湖南奔骥
HUNANBENJI

Sludge Disposal Plant

MSW Disposal Plant

Full Continuous Environmental Tyre to Fuel Oil Plant

Hunan Benji Environmental Energy Technology Co.,LTD

Company Introduction

Hunan Benji Environmental Energy Technology Co.,Ltd is a comprehensive company which is specialized in development and research、 manufacture and sales of wastes into new energy field with rich professional experience history more than 30 years.has been awarded as:“National Intellectual Property Advantage Enterprise”and “High-tech Enterprise Certification in Hunan Province”ect.

Benji Company has 103 national patents.Our advantage productions are: Waste Tire Oil Pyrolysis Plant,Waste Engine Oil Recycling,Waste Engine Oil To Base Oil Distillation Machine,City Waste Processing Machine,Waste Plastic to Oil Pyrolysis Machine,Continuous Machine ect. We have more than 100 patents of this field.The products are hot sold in many countries in the world.

Welcome your visit!

High Voltage Ultrafiltration Continuous Sludge Dewatering

•Plant Technology Theory

The plant is composed of a multi-stage double-sided water filter and a continuous strong ultrafiltration device.The ultrafiltration equipment adopts graded strong pressure, and the moisture can be reduced to about 50% within 3 minutes.For example, it takes a long time and a lot of heat to dry a towel when it is lifted out of water. But if you twist it with your hand, the water will be dehydrated immediately.

In the process of production, firstly break the combined water wall of the sludge in the conditioning device to release the water liquid in the cells of microorganisms and bacteria, then flocculate it with the polymer material, and then carry out rough filtration and ultrafiltration through the super filter device to obtain about 40-55% of the sludge.

• Plant Features

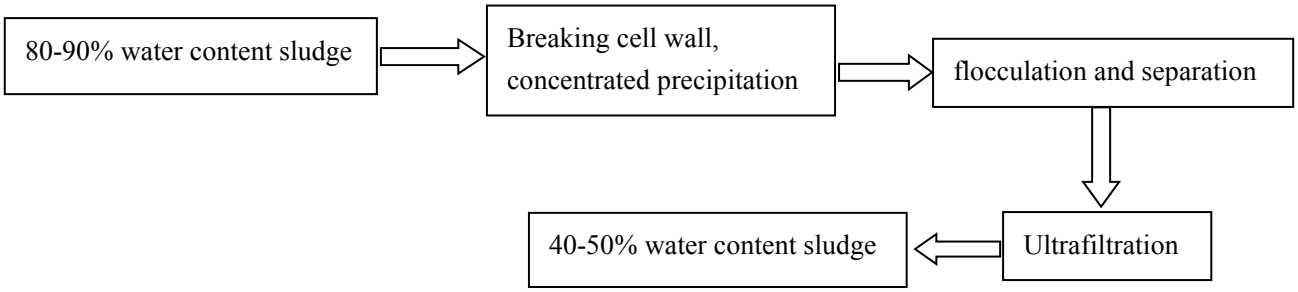
1. Wide range of treatment, suitable for all walks of life sludge treatment.

2. High efficiency with continuous production,capacity:from 500 tons of sludge with water content of 99% per hour (12,000 tons per day and night), to 10-15 tons of sludge with water content of 80% (about 250 tons per day and night);Or from 80% water content sludge 25 tons per hour (600 tons per day and night), get 50% water content sludge 4-8 tons (100 tons per day and night).Compared with the "cascade", not only the efficiency is high, but also the water content is greatly reduced;It is several times more efficient than the frame filter press.

