
EPS
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Caring Futur!!!

About Us

- **Recycling Tires, Empowering Business, Building a Greener World**

  For 17+ years, EPS has been at the forefront of sustainable solutions. We specialize in transforming discarded tires into valuable resources. Our expertise extends beyond recycling; we empower others to enter the industry with our setup guidance and modern machinery. From pyrolysis plants and crumb rubber processing equipment, we offer comprehensive solutions.

  Join us in creating a greener future, one tire at a time.

Introduction to EPS Tyre Recycling

- Headquarter in Surat, Gujarat, India
- Specializes in advanced tyre recycling technologies
- Offers a range of pyrolysis plants: batch, semi-continuous, and fully continuous
- Mission: Transforming waste tyres into valuable resources while adhering to environmental standards

Introduction to Pyrolysis

- **What is Pyrolysis?**

- A chemical process of thermal decomposition of organic material in the absence of oxygen.
- End products: Bio-oil, syngas, and solid residues
  (Recovered carbon Black, Carbon black, or charcoal).

- **Importance of Pyrolysis**

- Environmental benefits: Waste reduction, pollution control, and energy recovery.
- Economic benefits: Waste-to-value products, reduced reliance on fossil fuels.

What is a Fully Continuous Pyrolysis Plant?

- A fully continuous pyrolysis plant is a highly efficient system designed to convert waste materials, such as discarded tires, into valuable products through a constant process. Unlike batch processes, which involve loading and unloading materials in batches, a fully continuous plant operates without interruptions, ensuring maximum productivity and efficiency.

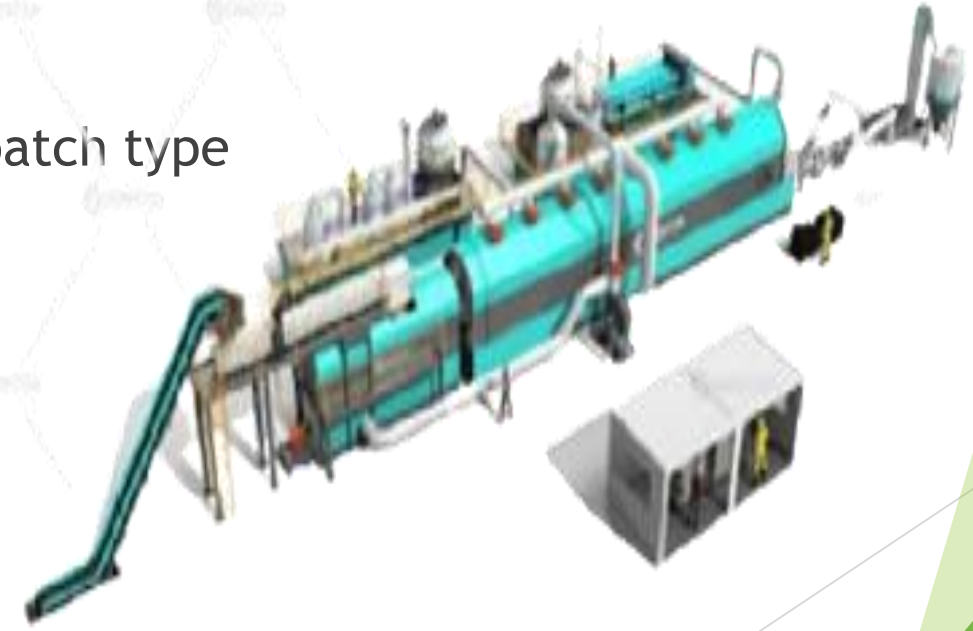
  These plants use heat to decompose the waste material in the absence of oxygen, resulting in the production of various valuable byproducts like fuel bio oil, syngas, carbon black, and steel wire.

