

What kind of equipment do we need if we want to recycle waste PE films?

We need the complete recycling line if we want to recycle waste PE films mainly including belt conveyor, crusher, screw loader, washing tank, high-speed friction washing, centrifugal dehydrator, pipe dryer system etc. The capacity and the degree of dirty of waste PE films being recycled decide the equipment configuration.

1. Purpose of every equipment

1.1 What is the purpose of belt conveyor?

The belt conveyor is mainly used to convey waste PE films being recycled to another equipment to do next recycling. Belt conveyor also is equipped with melt detector to detect melts being mixed among waste PE films. That will protect fixed and rotatory knives from damaging.

1.2 What is the purpose of crusher?

Generally, there are mainly three types crushers called LTPC Series Crusher(Granulator), LTSWP Series Crusher(Granulator)/ horizontal crusher and super power crusher. They are mainly used to crush waste PE films recycled. It is convenient to feed waste PE films into next equipment if materials are crushed scrapes by crusher, and the recycling efficiency will be improved too. You must use straight knives to crush PE films in case PE films twine around knives blades.

1.3 What is the purpose of screw loader?

The screw loader is mainly used to convey waste PE films recycled to another equipment. The screw loader is convenient to convey materials. At the same time, the manpower will reduce and working efficiency will improve.

1.4 What is the purpose of washing tank?

The washing tank is mainly used to washing dirty things attached on waste PE films. The screw on the bottom of washing tank makes silt, melt and pulp etc. Deposit and then exhaust them. The size of washing tank can be custom-made according to different requirements such as 4m, 6m, 12m etc.

1.5 What is the purpose of friction washing?

Through the high-speed rotation, friction will be generated between PE film and blades of screw, so high-speed friction will remove the dusty, silt, pulp etc. from waste PE films, then waste PE films will get clean by clean water washing.

1.6 What is the purpose of centrifugal dehydrator?

The centrifugal dehydrator is a kind of equipment for dehydrating. It is mainly used to dehydrate water attached on waste PE films.

1.7 What is the purpose of pipe dryer system?

It is also a equipment for drying. It does another drying for waste PE films after being washed. And the drying efficiency will reach to 85%-90%.

2. Composition of equipment

2.1 The composition of belt conveyor?

Belt conveyor is mainly composed of frame, belt, belt roller, tensioning device, transmission device and so on.

2.2 The composition of crusher?

The crusher is composed of feeding port, motor, fixed knife, rotatory knife, screen mesh, bearing and other parts.

2.3 The composition of screw loader?

The screw loader is composed of motor, screw and other parts.

2.4 The composition of washing tank?

The washing tank is mainly composed of slag eliminator, slag collector and slag eliminator screw etc.

2.5 The composition of high-speed washing?

It is mainly composed of motor, screw, screen mesh, water inlet, drain outlet etc.

2.6 The composition of centrifugal dehydrator?

It is mainly composed of motor, screen mesh and spray system etc.

2.7 The composition of pipe dryer system?

It is mainly composed of air blower, heating box and other parts.

3. The working principle of equipment

3.1 The working principle of belt conveyor

Motor rotates and drives the main roller rotation, the belt wraps the main roller and the auxiliary roller, and the main roller drives the belt movement to achieve the conveying effect.

3.2 The working principle of crusher

The PE film is fed into the box of crusher through the feeding port, then knives and rotors are driven by motor and gearbox to operate. As the torque of the reducer increases, the knife generates huge torque and super shear force to crush the PE film. Then PE film fragments crushed are discharged through the outlet. You should remember that you need to use horizontal knife, not a claw knife. Because the PE film will be wound around the claw knife when it is used.

3.3 The working principle of screw loader

The motor drives the screw spindle to rotate to reach the conveying effect.

3.4 The working principle of washing tank

The motor drives the wave wheel and the shifting fork to rotate, so that the PE film floating on the water will be rinsed repeatedly.

3.5 The working principle of high-speed friction washing

The motor, the rotating shaft and the screen mesh constitute the cleaning cavity. The motor drives the rotating shaft to rotate at a high speed and generates centrifugal force. So dirty things attached on waste PE films are removed to achieve the cleaning effect.

3.6 The working principle of centrifugal dehydrator

The motor drives the spindle to rotate at high speed, so that the water attached on the waste PE films are removed because of the action of centrifugal force, and the water is filtered out from the screen. The dehydration effect will reach to 80%.

3.7 The working principle of pipe dryer system

Because of the air blower, the hot air is transported to the pipeline, and the PE film is blown into the temporary silo through the pipeline, thus removing 85%-90% of the moisture to achieve the drying effect.

If this page still not solve your questions, we can talk about your questions and discuss it, just tell me!
Just call me if you want: 008617691068515, my name is Lexi.