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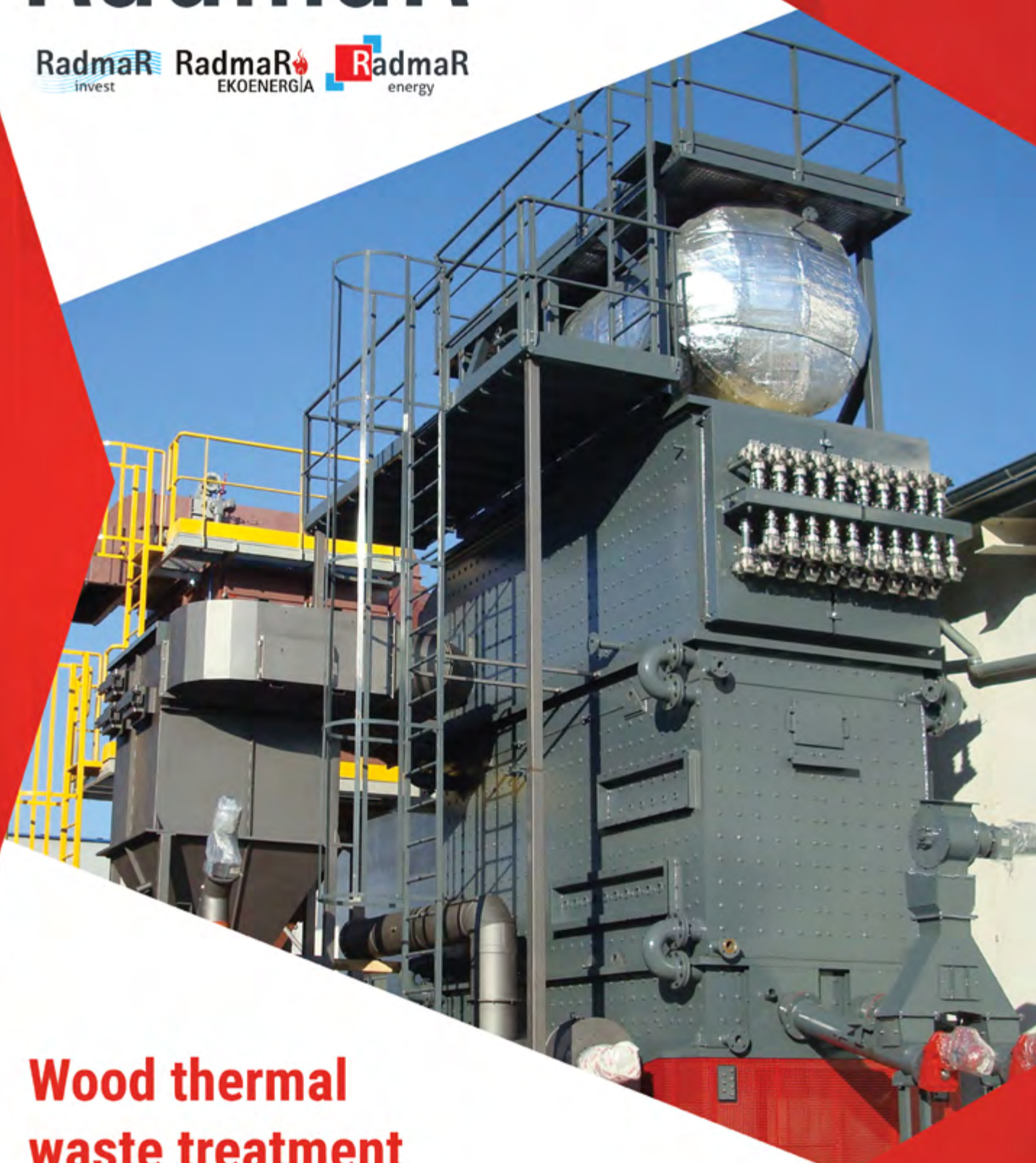

Wood thermal waste treatment in furniture and wood industry

Wood thermal waste treatment
in furniture and wood industry

THANKS TO THE KNOW-HOW AND CONSTANT DEVELOPMENT MATURE TECHNOLOGY WE DEVELOPED SPECIAL SPECIFICATION BOILER PLANT DEDICATED THE THERMAL TREATMENT OF WASTE FROM WOOD BOARD.

Our constructional solution satisfies crude technological requirements and emission standards in this field. According to the applicable regulations of thermal process waste processing as well as the required emission standards.

