



Pretreatment System of Domestic Waste

JUST SHRED IT

harden

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Contact Harden for professional shredding and recycling solutions.

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About Us

Harden Machinery Ltd. is a leading manufacturer of industrial shredder and waste disposal equipment in China. With a growing market and hundreds of successful cases we had built, Harden had became the most trustworthy brand in China, also it's being more popular worldwide. Thanks to rich experience and our strong R&D team, Harden always keeps advance in technologies.

Harden supplies competitive shredding machines worldwide, including single shaft shredder, double shaft shredder, quad shaft shredder, primary shredder and mobile shredder. We also offer a wide range of one-step solutions such as MRF system for MSW, SMP system for hazardous waste, shredding disposal system for organic waste, paper mill waste and bulky waste, etc.

Core Advantages of Harden

Professional Technologies

Focus on shredding technologies from beginning to now

High Reliability

All parts in world brands / Advanced and mature designs

Trustworthy Brand

900+ successful projects / Wide recognition in market

Aims the best ROI for customers

Batch production saves cost / High Durability Proven

Domestic Waste



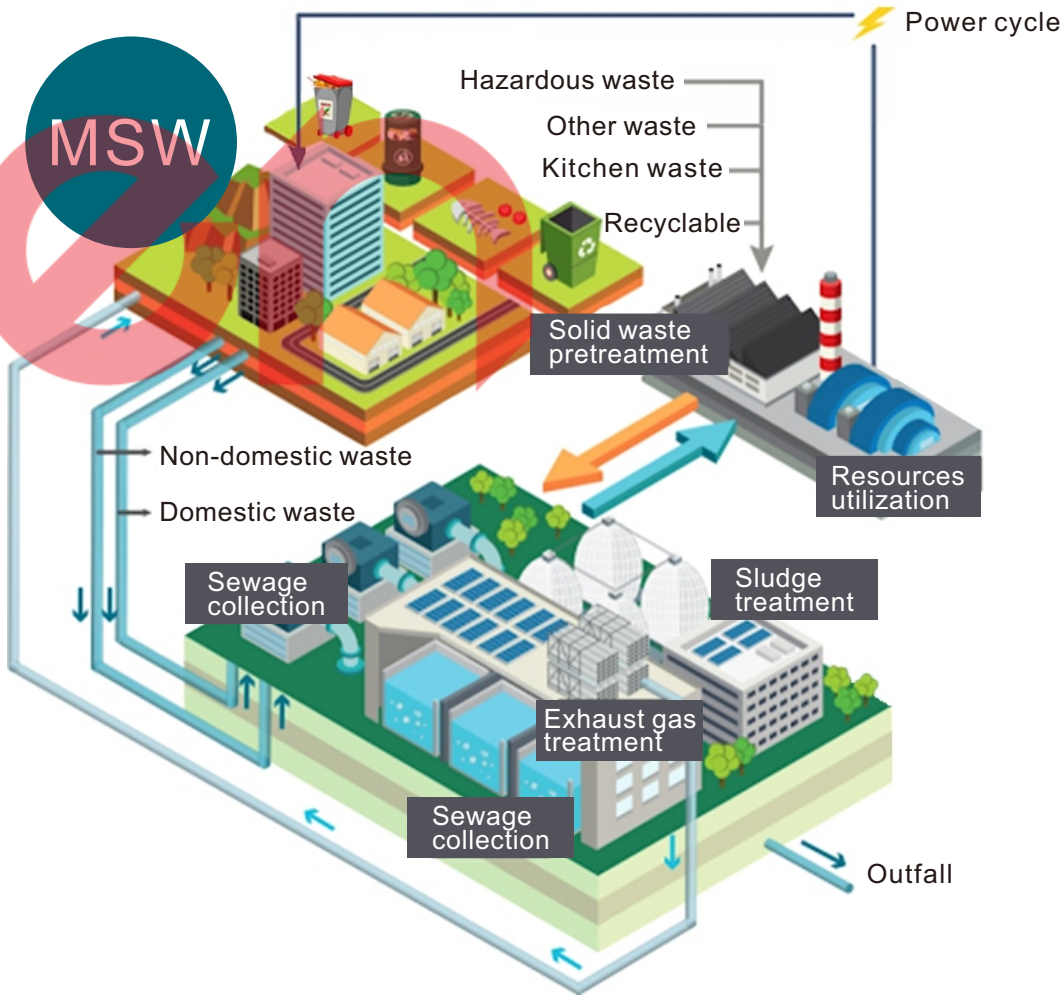
a large amount of renewable resources, e.g. plastics bottle, metal, paper, etc. are mixed with the municipal solid waste (MSW). The composition of perishable waste, mainly kitchen waste, accounts for 40%-60%, which can be used as biomass energy to use. High calorific value combustibles that take up the largest proportion can produced into RDF/SRF, reduces the use of the fire coal.