3. Low power consumption, low cost, 0.1kw power consumption per ton of 99% sludge,

4. Significantly volume reduction, easily treatment sludge with a moisture content of 80-99% to 40-55%.

•Process Flow Diagram



•Plant Specifications and Sparameters

Style #	Capacity/T (99% water content sludge)		Electricity kw/t	Labor	Land
	By Hour	By Day			
BJT100	100	2400	0.1kw	3	200 ㎡
BJT300	300	7200	0.1kw	3	250 ㎡
BJT500	500	12000	0.1kw	6	300 ㎡

•Sludge Dewatering Discharge

Multipass Rotary Continuous Sludge Drying Plant

Horizontal Middle Size Drying Boiler

Horizontal Large Size Drying Boiler

Upright Sludge Drying Boiler

Upright Sludge Incineration Boiler

•Plant Technology Theory

The equipment can process sludge with a moisture content of 60-80% through thermal energy, and finally process sludge with a moisture content of less than 5%.Through the innovative patent technology of heat-conducting ball with high dispersion 、high efficiency drying and carbonized sludge .When this plant is in production,Material goes feeder and then operate with 400 ℃ high temperature heat-conducting ball through running tube to reactor, running continuously under the spiral guidance of internal rotary reactor, materials will finish heat transfer with heat-conducting ball.Slag and heat-conducting ball are mixed into burning boiler through connection tube and continuous combustion under the spirally guidance of external reactor,then discharge to slag bucket.After the combustion, the heat-conducting ball obtained high temperature again and then enters the inner rotary reactor

through the heat-conducting ball connection pipe, so as to realize continuous circulation use. Flue gas is discharged through the smoke pipe.

• Equipment Features

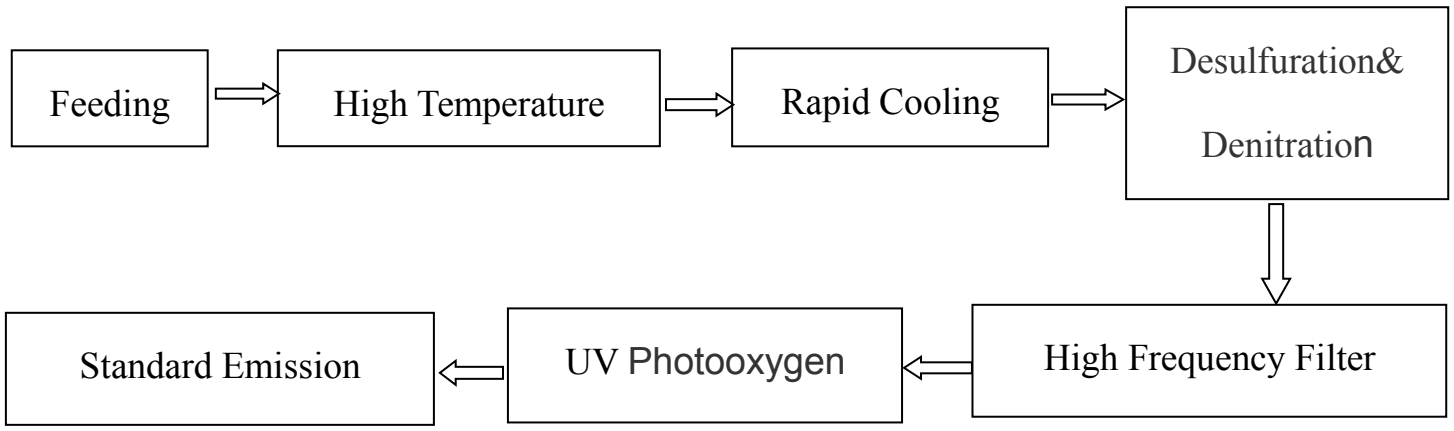
Firstly, innovation invention technology of energy heat accumulation and dispersive, which has a better drying effiects. On one hand,it can achieve to quick heating through heat exchange of a number of high temperature heat conducting ball and a batch of raw material.On the other hand, it can highly disperse the bonded sludge and fully absorb heat, which solves the problem of heat transfer of blocking sludge.

Second,innovative application of high-energy electric field technology , the exhaust gas purification effect is better.By adopting of high-energy electric field,it can capture and collect all impurities, such as dust, water mist and hydrocarbon. Exhaust emission is free from water mist, dust, oil ,gas or visible gas and sundries. The landscape is good.