Technological approach

The main requirements for a complete installation are:

- Appropriate design of the furnace which ensures being combustion gases for 2s at minimum 850ºC.
- Additional burner responsible for maintaining the process temperature at a minimum level 850ºC.
- Automatic waste feeding system that allows the retention of their administration in case of not acheiving the required parameters.
- The technical device used as a storage of waste from the process.

Conducting continuous measurements:

- Exhaust temperature.
- Oxygen concentrations in the exhaust gas
- Ressures combustion gases.

The main emission substances standards

thirty minutes average measurements:

- Dust - 30 mg / m^3
- Chloride - 60 mg / m^3
- Fluoride - 4 mg / m^3
- Sulfur dioxide - 200 mg / m^3
- Carbon monoxide - 100 mg / m^3
- Nitrogen oxides - 400 mg / m^3

Technological solutions offered by the installation manufacturer:

- The materials resistant to high temperature process including grate and ceramic furnace.
- Dual zone In air blow (primary and secondary).
- Efficient exhaust gas recirculation provides high efficiency of the combustion process and reducing emissions of NO X. Allows the maximum temperature control of the combustion process in order to avoid forming slags and “clinker.”
- The two-stage filtration flue system which provides a reduction of dust emissions In level <20 mg / m^3.
- In case of difficult fuels combustion with a high proportion of protective coatings or impregnates we use an additional NO_x reduction system (SNCR).

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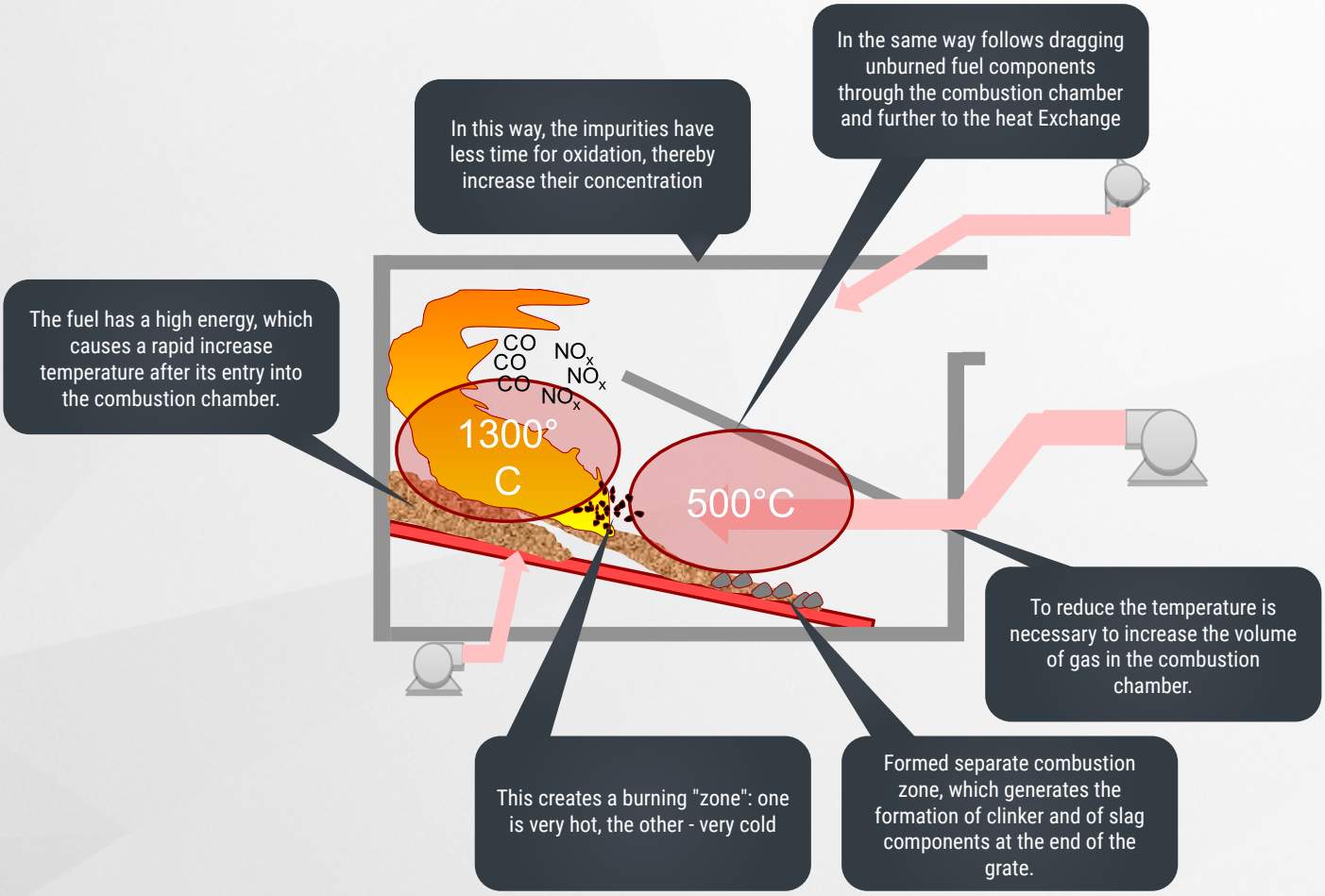


