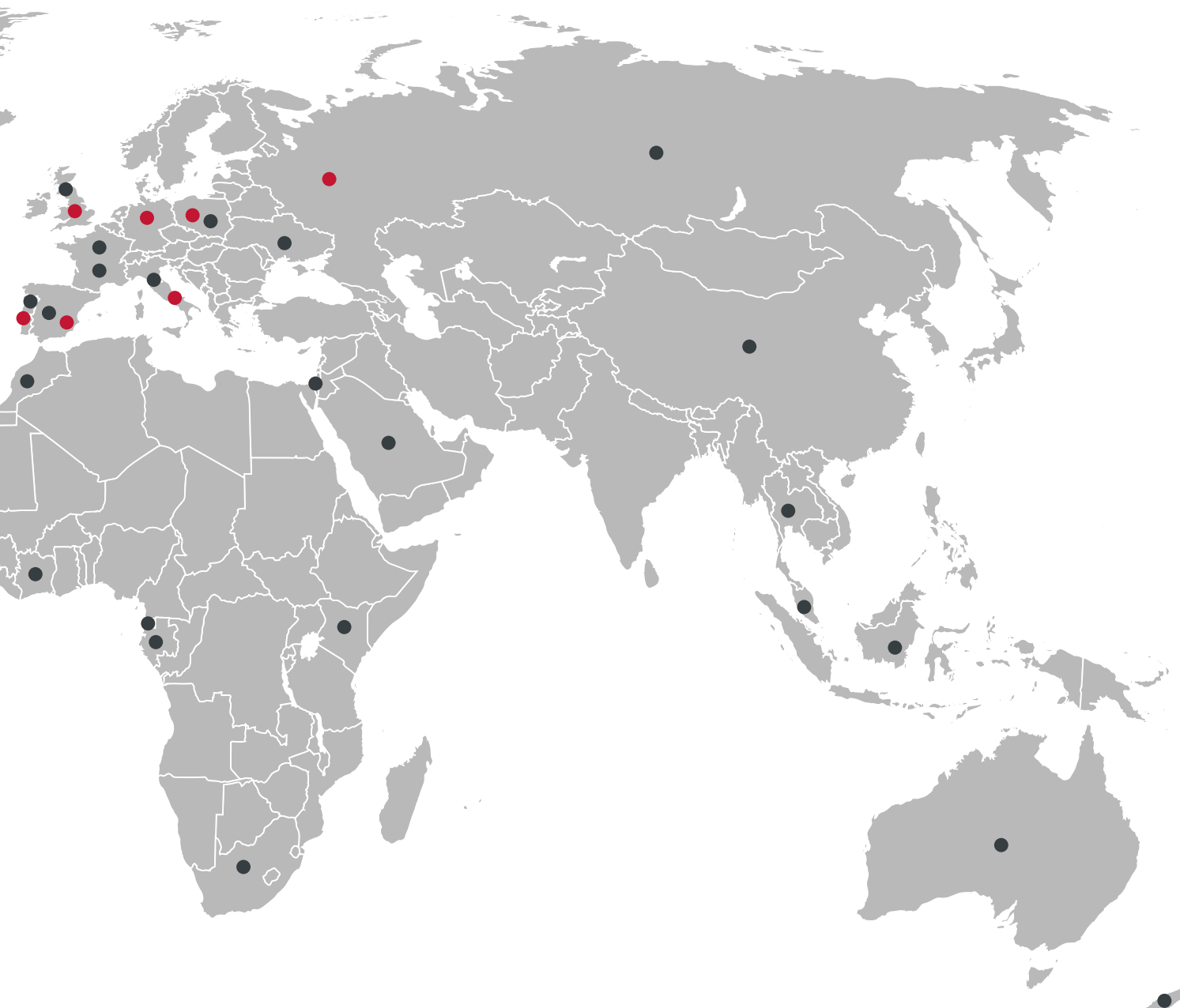
We have more than 3,000 installations spread across 28 different countries in sectors as diverse as chemical, solar thermal and biomass.

