

# **Waste Plastic Recycling Project Feasibility Report**



Shangqiu Zhongming Eco-Friendly Equipment Co., Ltd

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## ► Project Prospect



# Overview

## Project Prospect Analysis

Development of industrial has brought social developing, but also bring problems.

On the one hand, the rapid demand growth drives economy; On the other hand, it also creat huge resource consumption and environmental pollution. Faced with the gradual depletion of resources and worsening environment, it is necessary to find ways protecting environment and developing economy. Circular economy will be good for solving this problem. It requires the economy active principal should be "reduction, harmlessness, recycling, reuse and recycling" for recycling waste materials.

Along with the rapid development of automobile industry, new problem can not be ignored, that is the management and treatment of waste plastic. Waste plastic have strong heat resistance, mechanical resistance and degradation resistance, couldn't be naturally digested for decades. If they are discarded in the natural environment, they will not only occupy land, waste resources, but also creat new 'white pollution'. If incinerate it, will pollute environment seriously; if it is simply treated and then loaded for shipping, also have potential safe hazard; if it is processed and produced by the old way, will not only create pollution but also have very low utilization rate. It has become indisputable reality to realize circular economy and sustainable development in waste plastic recycle industry.

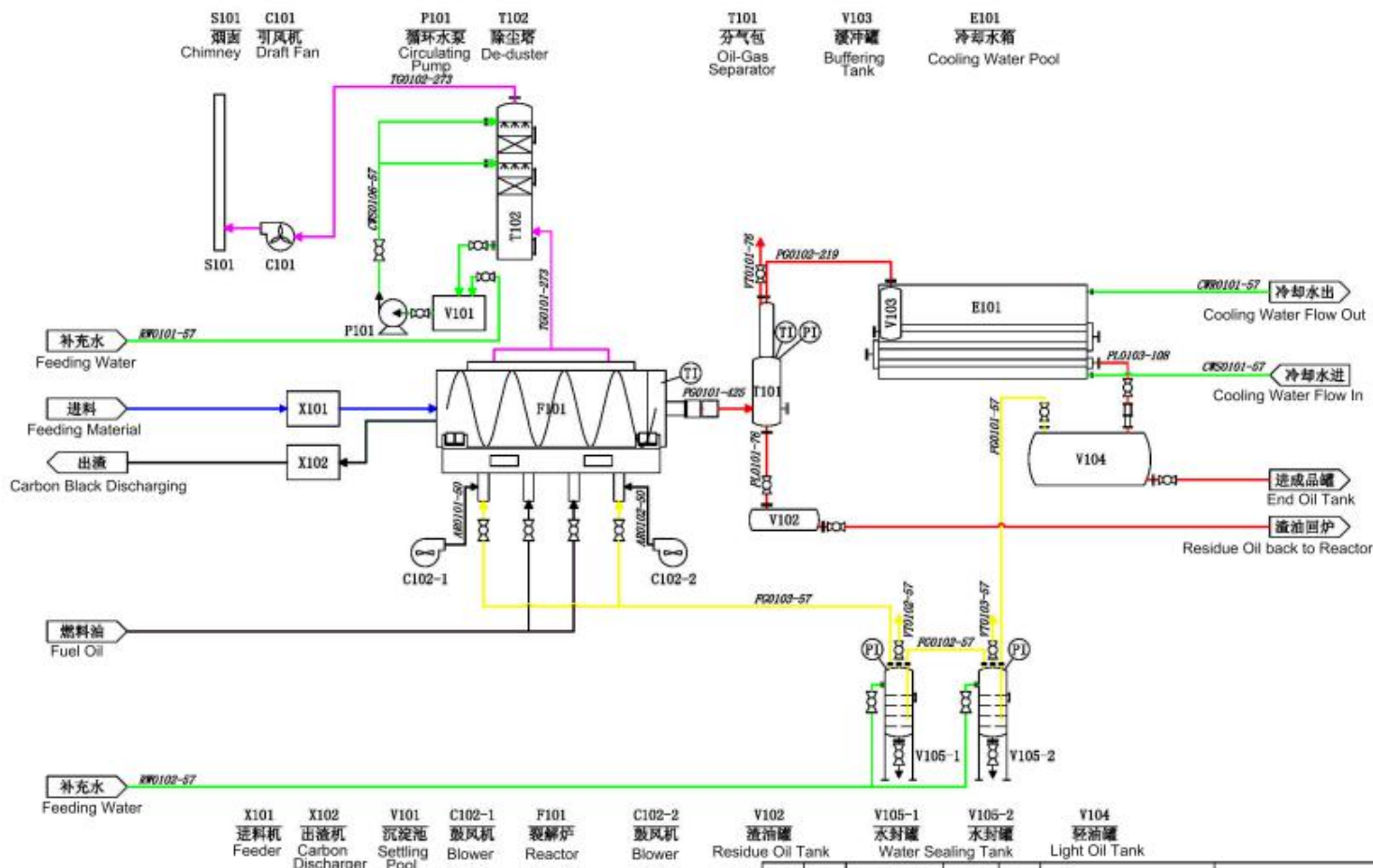
**Waste Plastic Pyrolysis Equipment will solve this problem very well.**