Third, innovative application of photooxygen catalysis technology, more sanitary gas emissions.Photooxygen catalysis technology is known as "the world's most ideal green environmental purification technology".Under the irradiation of light, it can be thoroughly degraded into carbon dioxide and water, which can intercept and kill all kinds of bacteria in the air in a broad spectrum, effectively removing various chemical odors of benzene.

Fourth, innovated technology of composite catalytic accelerant, more environmentally friendly of sludge self-combustion purification.At first,the agent has the function of organic molecules pyrolysis, to promote the rapid wall dehydration of sludge.The second is function of transforming harmful substances, which can remove sulfur especially to control the generation of dioxin. The last is the role of combustion and smoke purification.

•Process Flow Diagram



•Plant Specifications and Sparameters

Product #	Capacity	Electricity Installed	Labor	Land
BJGX30	30tpd	60kw	2	300 ㎡

BJGX50	50tpd	75kw	2	500 ㎡
BJGX100	100tpd	90kw	2-3	800 ㎡
BJGX200	200tpd	150kw	2-3	1000 ㎡

•Sludge Drying Slag Discharge

Sludge Far IR Low Temperature Film Drying Plant

•Plant Technology Theory

This plant runs under 100 ℃ low temperature,which has adjustable heating method,such as electric heating, steam heating, gas heating,fuel heating, biomass heating ect. It is a full auto continuous production plant with material transport chain of multiple cascading structure.Sludge will be transported as pancakes to conveyor belt with fast evaporation speed.

• Equipment Features

1. The equipment is compact in structure and occupies less land.

2, low drying temperature, with no burning odor.Sludge drying temperature about 100 ℃, only belongs to the evaporation of water temperature.It overcomes the disadvantage of smelly by direct burning drying in rotary furnace.

3, Use cell wall broken technology with its advantage of complete dehydration.Our advanced membrane breaker can separate out the microbial cell wall, dialysis the water in the cell as much as possible to facilitate dehydrate in maximum.

4. "Pancake" film technology is adopted, which has the advantage of rapid evaporation.By traditional drying methods sludge will make up into big clay lump with poor dispersion, which is difficult to dry totally .It will greatly improve the evaporation rate by spreading out sludge evenly and in particle dispersion, .

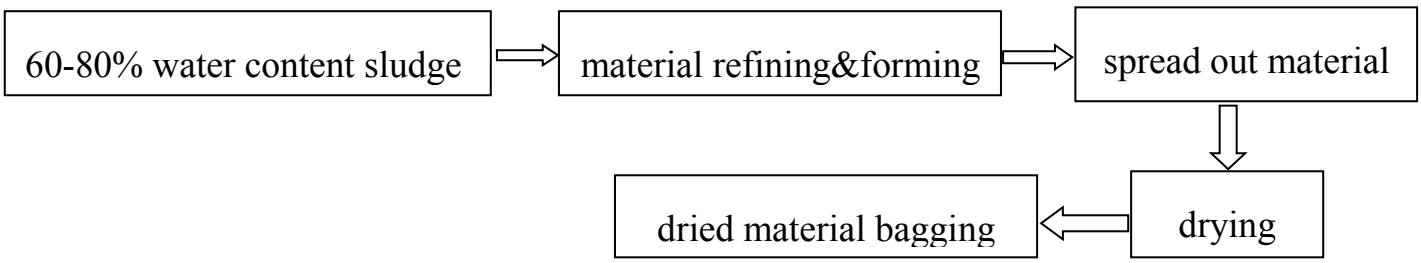
5. Low temperature drying can completely prevent dioxin.Dioxin synthesis temperature above 280 ℃.While Bioxins can't be formed in 100 ℃ low temperature .

6, Use technologies of far-infrared and superconductivity, with its efficient energy-saving advantages.Far infrared can improve thermal efficiency by 15%, which is equivalent to reducing energy consumption by 15%.Superconducting technology ensures fast heat transfer, balanced heat distribution, fast drying, low energy consumption and even drying.

7, Thermal cycle has the advantage of low energy consumption, the heat energy in the dryer all self-cycle, improve the utilization rate of heat energy, relatively reduce the heat energy consumption.