As a equipment supplier of solid waste pretreatment in solid waste processing industry for more than 10 years, arounds pretreatment goal of three mixed domestic waste/other waste in "Recyclable material sorting", "Organic matter extraction" and "Preparation of RDF/SRF from combustibles", Harden can provide reliable technologies, systems and equipment.

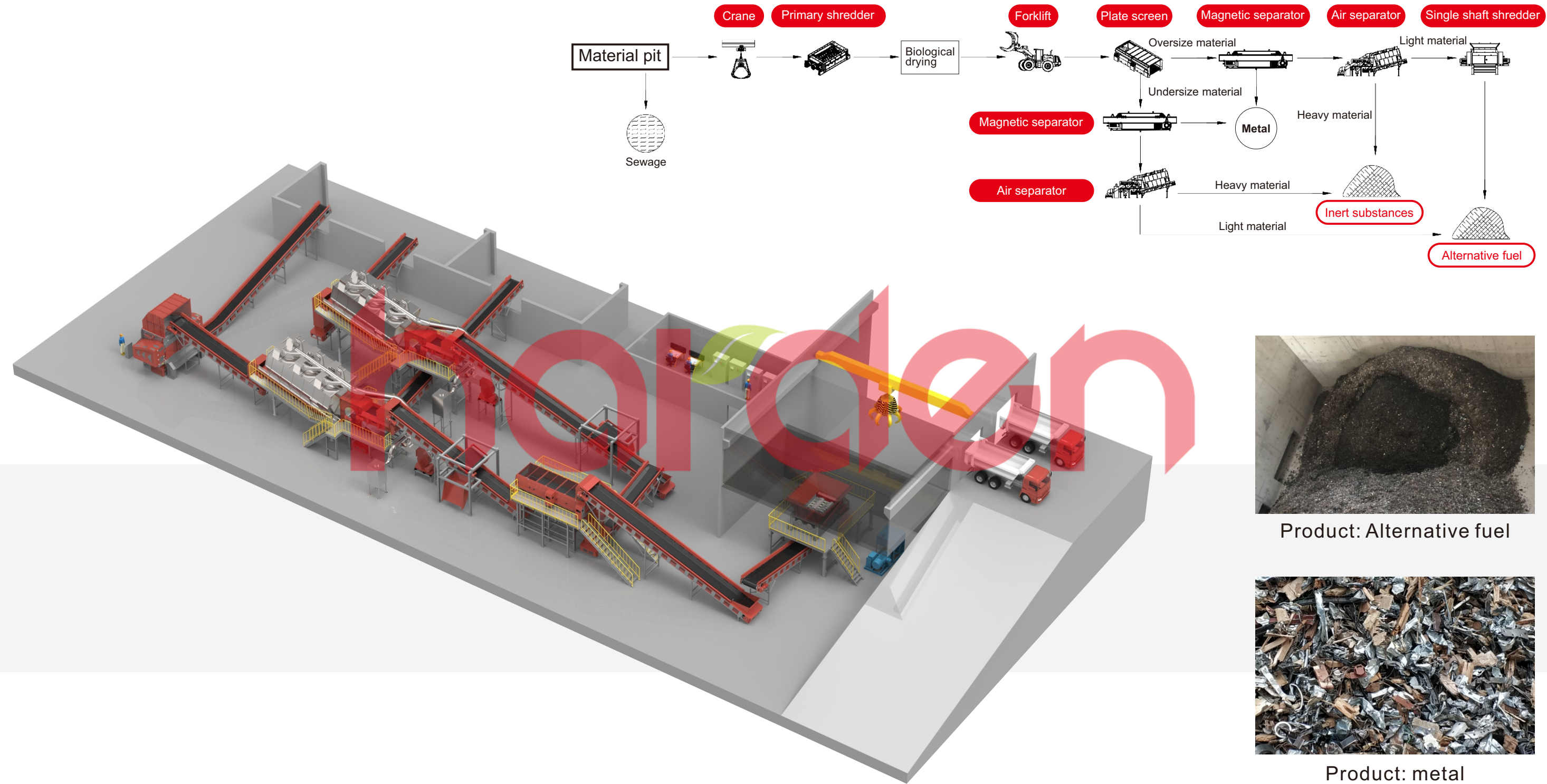
A common RDF specifications as shown below:

RDF types	Particle size (mm)	Calorific value (kcal/kg)	Density (kg/m³)	Moisture content	Application
Type 1	50-80	>3000	<250	<20%	pyrolysis fluidized bed cement kiln, etc.
Type 2	20-35	>4000	<150	<15%	Coupling power generation cement kiln, etc.