## ► Technical Flow Chart

# Overview

## Technical Flow Chart



商丘市钟鸣环保设备有限公司									
裂解设备工艺流程示意图									
标记	数量	更改文件号	签名	日期	参考图号		重量	比例	
设计		标准化							
校对		审定							
审核		批准							
工艺							共	张	第 张





# Overview

## Technical Flow Chart Description

**1st:** Feeding--Waste Plastic feed in reactor via auto feeder(Both packed plastic and crushed plastic available);

**2nd:** Heating--Use Pyrolysis oil or natural gas as heating fuel, pyrolysis oil gas go to condenser system for liquefaction when heating up to 260°C , then oil flow into middle oil tank.

**3rd:** Non-condensable Gas--Under normal pressure and temperature, uncondensable gas will be fully recovery to be used as heating fuel for furnace, can save most of heating fuel.

**4th:** De-dusting system--After heating, all of the dusts will be purified and processed via professional Industry processing system, ensure final emission achieve dust emission standard.

**5th:** Carbon Black Discharging--Auto Discharged carbon will be blowed to carbon black warehouse via vaccum system, ensure no any dust fly outside.



## **Waste Analysis and Treatment**



# Waste Analysis

Heating  
Process(Natural  
Gas/Pyrolysis Oil)  
create the flue gas will  
go to professional gas  
treatment system via  
flue extraction System.

Need circulating water  
for cool down the hot oil  
gas,water is recycling,  
only evaporation, no  
loss and no waste water  
created.

Noise mainly come  
from speed reducer,  
draft fan,blowers,water  
pumps and oil  
pums,all working noise  
less than 50db.

Solid waste can also be  
named as waste slag, same  
as carbon back, has high  
recycling value, can be used  
as making rubber  
production,cable skins, tyre  
and ohter plastic productions.

**Waste  
Gas**

**Waste  
Water**

**Noise**

**Solid  
Waste**



**Raw Material to be  
Processed**

# Applicable Raw Material



废轮胎



工程轮胎



自行车/摩托车胎



废塑料



亚克力边角料



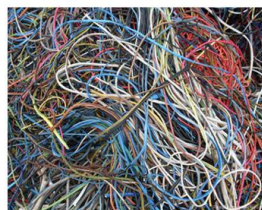
渣油/重油



废橡胶



废塑料



废电缆皮



油田油泥



皮革边角料



工业油漆渣



废鞋底



废铝箔



造纸厂水洗塑料



城市生活垃圾



工业废料



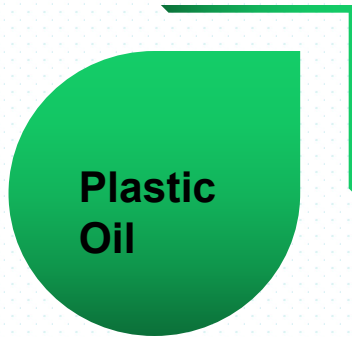
废机油滤芯





**End Production  
Yield and Usage**

## End Production Yield and Usage



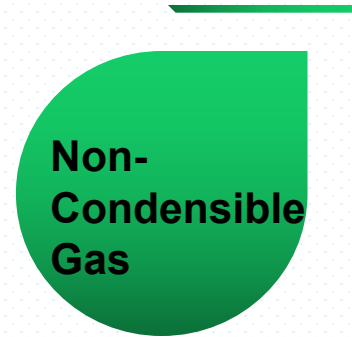
**40%**

Used as Industry Boiler Fuel, can be used in power plant, ceramic plant, glass manufacturers and other industry.