8. The innovative application of photooxygen catalysis technology has the emission advantage of more sanitary and odorless.

•Process Flow Diagram



•Process Introduction

(1) Material refining. The sludge containing 60-80% water will be entered into the refinder, so that the sludge evenly distributed in the molding machine, the heat source of sludge drying comes from heat of hot air.

(2) Molding. The sludge is extruded into a thin strip to allow heat to pass through.

(3) "pancake" distribution of sludge on the chain row, forming a thinner layer of sludge, accelerate the drying of sludge.

(4) Start chain row and hot air cycle heating to **evaporate water**.

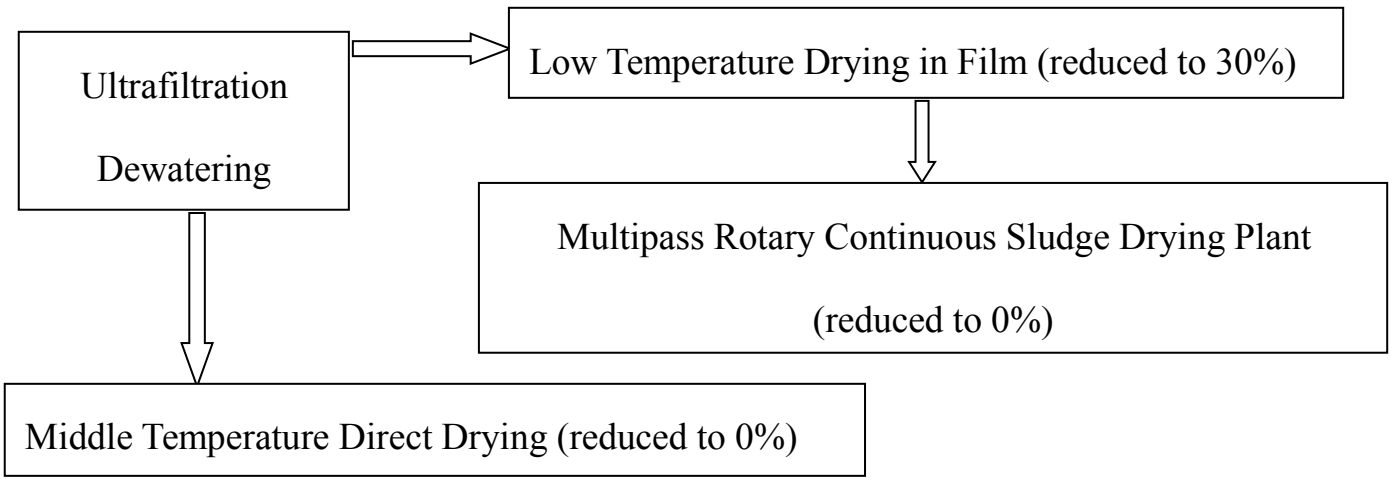
(5) Dried sludge **bagging**.

•Plant Specifications and Sparameters

(heating by electricity)

Product #	Capacity	Electricity	Labor	Land
BJGL30	30TPD	140KW	4	40 ㎡
BJGL50	50TPD	230KW	4	60 ㎡
BJGL100	100TPD	460KW	6	120 ㎡
BJGL200	200TPD	920KW	8	240 ㎡

Perfect Partners



Low Temperature Oxygen Control Pyrolysis MSW Disposal Plant

•Plant Technology Theory

1、Pyrolysis and ashing in low temperature with oxygen control.

Temperature of upper furnace is not higher than 200 ℃ during waste pyrolysis. Raw waste first selection (clear away large stones, glass, iron blocks, etc.) →garbage into the pyrolysis furnace→preheat by pyrolystic heating gas from middle room→preheated material goes to middle room, in the condition of controlled oxygen pyrolysis gasification, carbonization→ combustible medium temperature carbides into ash and discharge after pyrolysis in the bottom room.

2、Pyrolysis in high temperature.

Temperature of upper furnace is around 750 ℃ during waste pyrolysis. Raw waste first selection (clear away large stones, glass, iron blocks, etc.) →garbage into the pyrolysis furnace→gas goes to the second combustion room in temperature 850-1000℃ to decompose harmful matters such as dioxin→immediately cooling to less than 300℃ to prevent the generation of dioxin→auto discharge after pyrolysis finish.

3. Standard emission.

Water desulfuration denitration→absorbing cleaning→multi-absorbing purification→high efficient electrolytic dissociation→Photo-oxidation deodorization→standard discharge and emission

•Innovation Technologies

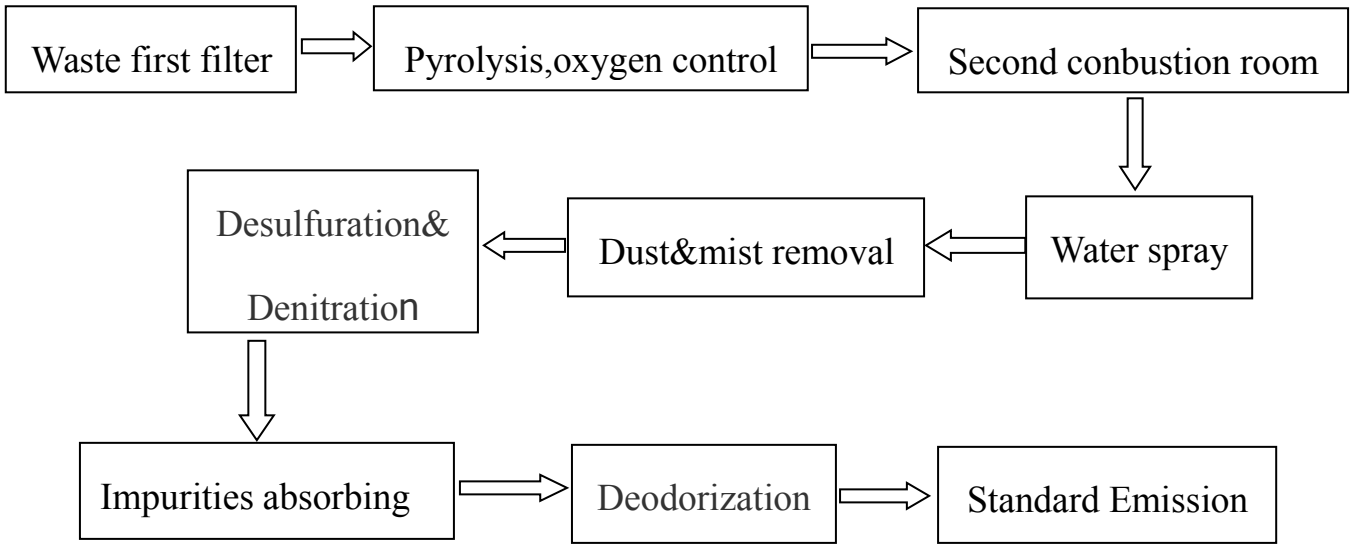
Firstly,Innovation pyrolysis technology of far-infrared energy ball , fully stable fast decomposition of waste, energy efficient.

Secondly,Innovative advanced technologies of high-energy ion dust and smoke elimination, dust removal, oil removal and mist removal.With its complete exhauseted gas treatment system, it can achieve to good production progress with no smoke, no fog, no dust, to achieve standard emissions, and effectively improve the landscape.

Thirdly,Innovative composite control agent can accelerate the pyrolysis of waste, especially effectively destroy the precursor of dioxin and prevent the formation of dioxin.