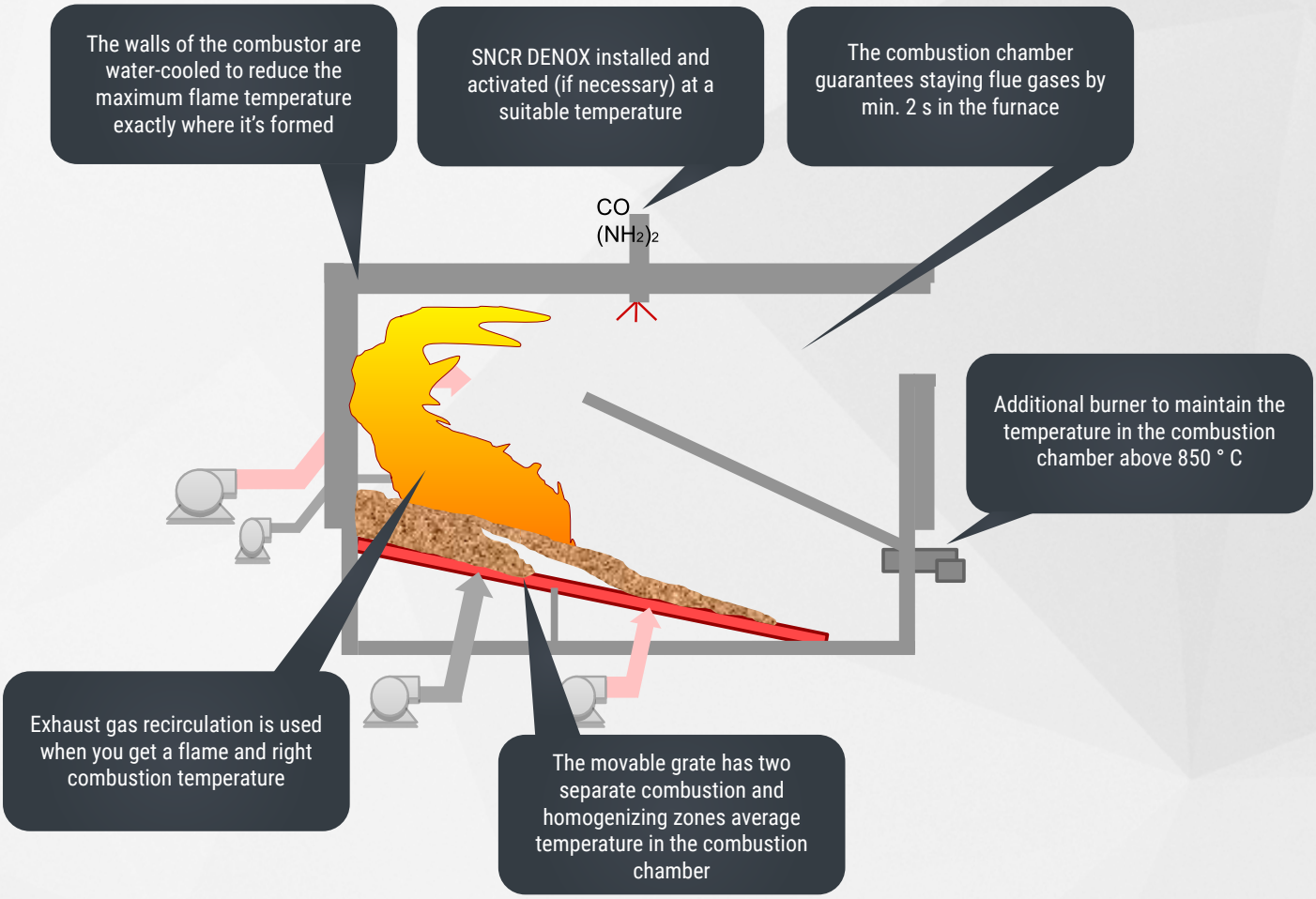
Standard combustion technology

- Exposure time of the exhaust gas in the combustion chamber and the temperature of the process nonstandarlized.
- Lack of modulating burner supporting the process temperature.
- Haven't got a dust abatement system in the standard required for the incineration of waste.
- Haven't got a system of reducing NOx or activation of combustion control.
- Used automatics and control of the boiler doesn't work in the algorithm suitable for the process of thermal treatment of waste.
- It doesn't have efficient exhaust gas recirculation necessary to maintain and control the process temperature in the upper conditions (up to 1100 ° C) above which is dangerous for furnaces and boiler construction which causes the slags and so-called. "Clinker" from fuel.
- Lack of recirculation system and dust reduction causes a further consequence as: excessive consumption of refractory linings and heat exchanger after the potent influence of dust particles and abrasion of parts subject to the influence of smoke and ash - the fans, grill, flues.

Installation for the thermal treatment of waste boards Wood

The legal Framework

- European standard WI D Directive (Directive concerning the incineration of waste) 2000/76/EC.
- Waste Act.
- The Law on environment protection.
- The Regulation on waste incineration.
- Regulation on emission standards from installations.
- Regulation on requirements for emission measurement.



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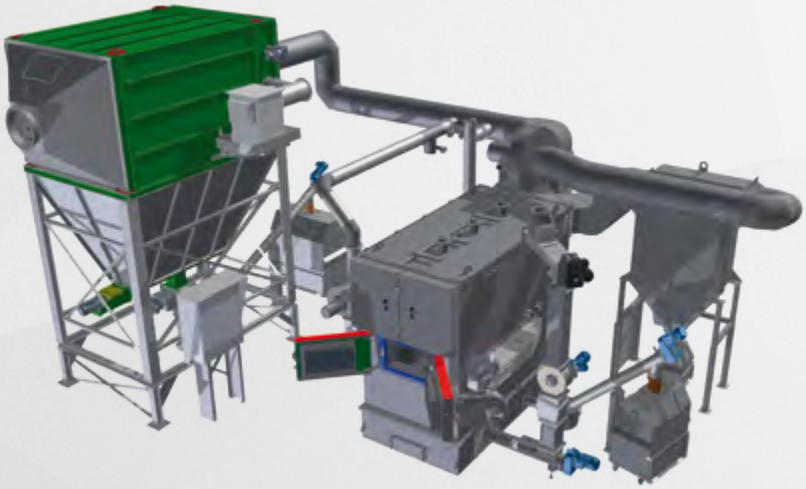