**50%**

Widely used, can be used as heating fuel after making carbon briquettes



**7%**

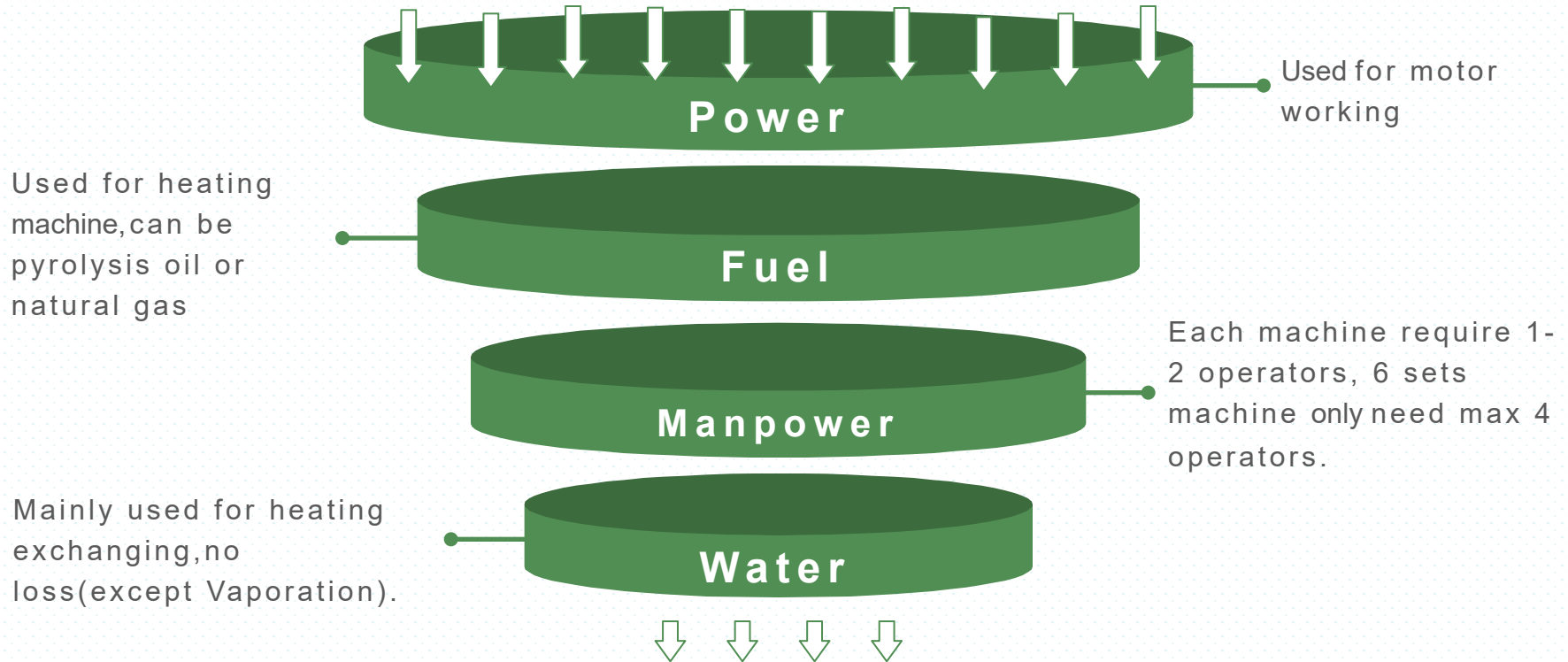
Used as heating fuel, before emission, treated by professional gas treatment system to achieve local emission standard.



## ► Energy Consumption



# Energy Consumption



Reference : Averagly process per ton waste tyre, manufacture cost will be around USD 17.00



## ► Economic Benefit Analysis

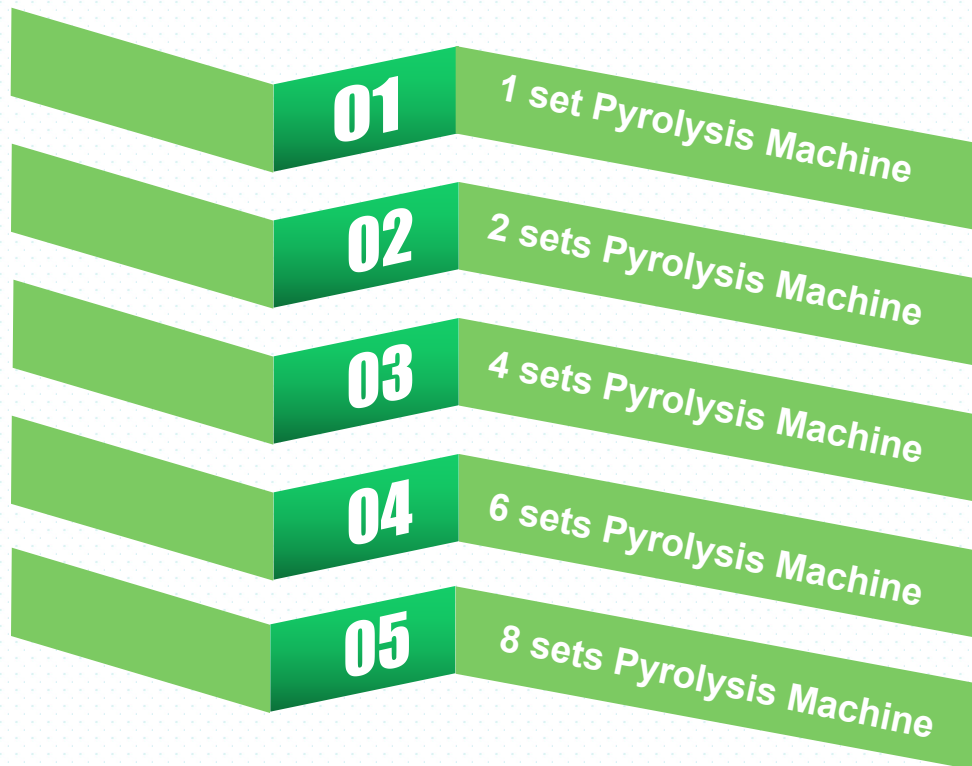
## Economic-Benefit Analysis(20000 tons per year capacity)

