



Analysis, designing and manufacture of rubber and plastic

Waste Recycling Machines

Executing petrochemical and petroleum projects

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What is pyrolysis:

Pyro = heat. Lysis = break down.

Pyrolysis is chemical reaction. This reaction involves molecular breakdown of larger molecules into smaller molecules in presence of heat. Pyrolysis is also known as thermal cracking, cracking, thermolysis, depolymerization, etc.

Tire pyrolysis is: the process of converting waste tires into industrial fuels like Tire Pyrolysis Oil, Carbon Black, Steel Wire and Hydrocarbon Gas.

Tire pyrolysis involves subjecting tire to high temperature of 400 to 450 degree Celsius, in absence of oxygen. In case of oxygen is present plastic will start burning. During pyrolysis tire breaks down into smaller molecules of pyrolysis oil, pyrolysis gas, steel wire and carbon black. Pyrolysis is a great way of recycling large amounts of tires. This plant can also used for waste plastic recycling.

Specification :

Item	Contents
Input raw materials	Waste tire-rubber-Medical waste-MSW
End products	Fuel oil, N220, N330 carbon black, steel wire, combustible gas
Heating material	Coal, charcoal, wood, fuel gas, fuel oil
Model (Diameter*Length) (mm)	HY2200*5500 5 Ton-Batch HY2800*6600 10 Ton-Batch
Reactor material	Q345R-Q245R-310S+Boiler plate-Stainless steel
Thickness	14mm-16mm-18mm
Weight	15T-35T
Power	Average 15KW-h
Space needed	300-400 square meters (Width:10m, Length:30m-40m)
Labor needed	3-4 workers
Density of oil	0.89g-cm ³
Combustion value	44.30KJ-KG




End products:

Items	Application	Sales Market
45% Pyrolysis oil (tire oil-plastic oil)	<ol style="list-style-type: none">1. Add it into heavy oil generator to produce electricity.2. Used as heating material.3. Sell it into oil refining factory to further process it.	Ceramic factory, glass factory, electric power factory, steel making factory, boiler factory...etc.
30% Carbon black	<ol style="list-style-type: none">1. Deep process it into N220, N330 Carbon black.2. Make it into pellet or briquette for burning.3. Further process it into color master batch as basic material to make pipes, cable jacket...etc.	Coal briquette factory, plastic factory, cable factory, etc.
15% Steel wire(for tire)	Sell it directly	Iron and steel factory
10% Waste gas	Recycled into fire furnace to heat reactor to save fuel material.	

Oil ratio of different tire-rubber wastes:

Raw material	Oil ratio
Submarine cable	75%
Rubber cable	35%
Sole	30%
Big tires	45%-50%
Small tires	35%-40%

Profit analysis:

 *Wastes = Wealth!*

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Our scientific and research achievements:

