



INDIA'S 1ST
MANUFACTURER BY
YOGESH GAJJAR



Fully Continuous Tyre Pyrolysis Plant

"Turning Waste Into Value"

www.luzonindia.com



Fully Automatic
Operation



24/7 Continuous
Processing



High Oil
Yield



Advanced
Eco-Friendly System



Low Maintenance
Operating Cost



Smart PLC Controlled
Automation Technology

WHAT IS THE USE OF THIS MACHINE?

The Fully Continuous Tyre Pyrolysis Plant Is Designed To Recycle Waste Tyre And Rubber Materials Into Valuable By-products Such As:



01

PYROLYSIS OIL

Pyrolysis Oil is the primary liquid product obtained from the thermal decomposition of waste tyre in an oxygen-free environment it can also serve as a feedstock for various petroleum-based products..



02

CARBON BLACK

Recovered Carbon Black (RCB) is a fine black powder produced during the pyrolysis process. It is widely used in the rubber, plastics, coatings, inks.



03

COMBUSTIBLE GAS

Combustible Gas is generated naturally during the pyrolysis process and is recycled within the plant as a fuel source. This self-sustaining energy cycle minimizes operating costs and lowers environmental impact.

This advanced recycling system converts waste Tyre into reusable industrial products through a high-temperature oxygen-free pyrolysis process. It helps industries reduce environmental pollution while generating profitable outputs from waste materials.

The plant operates continuously with automated feeding, pyrolysis, condensation, and discharge systems, ensuring maximum productivity and minimum downtime

FEATURES :

The Fully Continuous Tyre Pyrolysis Plant Is Designed To Recycle Waste Tyre And Rubber Materials Into Valuable By-products Such As:

1. Capacity 60-80 T Tyre per day, materials needs to be smaller than 20mm discharging 24 hour per day.
2. Whole equipment adopt modular design, assembled in fabrication
3. No need for foundation, easy to be transported to another project.
4. Fully enclosed production, special sealing system to guarantee safety no dust flying.
5. Special emission purification system.
6. Customized design, configuration adjusted to meet your different requirements.
7. Modular design cooling system, combining oil gas cooling system.
8. Auto screw discharging system, with water cooling, make sure high efficiency, production safety, fully environmental standards, better care workers' health.
9. Steel structure burner and reactor base, reduce civil works, and shorten installation time.

*“Transforming **Waste** Tyre
into Valuable **Resources**”*



WHAT ABOUT MACHINE?

LUZON INDIA Fully Continuous Tyre Pyrolysis Plant is a state-of-the-art recycling solution engineered for large-scale tire processing operations. The plant uses continuous pyrolysis technology to thermally decompose waste Tyre in an oxygen-deficient environment at temperatures between 400°C to 600°C.

The machine can operate continuously for 24 hours with stable production and high fuel efficiency. Advanced sealing ensure environmentally friendly operation and compliance with industrial standards.



The Fully Automated System Includes :