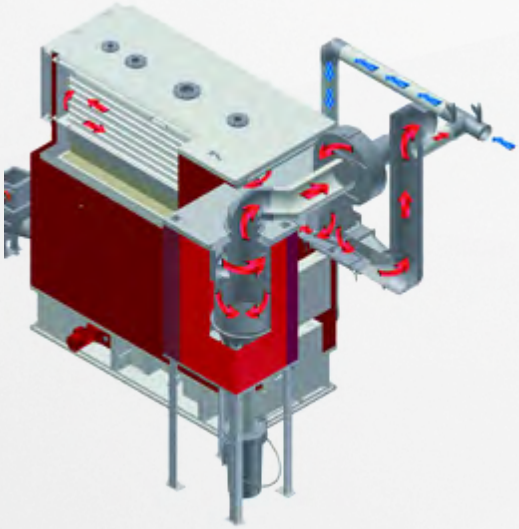
We owe the success of innovation technology





Automatic cleaning of the boiler HV

To clear the cables smoke for heat exchangers we placed in a high speed exhaust gas flow which carries settle particles which are separated by cyclone separator.

Cleaning using a high-speed gas-programmedintervals without stopping the operation.

- Prevents deposition of particles on the entire length of the tubes, and therefore provides a high level of performance throughout the service life.
- This reduces the workload of maintenance to 1-2 thorough cleanings per year.
- Prevents boiler corrosion.

Exhaust gas recirculation

Depending on the temperature in the combustion chamber exhaust gas recirculation added a controlled amount of exhaust gases to the air used for combustion.

Thanks to more exhaust gasses - depending on the O2 content – to heat exchangers is discharged more heat from the combustion chamber. Lower temperatures ensures longer life of the coverings and fireclay grate.

Recommended for fuels with high calorific value, low melting ash and high nitrogen content.

RADMAR GROUP relies on proven and mature technologies. **BINDER** has over 3,500 installations around the world made by a leading manufacturer of installations for combustion of biomass and waste wood. In Poland it fitted over 150 installations. Boiler rooms **BINDER** are on the highest technological standard appreciated by many customers. High energy efficiency (92%) as well as innovative and proven design solutions, is a guarantee of long work and reliability of our system.