Understanding Pyrolysis

- Thermal decomposition of materials at elevated temperatures in an inert atmosphere
- Application in Tyre Recycling: Converts waste tyres into pyrolysis oil, carbon black, steel wire, and syngas
- Advantages: Reduces environmental pollution, generates valuable by-products, supports circular economy initiatives

Fully Continuous Pyrolysis Plant Advantages

- 24/7 continuous operation
- Automated feeding and discharging systems
- Advanced PLC control for process optimization
- Benefits: Enhanced efficiency and productivity, Reduced labor costs, Lower environmental impact
- EPR benefits more compare than batch type
- Smooth operation with Safety
- Environment norms fulfilled
- Capacity Advantage
- Less space required



Specification

Fully Continuous Pyrolysis Plant	Continuous Pyrolysis
Capacity Range	**50 to 60 ton**
Raw Material	Up to 25mm Rubber chips (Suggestable steel free)
Land require	As per (SOP) 7000 Sq./m. (Minimum)
Manpower / 1 shift	3 Skilled & 3 Unskilled
Electricity commission	200 HP
Input Material	25 mm Chips (suggestable mix) Rubber Powder
Cycle time	22 to 30 Days.
Loading tyre	Auto-feeding Conveyor
Production per month	1250
Initial Hitting Fuel (Pyrolysis oil)	1200 ltr
Reactor life	5~7 years
Reactor life in S S	8~10 years

Calculation Example (One Month In INR)

Input		
Raw material (Approx 15 Rs/kg) (1250*15000)	₹	18,750,000
Initial Fuel (ltr) (Pyrolysis oil) (1200*45)	₹	54,000
Electricity consumption	₹	200,000
Labour (2 shift) Skilled Worker (30,000*3*2 shift)	₹	180,000
Labour (2 shift) Unskilled Worker (20,000*3*2 shift)	₹	120,000
Admin	₹	100,000
Carbon bag (Jumbo Bag)	₹	150,000
Wear and tear	₹	100,000
Hydra & Loader	₹	100,000
Loading, Unloading & Material Handling Expense	₹	200,000
Interest & Depreciation	₹	900,000
Total Cost	₹	20,854,000
Output		
Oil (40-45%) calculation at 43% (1250*43%*45,000)	₹	24,187,500
Carbon 40 % (1250*40%*10,000)	₹	5,000,000
	₹	29,187,500
Benefits	₹	8,333,500

Choose the Right Pyrolysis Plant for Any Scale

Process Flow Diagram

- Tyre Shredding: Tyres are shredded into small pieces for efficient processing.
- Feeding: Shredded tyres are fed into the reactor continuously.
- Pyrolysis Reaction: Thermal decomposition occurs in the absence of oxygen.
- Condensation: Volatile gases are condensed into pyrolysis oil.
- By-product Collection: Carbon black and steel wire are collected.
- Syngas Recycling: Syngas produced is reused as a heating source.

End Products and Applications

- Pyrolysis Oil:
  - Used as fuel in furnaces, boilers, and engines
  - Raw material for chemical synthesis
- Recovered Carbon Black:
  - Rubber & tyre industries
  - Reinforcing agent in rubber products
  - Pigment in plastics, inks, and paints
- Steel Wire:
  - Recycled into construction materials
  - Used in manufacturing new steel products
- Syngas:
  - Energy source for the pyrolysis reactor
  - Electricity and steam generation
  - Potential for green hydrogen production

Environmental and Economic Benefits

- Environmental Benefits:
  - Reduces landfill waste
  - Minimizes greenhouse gas emissions
  - Complies with Indian environmental standards
- Economic Benefits:
  - Generates revenue from by-products
  - Creates employment opportunities
  - Supports sustainable industrial practices

Enterprise Honor

- CE Certificate
- ISO SYSTEM
- Benji Patents Wall
- Plastic Pyrolysis Technology Invention Achievement
  (The first achievement of plastic pyrolysis in China, in the year of 1993.)
- National Hi-tech Enterprise Certificate
- National Intellectual Property Advantage Enterprise
- CTRA Certificate of Energy Saving and Emission Reduction
- Patent of continuous pyrolysis
  (A kind of fast pyrolysis plant for electric waste and waste tyre or plastic with combanation of reactor and tube.)
- Patent of Continuous Pyrolysis
  (A household waste disposal plant with continuous pyrolysis and ashing function.)
- Patent Continuous Pyrolysis
  (A kind of multi-functional Rotary environmental protection technology and plant for continuous pyrolysis,distill and burn through.)
- Patent of Continuous Pyrolysis
  (A kind of plant for continuous pyrolysis and carbonize film evaporation.)
- Patent of Continuous Pyrolysis Technology
  (A kind of automatic conbined style pyrolysis and carbonize plant.
- Patent of Continuous Pyrolysis
  (A kind of combined style internal rotary continuous refining plant.)

Contact Information

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