Fully Automatic
Operation



24/7 Continuous
Processing



High Oil
Yield



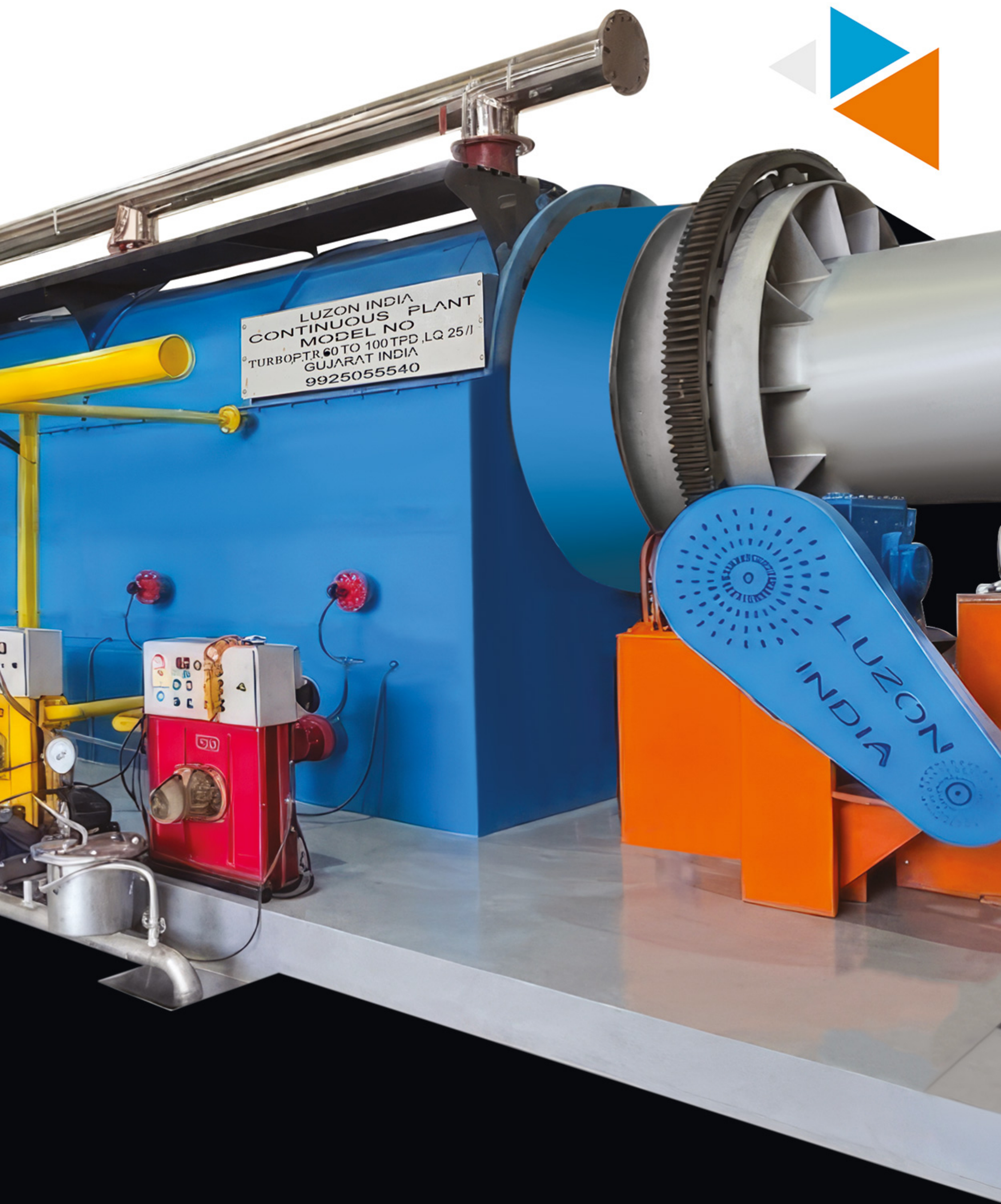
Advanced
Eco-Friendly System



Low Maintenance
Operating Cost



SCADA & Smart PLC
Controlled Automation
Technology