Our major investments:

NORCO FURNITURE FACTORY

Water boiler room 1200 kW

Fuel - Wood Waste

GOLIARD PASTA FACTORY

Steam boiler 3000 kW

Fuel - agro pellets

POSTĘP FURNITURE FACTORY

Water boiler room, two boilers 1200 kW and 2100 kW

Fuel - wood waste and wood

Our investment partners:

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Burner supporting the combustion process

System NO_x reduction - SNCR

An flue gas electrostatic precipitator

Combustion unit with hydraulically or electro-mechanically operated grate

Boiler for wood waste – 3.3 MW

Oblique fuel scraper in silo

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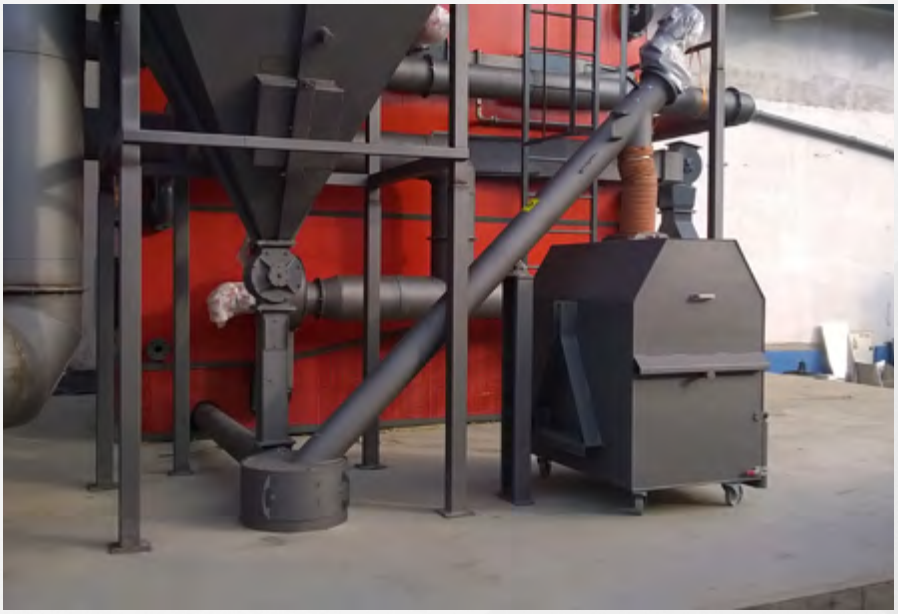
Automatic fluel ignite

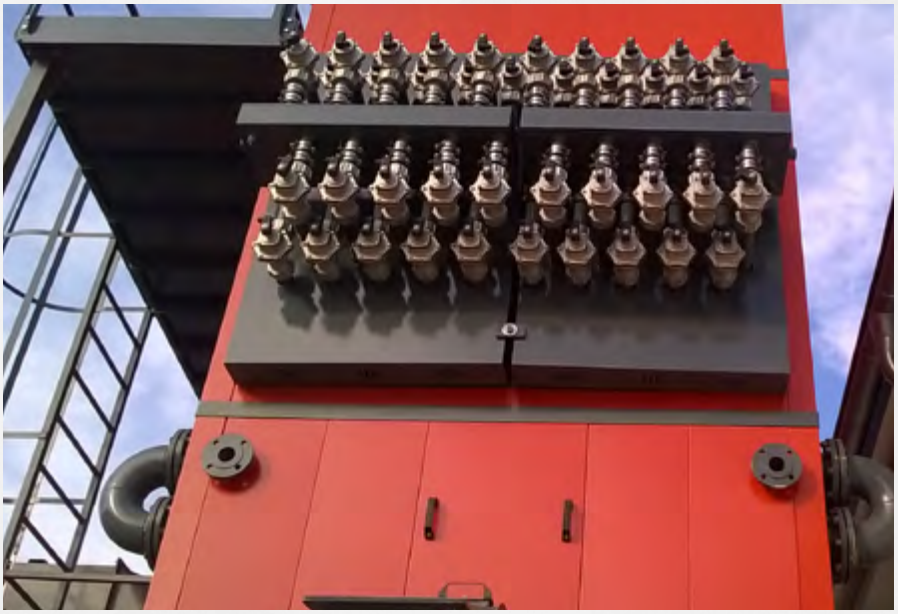
Steam boiler for agro pellets – 3 MW

Moving floor - hydraulic drive

Burner supporting the combustion process



Automatic ash removal



Automatic smoke tubes cleanin

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