The last,Photooxygen catalytic deodorization technology can greatly eliminate a variety of odor gas,gives a nice ambient atmosphere

•Process Flow Diagram



•Plant Specifications and Sparameters

Project	Population	Electricity	Labor	Land
3TPD	3000	6kw	1	100-200 ㎡

5TPD	5000	15kw	1-2	200-300 ㎡
10TPD	10000	20kw	2-3	300-500 ㎡
100TPD	100000	150kw	8	5000 ㎡

Advanced Full Continuous Automatic Tyre to Oil Pyrolysis Plant

•Plant Technology Theory

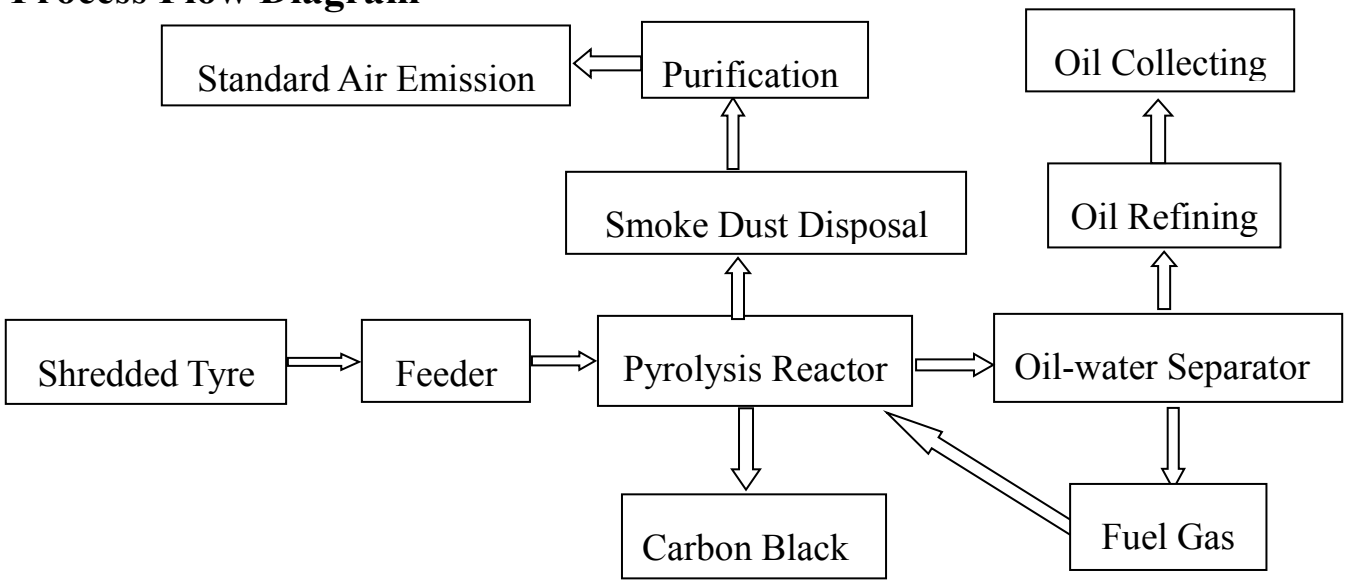
Fully continuous environment-friendly tire oil refining is a chemical process in which a kind of macromolecule compound pyrolysis into low molecular compounds under certain conditions without oxygen.Fully continuous environment-friendly tire refining equipment with accurate calculation, to ensure that the waste tire fully cracked, waste tire treatment efficient and fast.Using the principle of pyrolysis, high temperature pyrolysis method was used to split the waste tire into tyre pyrolysis oil, carbon black and steel wire.The whole process operation with plant sealed, clean, environmental protection and safety.

•Innovation Technologies

The reactor body rotates externally as a whole, and a material turnover device is set inside the reactor.When working, the reaction kettle rotates in the right direction to run the materials from the inlet to the outlet, and discharge the slag materials from the outlet without stopping, so as to realize "continuous feeding every minute, automatic slag discharge every moment, continuous oil discharge day and night".The equipment ensures that the reactor can not only suitable for tires and oil sands and other oil-bound raw materials, but also suitable for pyrolysis of waste plastics,

sludge, sludge and other coking raw materials.

•Process Flow Diagram



•Plant Specifications and Sparameters

Product #	Capacity	Electricity	Labor	Land
BJ5L-15	15TPD	65KW	2	200 ㎡
BJ5L-30	30TPD	70KW	2-3	300 ㎡
BJ5L-50	50TPD	100KW	2-3	500 ㎡

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