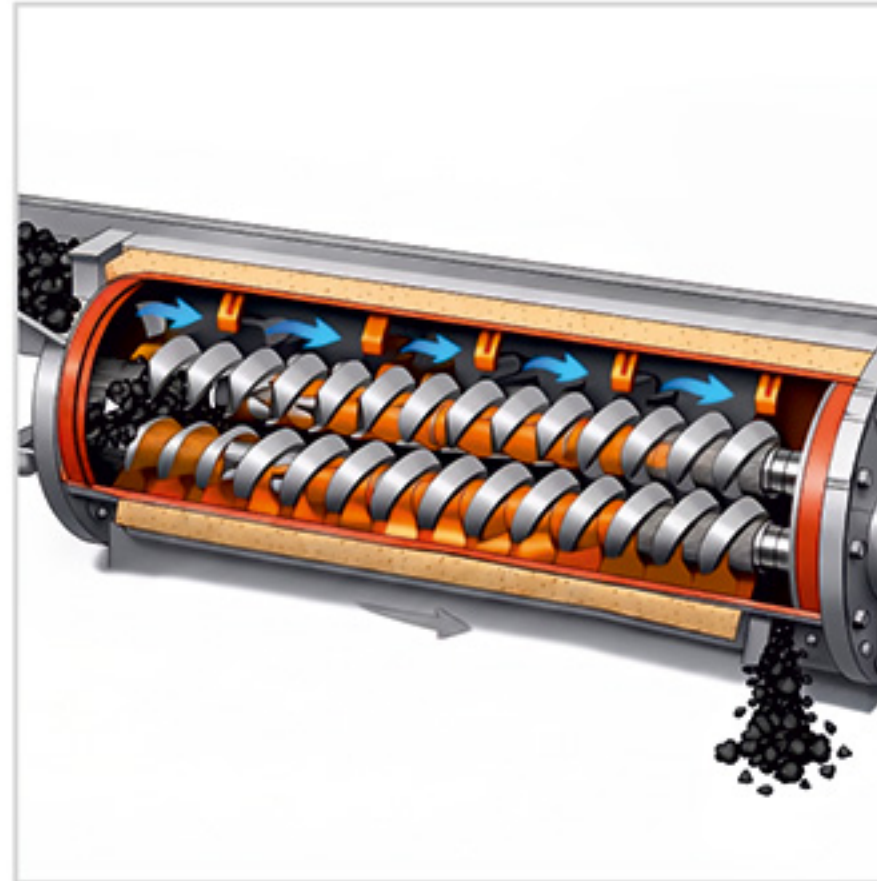


CONTINUOUS TYRE PYROLYSIS WORKING PROCESS



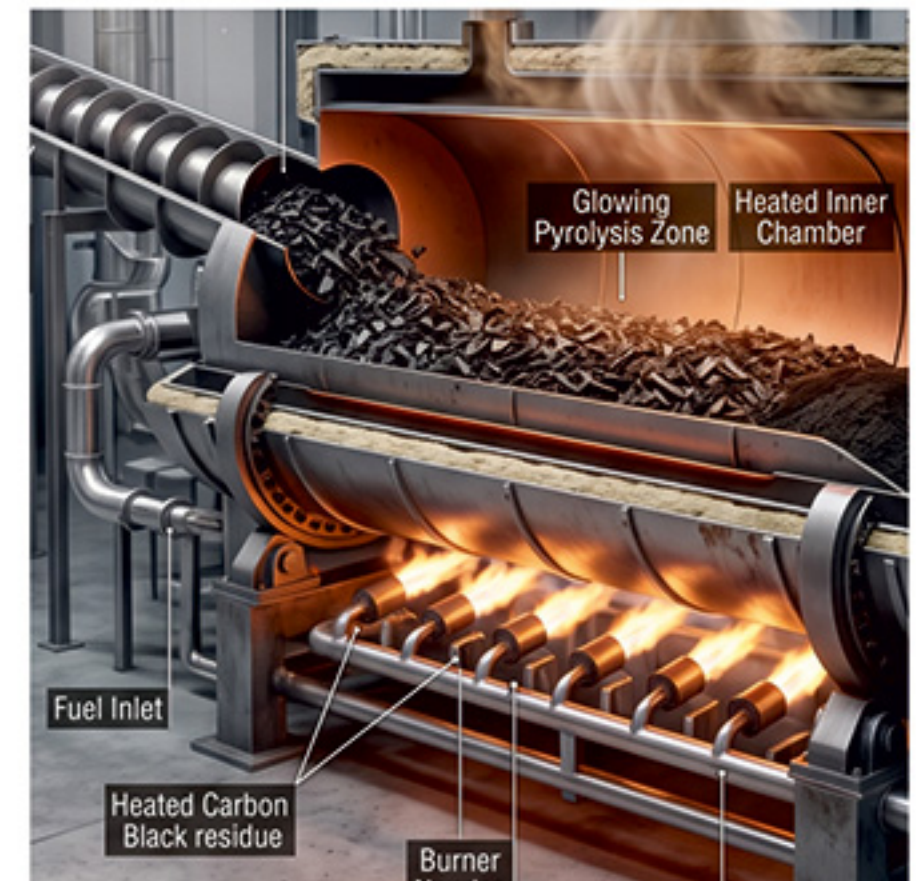
1. Tyre Pretreatment

Waste tyres are shredded into small rubber pieces and steel wires are separated.