Pretreatment Solution of RDF Preparation

The final products from this pretreatment line include three parts: The high quality of alternative fuel (RDF/SRF) with 98% of particle size less than 60mm, alternative fuel based on inorganic substances, recyclable metal. The whole processing does not need manual participation, with good material compatibility which ensures bulky waste, mattress and other foreign objects. The core equipment such as shredder and sorting machine run smoothly and steadily, to keep the low cost of the RDF preparation.



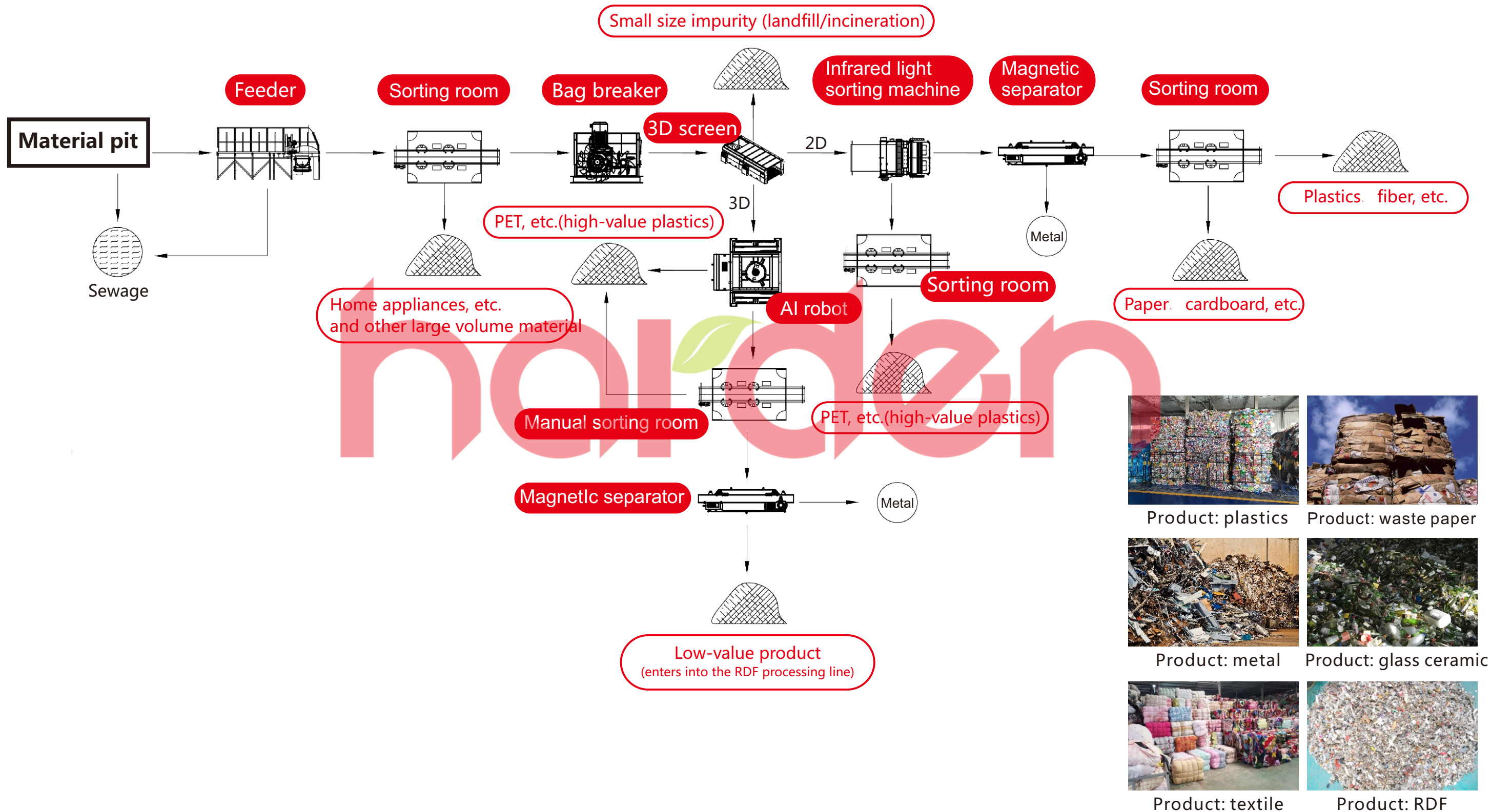
Product: Alternative fuel



Product: metal

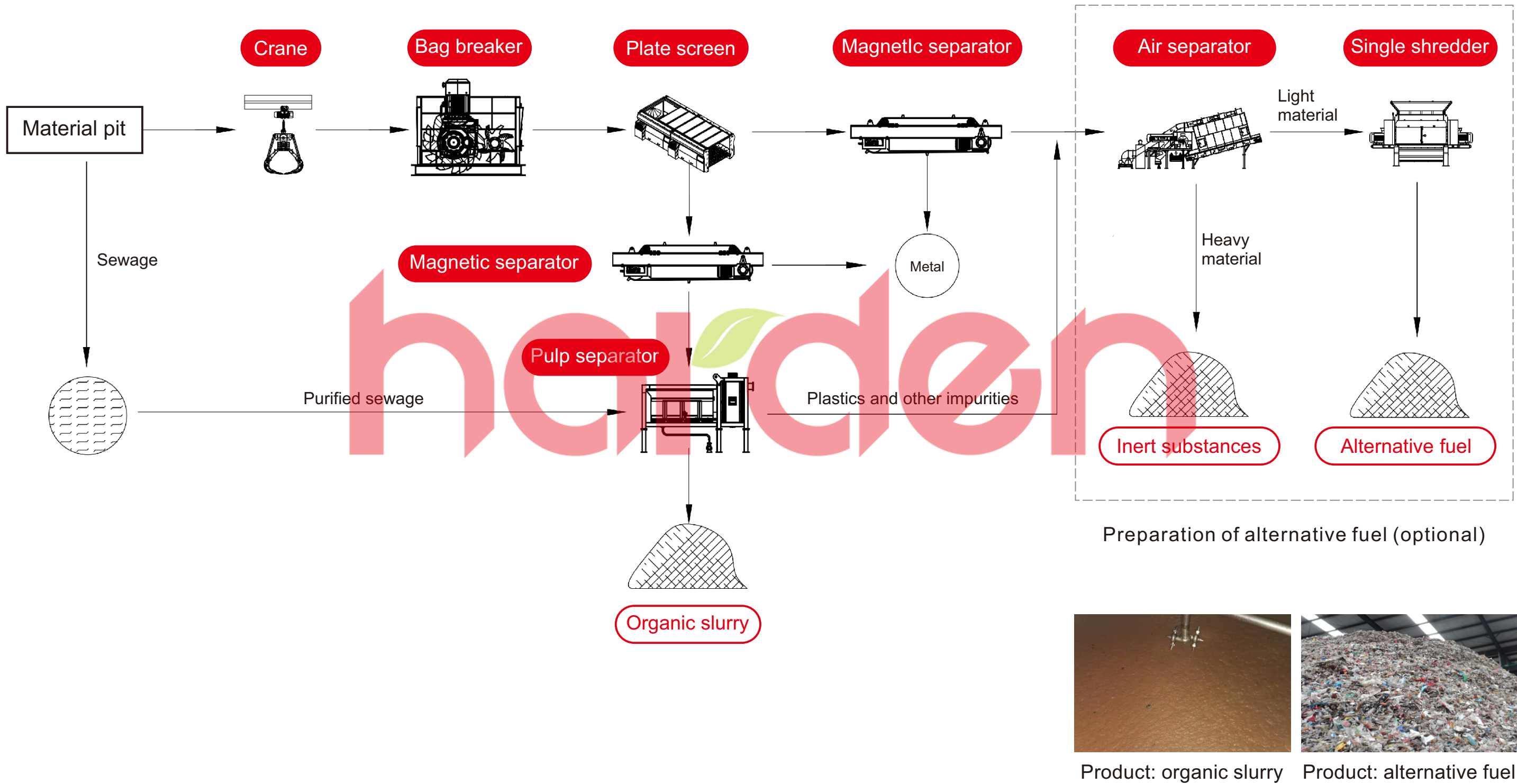
Pretreatment Solution of Recyclable Material Sorting