No.	Item Name	6 sets 12TPD capacity
1	Raw Material	900 RMB/T
2	Raw Material	70tons*900RMB/T=63000RMB
3	Labor Cost	7persons*2shifts*250RMB/D=3500RMB
4	Fuel Cost	Pyrolysis Oil 800 kgs (exclude non-condensable gas)
5	Electricity	Around 3000 RMB
6	<b>Daily Cost</b>	<b>69,500.00 RMB</b>
7	Pyrolysis Oil Price	2600 RMB/T
8	End Production (Oil)	70tons*40%=28 tons(minus heating fuel 800kg) , 27.2tons*2600RMB/T=70720 RMB
9	End Production(Carbon Black)	70tons*50%=35tons*280RMB/ton=9800RMB
11	<b>Daily Output</b>	<b>80,520.00RMB</b>
12	<b>Daily Profit</b>	<b>80,520.00 RMB-69,500.00 RMB=11,020.00RMB</b>
13	<b>Monthly Profit</b>	<b>11,020.00 RMB*25 day/month=275,500.00</b>
14	<b>Yealy Profit (10 months)</b>	<b>Around 2,755,000.00 RMB</b>



► **Project Covering Area**

# Covering Area



Device Area 300m<sup>2</sup>(30m\*10m\* $\geq$ 6米) Plus Warehouse for raw material and end production totally around 800m<sup>2</sup>



Device Area 450m<sup>2</sup>(30m\*15m\* $\geq$ 6米) Plus Warehouse for raw material and end production totally around 1500m<sup>2</sup>



Device Area 900m<sup>2</sup>(30m\*30m\* $\geq$ 6米) Plus Warehouse for raw material and end production totally around 2000m<sup>2</sup>



Device Area 1800m<sup>2</sup>(60m\*30m\* $\geq$ 6米) Plus Warehouse for raw material and end production totally around 4000m<sup>2</sup>



Device Area 2400m<sup>2</sup>(80m\*30m\* $\geq$ 6米) Plus Warehouse for raw material and end production totally around 5000m<sup>2</sup>



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**Choose Us**



# Choose Us

## 1 10 Years Experience

Our company has 10 years R&D, manufacturing and service experience, served thousands customers, updating our technology according customer running practical feedback, now has 8th generation oroduction,updating technology for better serving customers,meet customer requirement while apply government license.

## 2 Eco-Friendly Environmental

Machine equip with professional and advanced gas treatment system,ensure emission meet national emission standard; Actively respond government slogan "green water and green mountains are golden and silver", no pollution to the environment.

## 3 After-Sale Service

Once Machine arrive to buyer site, we send technician to buyer site for free installation, commissioning and training.Technician couldn't leave buyer site until buyer fully operating the machine and maintenance skills..

## 4 Qualitive Product

Technology department in charge of the machine design and production guidance. Manufacture department in charge of producing according technology department drawings and engineer on-site guidance.QC department in charge of inspection to ensure that each part is qualified for delivery.

## 5 Honor

Company has got CE certification, ISO9000 and ISO14001, also got the honor of 'Qualified products of National Standard'

## 6 Export Production

Since 2008, our production has been exported to Malaysia,Thailand,Korea,Philli pines,Portugal,Russia, Middle East area, etc...more than 60 countries, send engineers to buyer site for installation, commissioning and training.



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**Success Story**

# Success Story





## Success Story



# Success Story





**Contact Us**



## Contact Us

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Website Code



Wechat Code

# Contact Us

