Product Presentation 2024

PYROLY®

Pyrolysis Technologies of the Future

Completely environmentally friendly solution for waste utilization.

End-Product Percentage Yields

Pyrolysis Oil	~57%
Carbon Black	~25%
Liquid CO2	~10%
Technical water	~3%
Tire Wire*	~5%

1. After the first stage, the processing of waste with a moisture content of up to 20% in the thermo-pyrolysis reactor "PYROLY" yields the following results:

The complex generates **heat and electrical energy** as by-products. Most of the electrical energy is used internally, and the heat can be applied in greenhouses or supplied to city heating networks through agreements with local authorities.

*When mainly processing used tires.

Gasoline AI-92:	25 – 30%	Density at 20°C, g/cm3 = 0.71-0.76.
Diesel Euro-5:	45 – 50%	Density at 20°C, g/cm3 = 0.80-0.85.
Mazut M100:	12 – 15%	Density at 20°C, g/cm3 = 0.92-0.99.
Heavy tar:	5 – 8%	Density at 20°C, g/cm3 = 1.2-1.5.
Syngas:	15 – 20%	(50% used in production).

2. After the second stage, which involves the fractionation of pyrolysis liquid in a specialized refinery, the following results are obtained:

About Our Pyrolysis Plants

For diverse purposes, PYROLY offers 3 main types of pyrolysis plants. All the plants can be configured and modified to achieve maximum efficiency and the desired end-product output volume.

1. **PYROLY-EKOPYR OS:** Treats waste oils, sludges and acidic bitumen.
2. **PYROLY-EKOPYR RP:** Processes rubber, plastics, and polyethylene.
3. **PYROLY-EKOPYR EG:** Handles all types of waste mixtures.

Key technological advantages:

- The system can utilize excess heat generated during waste utilization, promoting energy efficiency.
- The technology is versatile and can be deployed as mobile units, even on large ships.
- Waste-to-fuel processing plants can operate as power stations.
- The system's reactor can handle various materials, from household waste, oil extraction residues, tires, and more.
- The system boasts unique environmental compatibility with zero harmful emissions.
- The technology showcases high energy efficiency.
- There's no need for fine raw material grinding.
- Have solutions for utilizing more than 50,000 tons of waste per year.

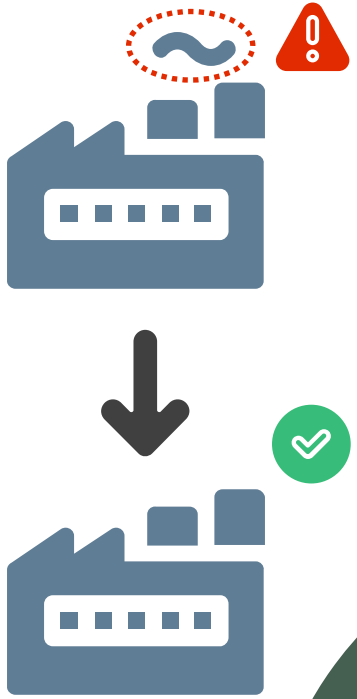
Ensuring Environmental Performance in Waste Processing

To ensure production ecology, the complex employed three filtering systems and linking of harmful substances:

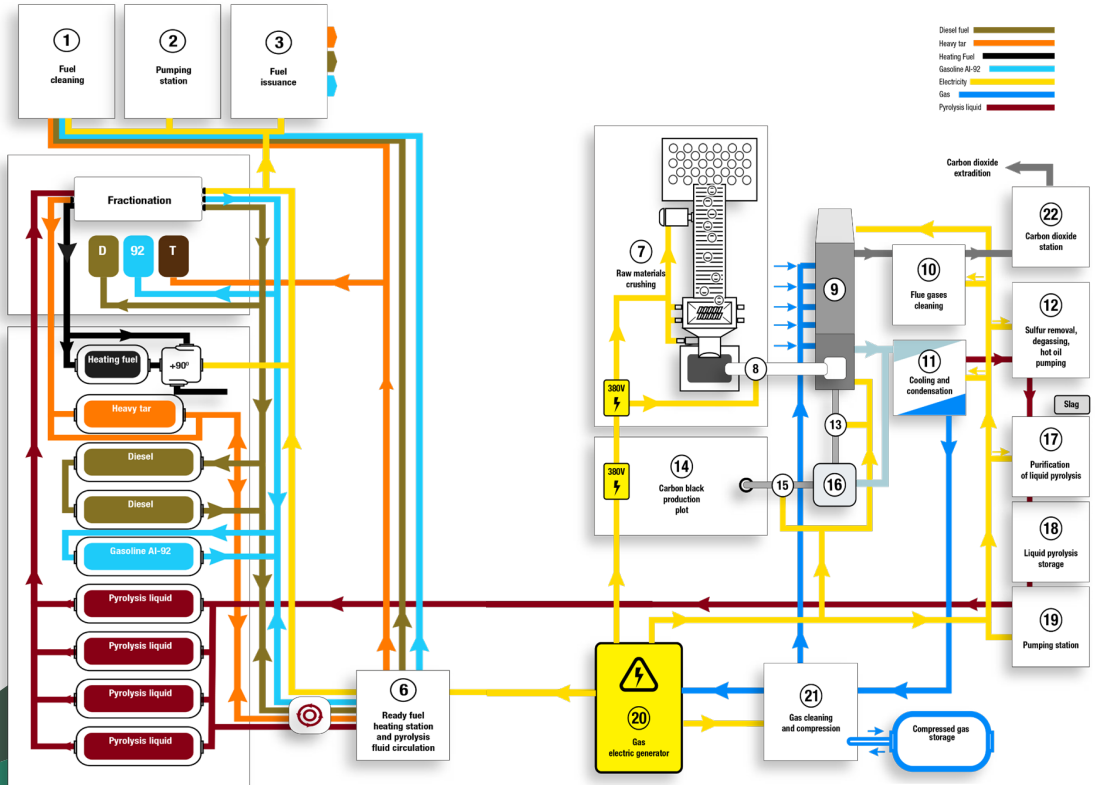
1. A three-tiered system for flue gas from the heater, including a mechanical stage with a dry cyclone and a scrubber for further cleaning, a liquid stage with a wet scrubber to remove acidic fragments, and a third stage with a dry filter-sink for additional purification.

2. Two-step purification of pyrolytic gas before release to the gas turbine power station and pyrolysis reactor, involving bulk absorbers for maximum cleaning and reducing harmful emissions.

3. Two-stage pyrolysis cleaning fluid using heated pyrolysis liquid circulated through bulk absorbers, ensuring a purification and filtration system that eliminates the possibility of gas and liquid emissions into the environment.



Overview of the complex



Part of the proposed complex includes:

- Waste screening: selection of glass, metal, stone, concrete, and radioactivity checking of materials.
- Grinding of materials into specific factions.
- Mechanisms for the movement of raw materials.
- Pyrolysis processing plot for raw materials.
- Transitional tanks for pyrolysis oil.
- Filtration through tubing.
- Carbon black warehouse.
- Processing of materials not subject to pyrolysis.
- Power plant.
- Separation of pyrolysis liquid into fractions.
- Transitional tanks for finished products.
- Issuance plot for the finished product.

Pricing

PYROLY®	EKOPYR-50	EKOPYR-100	EKOPYR-200	EKOPYR-800	EKOPYR-MAX
Waste Processing Capacity	50m3 / day	100m3 / day	200m3 / day	800m3 / day	>1000m3 / day (custom capacity)
Annual Capacity (Metric)*	~8,500 t	~20,400 t	~42,500 t	~170,000 t	>170,000 t (custom capacity)
Price**	**4,290,000€**	**9,750,000€**	**19,860,000€**	**71,680,000€**	Custom
Investment return	~4 years	~3.5 years	~3 years	~2.5 years	-
Pyrolysis Oil	~4,788 t	~11,628	~24,225	~96,900	-
Carbon Black	~2,100 t	~5,100	~10,625	~42,500	-
Liquid CO2	~850 t	~2,040	~4,250	~17,000	-
Additionally, indicative annual outputs from our pyrolysis oil refinery					
Diesel Euro-5	~2,400 t	~5,800 t	~12,100 t	~48,500 t	-
Gasoline AI-92	~1,450 t	~3,500 t	~7,200 t	~29,100 t	-
Fuel Oil M100	~720 t	~1,700 t	~3,600 t	~14,500 t	-
Heavy Oil/Tar	~380 t	~930 t	~1,900 t	~7,750 t	-

* The annual capacity in metric tons varies based on the waste type used. **Listed prices are indicative. Contact for personalized RFQ-based pricing.

Interested?

Don't hesitate to reach out to us for a **free** RFQ! We provide tailored solutions based on our client's goals and needs.
PYROLY solutions can be configured for specific purposes to achieve maximum utilization efficiency.

Additionally, our company offers free consulting on business opportunities using our pyrolysis waste-to-fuel plants, especially beneficial for clients new to the industry.

If you have any further questions, feel free to contact us at:

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PYROLY®
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