This pretreatment line aims to realize the maximum recycling of recyclable material. The bag breaking shredder can not only guarantee the high broken rate of packing bags, but also ensure the integrity of high-value recyclable material such as plastics bottles, glass bottles and waste paper to the greatest extent. It can achieve high recovery rate of recyclable material by cooperating with AI robot, optical sorting machine and manual sorting



Pretreatment Solution of Organic Matter Extraction

30%-40% of the unclassified original solid waste is food waste. As a high-quality renewable biomass, the recycling of food waste is conducive to the realization of resources utilization. The treatment line adopts plate screen and advanced pulp separator to realize effective separation and recovery of organic matter.





Large output hydraulic primary shredder

The large output hydraulic primary shredder adopts the concept of open-ended shredding. In the front end, it can grab directly feed without a vibrating feeder. The output can reach up to 80 t/h. Several types of cutters and running programs can be selected in order to meet the domestic waste shredding requirements of different particle sizes, especially to realize a homogeneous size of material to ensure the sorting effect in the following processes.



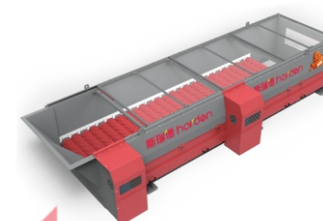
Large-scale single shaft shredder for RDF

Single-shaft shredder adopts the spindle of large diameter and thick wall, equipped with a big pulley in the power system. The main spindle and big pulley can store a large amount of energy to keep ultimate cutting force and smooth operation. The patent design of dense arrangement blades and blades structure ensures the large output and energy-saving. Built-in hydraulic arc pusher works cooperated with the main spindle, which has the characteristics of intelligent speed control and voltage changing.



Pulp separator of organic matter

The pulping machine applies a vertical separation concept, which ensures the separation rate of organic matter over 99.5% and a low moisture content of the discharged material. Metal or other impurities can be easily accepted by this machine without any breakdown. A screw feeding machine and discharging control screw are equipped to keep the smooth operation. In order to satisfy the need of different fermentation systems, a variety of different mesh screens are optional for the customers.



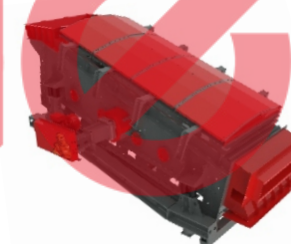
Anti-blocking plate screen

Plate screen adopts a multi-angle design which aims to mix domestic waste, and the mesh is always in the process of dynamic changing to effectively prevent the mesh from being blocked by organic matter. The patent designs of anti-winding and anti-jamming effectively avoid the hard objects from falling into the mesh hole, causing the breakdown of the machine. Comparing with the roller screen in the situation of 80t/h, the plate screen only consumes 15 KW.



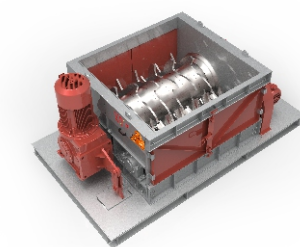
Intelligent rotary air separator

The air separator adopts an advanced light and heavy material separation principle of drum assisted, with high sorting accuracy and large production capacity. The position of the infeed & discharge belt conveyor and the angle of the separation room can be adjusted for different materials.



3D screen

3D screen is suitable for a variety of materials, with high quality of screening effect at the same time. It adopts a double structure design to ensure the screening size.



Bag breaker

The bag breaker adopts the bag broken principle of mutual meshing to ensure that all material must pass through the broken bag. Patented structure of small shaft and hook guarantees a high rate of breaking. In the process of breaking, the recyclable material, e.g. plastic bottles and other materials, etc., will not be damaged. If there exist unbreakable foreign objects, the bag breaker can discharge it without breaking, which ensures smooth operation.



Step feeder

The step feeder has a large bearing capacity and can be used as a storage box with a width of 4m, a length of 10m and a stacking height of 2.5m. It is driven by hydraulic, with good stability and continuity.



Sorting room

With negative pressure dust removal and ventilation to ensure the manual working environment; Sound insulation design to prevent noise pollution.



Light separator

It's a multifunctional photoelectric sorting machine and is widely used in material sorting, e.g. mixed plastic bottles, mixed packing material, municipal solid waste, construction and decoration waste and mixed paper waste, etc.

Client Cases