- 9 International offices
- References in 28 countries



### COMMITMENT

We listen to our clients and work to find the best solution tailored to their needs.



## Hallmarks

### QUALITY

- ISO 9001/2015
- Asme Stamps U, S and R
- Directive 2014/68/UE of Pressure Equipment

### INNOVATION

We have an R + D + i department with more than 20 engineers and a combustion laboratory.

### VERTICAL INTEGRATION

Since 1978 we have developed turnkey projects adapted to the needs of each client.



# PRODUCTS

## Fluids



Water / 180°



Steam / 450°



Oil / 400°



Salts / 550°

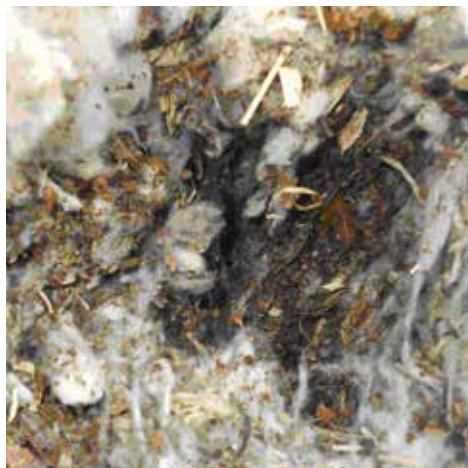
Biomass combustion plant with vertical adiabatic chamber and dust injection – 12 MW  
France



# 1.

## PRODUCTS

### Fuels



### BIOMASS

Dust  
MDF  
Pine Bark  
Poplar  
Chips  
Shavings  
Pruning waste  
Cotton waste  
Rice husk  
Wood pellet  
Straw  
Marc  
Olive marc  
Olive stones

### WASTE-TO-ENERGY

Sewage sludge  
RDF  
Wood grade C / D  
Meat flours  
Cereal straw  
Chicken manure  
Cow and pig manure



## Combustion systems

We develop the ideal combustion system for each project according to the technical specifications and fuel characteristics.

These systems can use both biomass and waste suitable for waste-to-energy.

- Underfeed stocker
- Mechanical grate
- Travelling grate
- Dust Injection
- Fluidised bed



## Biomass plants



Biomass combustion plant with vertical adiabatic chamber – 12 MW - France

Hot gas generators  
4MW - Spain



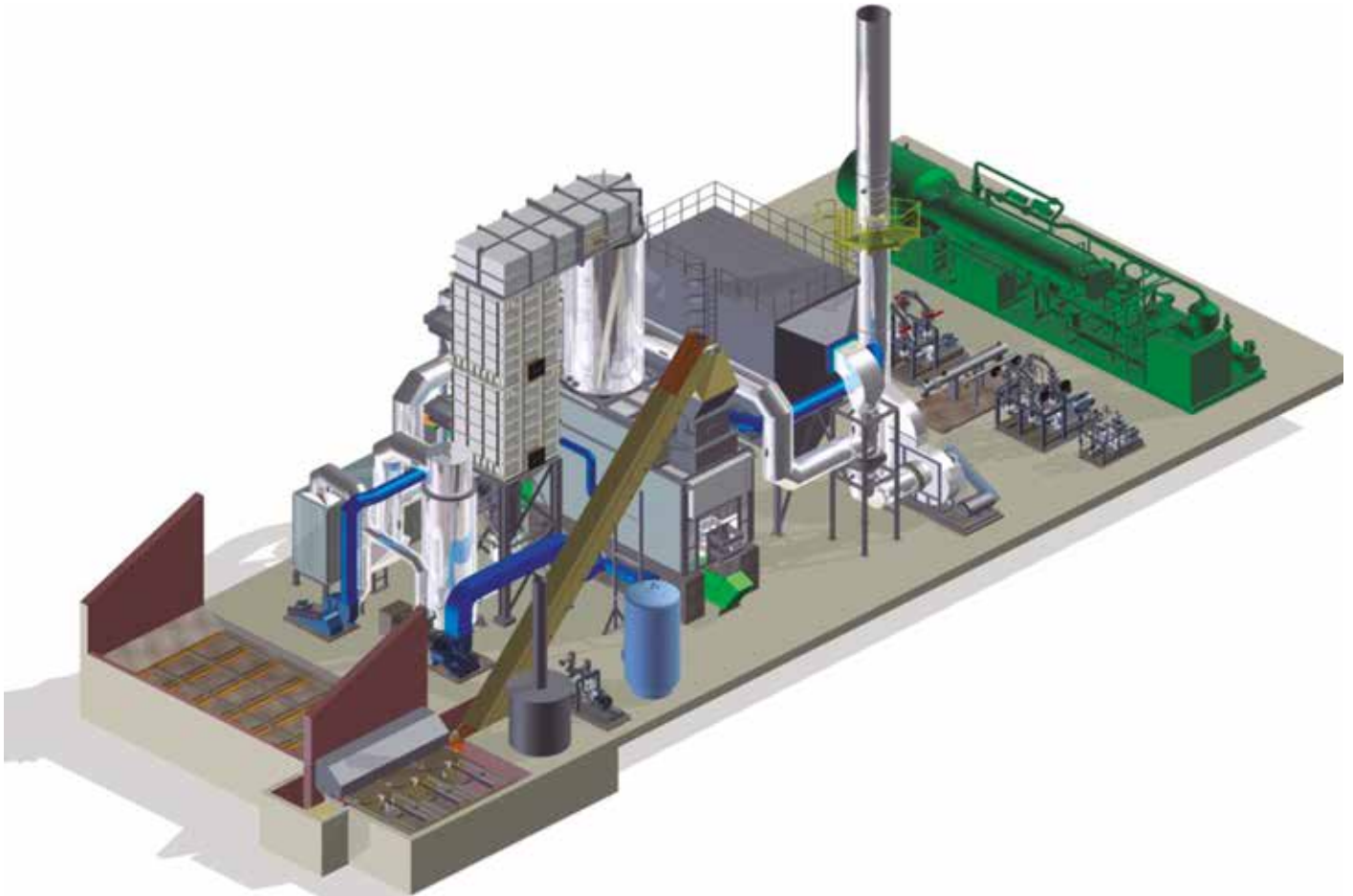
SUGIMAT | Biomass and waste-to-energy



# 2.

## ORC - ORGANIC RANKINE CYCLE

### ORC



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Sugimat develops heaters for cogeneration systems through ORC turbines (Organic Rankine Cycle).

The main advantages of this technology are low working pressure and low maintenance of the turbine which, due to the technical characteristics, runs at low rpm.

#### Possibilities of the equipment

- CHP generation (Combined Heat and Power): hot water and power generation
- Trigeneration through CHP and absorption machine
- Trigeneration through CHP and absorption chiller



