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## Paper Mill Waste Recycling Disposal System

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JUST SHRED IT, THUS SORT IT.

# harden



Contact Harden for professional shredding and recycling solutions.

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## About Us

Harden Machinery Ltd. was founded in 2010, located in Zhongshan city, Guangdong Province, China, one of the first professional design manufacturers for solid waste shredders and solid waste processing systems. With professional technology research and development capabilities, high-quality products and perfect after-sales service, Harden has developed into a leading enterprise for solid waste processing in China. Products are sold all over the world and recognized by customers.

## Core Advantages of Harden

- Leading enterprise for solid waste processing in China
- Cooperates with European companies
- Full ranges of products
- Famous brand configuration for core components
- The largest R&D scale for solid waste processing in China
- More than 10 years experience in waste industry
- Perfect solutions for solid waste
- More than 1,500 cases domestic and overseas



# Paper Mill Waste Recycling Disposal System

The flowchart is based on double shaft shredder for ragger waste and light reject waste from bulping process of recycled paper in paper mill. After conveying, shredding, separating and sorting, the metals are separated from the combustibles and SRF is obtained (WtE).



## Material



Ragger



Light reject

## Outputs



SRF



Metal



Steel wire



Other Mixtures



## TP Series Double Shaft Shredder

It is mainly used in the pretreatment shredding of obsolescence corrugated cardboard (OCC). According to the characteristics of OCC, a unique tool structure is designed, which has the obvious advantages of labor saving, energy saving and efficiency.

### Technical Characteristics

- The throughput is more than 80% higher than other equipment under the same power.
- Uniform discharging size, loose, without compaction and caking.
- Special tool structure designed, with longer service life and lower maintenance cost.
- The whole package of material can be shredded at one time, without bale opening.
- High efficiency and energy saving, frequency control, high cost performance.



### Shredding Effect



Original OCC



Discharged material

### Product Parameters

Model	Power	Cutting Chamber	Throughput	Weight	Discharge
TP1618	2*250 kw	1600*1800 mm	30~40 t/h	20 T	<300 mm

## Heavy-duty SM Series Single Shaft Shredder

It is mainly used in the secondary shredding of obsolescence corrugated cardboard(OCC), with a number of patented technologies, e.g. intelligent built-in arc pressing device, dense arrangement blades on shaft, small gap between blades, quickly adjust of rotating blades etc. Also, it is combined with the advanced European design ideas and concepts, to achieve high throughput and low operating cost.

### Technical Characteristics

- The biggest throughput of waste paper secondary shredder in China, high efficiency, energy saving.
- Without bale opening, directly shreds the whole package.
- Special tool structure designed, with longer service life and lower maintenance cost.
- Small size discharge, homogeneous and loose, minimum size down to 10mm.
- Frequency conversion control, intelligent speed & voltage regulation, energy saving, environmental-friendly.



### Shredding Effect



Original OCC



Discharged material

### Product Parameters

Model	Power	Cutting Chamber	Throughput	Weight	Discharge
SM3000R	2*250 kw	3815*2820 mm	20~35 t/h	30 T	<50 mm

# Core Equipment

## Double Shaft Shredder



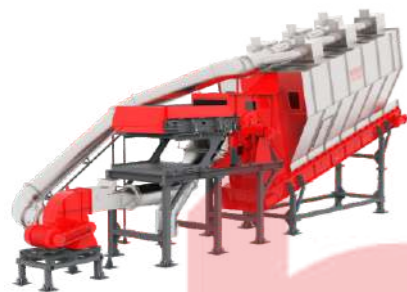
Double shaft shredder come with smart shearing feature, low speed, high torque, reliable and long lifespan running for shredding of paper mill waste. The knives are made in Europe with high alloy materials, having high strength, high impact toughness and excellent wear resistance quality. The knives can be repair by hard-faced after wearing and are fast in dismantling, which makes the shredder easy in maintenance.

## Disc Screen



The disc screen separate the waste by size, where the small fraction is discharges as final RDF and the large fraction is conveyed back for re-shredding. The discs are made from polymer composite material that is robust for all wastes. Optimized design enables the machine free from material twining and easy for maintenance.

## Windshifter



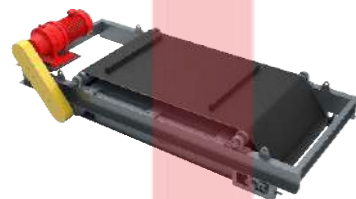
Windshifter is widely used in the waste disposal sorting, which utilizes air flow to separate the heavy and light fractions of the material. Different models of Windshifter have capacity of 15-30 TPH.

## Slat Conveyor



The slat conveyor is designed for heavy load and high impact ability with its overlapped galvanized chain plate, duplex chain drive and enhanced structure. The overlapped galvanized plates provide excellent sealing to prevent the dirt from entering. Auto-lube system provides the best lubrication and ensure low noise and vibration, thus longer lifespan. The slat conveyor is also equipped with VFC and emergency stop.

## Magnetic Separator



The permanent magnetic separator can effectively remove the ferrous metals from the waste, which can recycle the metals while improve performance of the equipment afterwards. Dust collection system may be installed to the magnetic separator.

## Belt Conveyor



Belt conveyor has sideboards to prevent leakage, and it also has cleaning device at its end. The tray underneath the belt collects the debris to keep the environment clean. The belt conveyor is also equipped with VFC and emergency stop.

## Electrical Control System



Main electrical cabinet and control panel can operate separately. Touch screen and button control are available with user friendly interface. The system is 100% automation (unmanned) under auto mode, and single machine can be controlled under manual mode. Control modes can be switched easily at any time when needed. Smart features such as the audible and visual alarms, fault display, maintenance reminder make the maintenance an easy job. With the help of 100% CCTV coverage and easy communication with MCC, operators can monitor the equipment status at all time.

## Remote Data Analysis



HARDEN has built its central database, which provides the real-time monitoring, supervision, diagnosis and troubleshooting for the equipment. This system also provides the reminder and alarm system to ensure the proper running and maintenance of the equipment.



## Selected Cases



## Selected Customers