2. Continuous Feeding

Rubber materials are automatically fed into the pyrolysis reactor through a sealed screw feeding system.



3. High Temperature Pyrolysis

Inside the reactor, materials are heated in an oxygen-free environment where rubber decomposes into oil gas, carbon black.



4. Condensation System

Oil gas passes through condensers and converts into pyrolysis oil.



5. Gas Recycling

Non-condensable gas is recycled back into the burner system as fuel, reducing energy consumption.

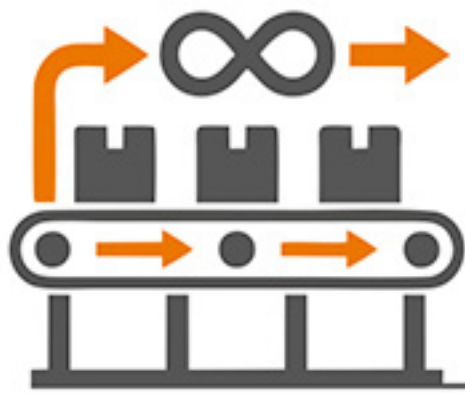


6. Automatic Discharge

Carbon black is continuously discharged through automated systems.

ADVANTAGES

DESCRIPTION



1. High Productivity

Continuous operation allows uninterrupted processing and maximum output capacity.



2. Fully Automatic Scada & PLC Control

Advanced SCADA & PLC control system ensures stable operation with minimal manpower.



3. High Oil Yield

Optimized pyrolysis technology provides maximum conversion efficiency.



4. Energy Saving

Recycled combustible gas is reused as heating fuel, significantly reducing fuel consumption.



5. Environment Friendly

Closed-loop system with emission treatment minimizes pollution.



6. Low Operating Cost

Reduced labor requirement and energy recycling lower operational expenses.



7. Long Equipment Life

Indirect heating technology reduces reactor damage and increases durability.





Application

Operation Mode	: Fully Automatic
Working Hours	: 24/7 Continuous
Automation Level	: High (Scada & PLC)
Labor Requirement	: Low
Oil Yield	: 38 % to 42 % (Depend on Tyre Peaces)
Production Capacity	: Large Scale
Energy Efficiency	: 150 KVA
Environmental Performance	: Advanced
Maintenance Frequency	: Low

Labour Requirement

2 Operator | 2 Helper | 7 Labour

APPLICATION OF FINAL PRODUCTS

PYROLYSIS OIL



• Industrial Fuel



• Boiler Fuel



• Furnace Oil

CARBON BLACK



• Rubber Industry



• Construction Bricks



• Reactor Heating Fuel



• Energy Recovery System



HIGHLY EFFICIENT PROCESSING

The equipment is typically designed to efficiently process used tyre, ensuring a fast and effective conversion process to minimize processing time and resource waste.

VERSATILITY

Tire pyrolysis equipment may feature versatility, capable of handling various types and specifications of used tyre to adapt to different waste sources.

ENVIRONMENTALLY FRIENDLY DESIGN

Modern tyre pyrolysis equipment often emphasizes environmentally friendly design, employing advanced technologies and processes to minimize emissions and environmental impact.

PRODUCT DIVERSITY

Certain tire pyrolysis equipment can produce a variety of products such as fuel oil, carbon black, and steel wire, enhancing the diversity of resource recovery.

ECONOMIC VIABILITY

Considering investment and operational costs, tyre pyrolysis equipment may be designed as an economically viable solution, making it more attractive in commercial and industrial settings.

FINAL PRODUCT APPROXIMATE YIELD

Pyrolysis Oil

38% – 42%

Carbon Black

30% – 34%

Combustible Gas

8% – 12%

*Output Percentage May Vary Depending On Tire Quality And Moisture Content.



NOTE



Mfg. By

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