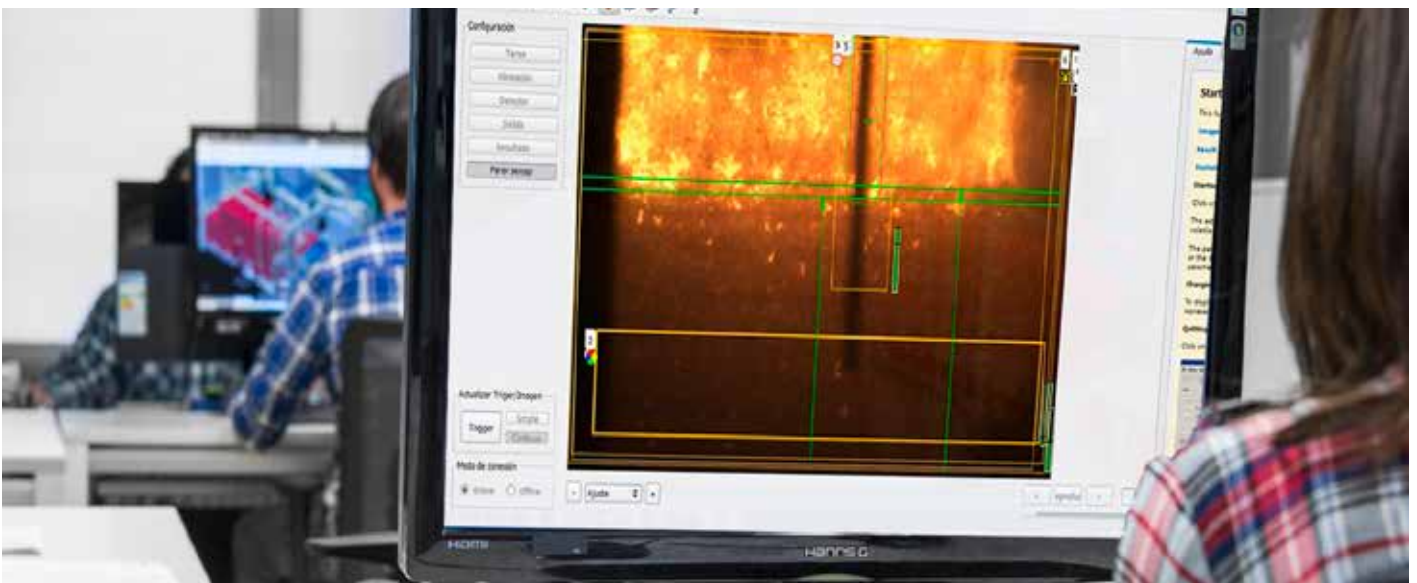
## Computer vision

In Sugimat we satisfy the industry demands for biomass combustion boilers. For this, we use innovative control technologies such as our computer vision system, which processes the images of the furnace in real time, adapting the combustion parameters to the optimum point.

Our R+D+i Department has been responsible for developing the project.

### Advantages of the system

- More efficient processes
- Fuel adaptability
- Less staff in shifts
- Cost savings
- Reduction of technical stops
- Decrease in faults

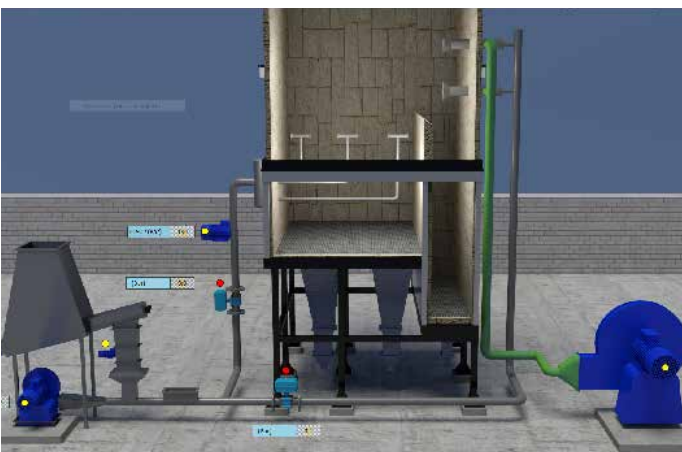


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## Fluidised bed

Our commitment to R + D + i enables us to offer an alternative technology to those industries producing waste that can be used for waste-to-energy.

The fluidised bed system achieves the combustion of this waste with a maximum of 50% ash content and humidity up to 70%.





# 4.

## SECTORS





# 5.

## CLIENTS



The background image shows an industrial plant. On the right, a tall, silver, cylindrical distillation column rises vertically, featuring yellow safety railings at different levels. To its left, there are large, dark-colored storage tanks and a complex network of pipes and structural steel. The sky is clear and blue, suggesting a bright day. The overall scene is industrial and modern.

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