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Waste tire treatment system

harden

JUST SHRED IT

harden



Contact Harden for professional shredding and recycling solutions.

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JUST SHRED IT



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 become 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



German technician guides the assembly process



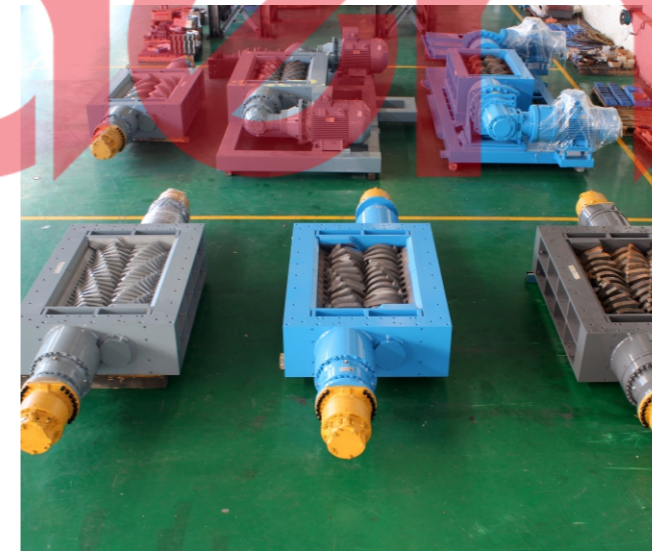
N0.3 Assembly shop



German technical director supervises manufacture quality



Exchanging technical insights



A corner of workshop



A corner of warehouse



Harden has a large shredder production base, including 6 manufacturing workshops. The complete profile cutting, welding, large-scale processing, fine processing, assembly, quality inspection, testing, experiment and other work will be finished in the factory.

Harden introduces advanced quality management system, excellent design must be combined with an entire manufacturing system, quality control technology, to ensure the quality. Harden has passed a number of product certifications and established strict implementation standards for each process. The implementation of 5S visual lean management makes the factory clean and orderly. Using manufacturing level to speak for product quality.

Industry Background



Waste tires are called “black pollution”, the accumulation of a large number of waste tires not only occupies the land but also seriously damages the environment. Because the waste tires are not biodegradable, the decomposing time of tires is uncertain. At the same time, waste tires contain elements such as lead, chromium, cadmium and other heavy metals, which will pose a treat to human health and the environment if handled and managed improperly. Stacking waste tires in the open for a long time will not only occupy a large amount of land resources, but also easily breed mosquito-borne diseases, seriously aggravate the natural environment, and have fire hazards. Therefore, how to deal with the increasing number of waste tires has become urgent environmental and development of support industries problems to be solved.



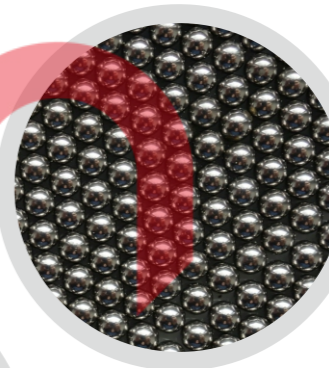
Alternative fuel

The calorific value of the tire is more than 8000 kcal, and most of the high thermal energy industries such as cement plants, power plants, paper mills and smelters can use the waste tires as an alternative fuel, thus reducing the production cost to a certain extent.



Rubber regeneration

The powder can be widely used in highway, aircraft/sport runway, flame retardant materials, rubber and plastic bottom, waterproof material s and other fields; The powder produced by high temperature, high pressure desulfurization can be used to make rubber hose, rubber tape, rubber floor tiles and other rubber products.



Steel wire recycling

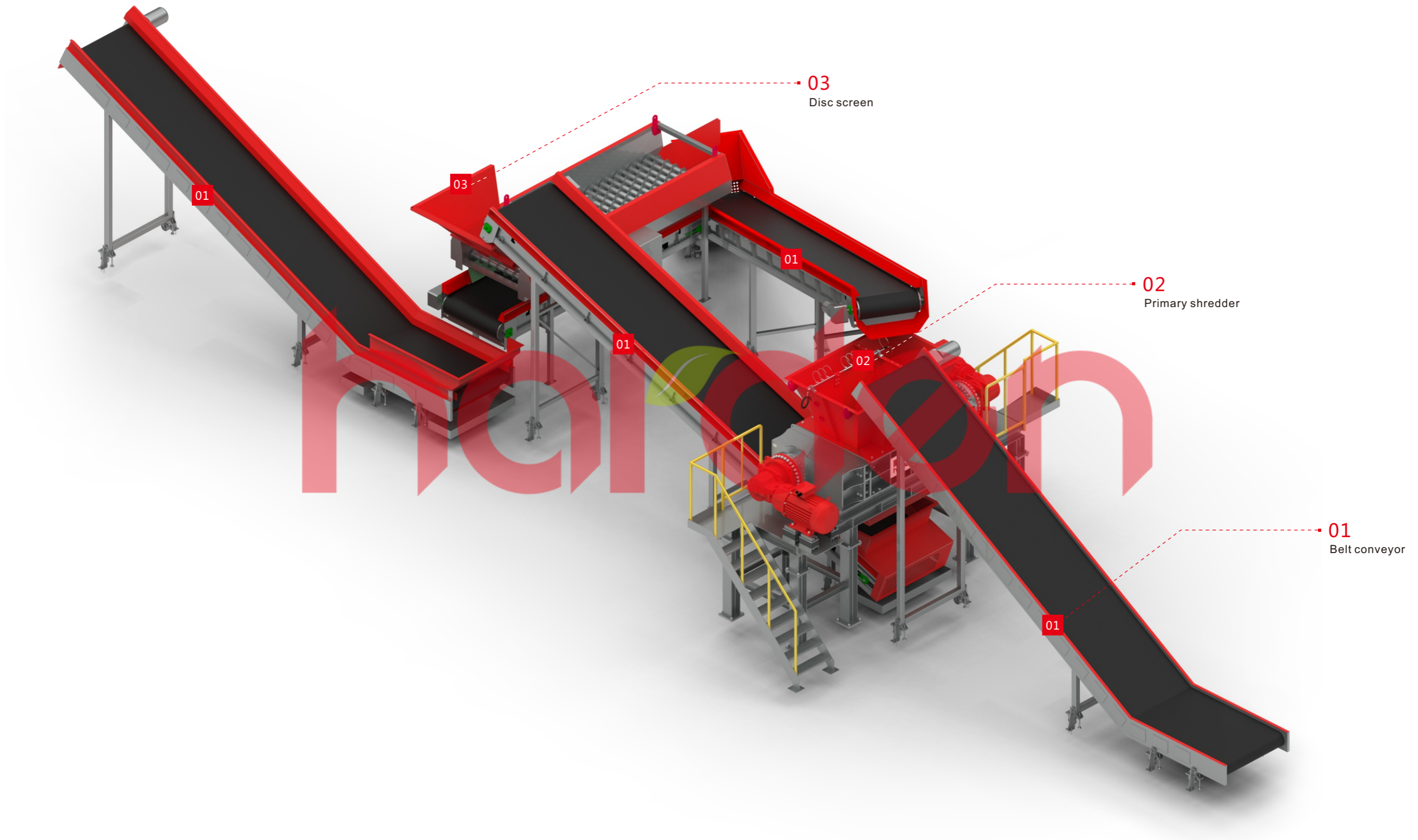
The rubber content of steel wire can be controlled in 1% after the steel wire is screened. The steel wire can be made into steel shots after smelting; The steel shot can be used in casting sand removal, rust removal and other functions.



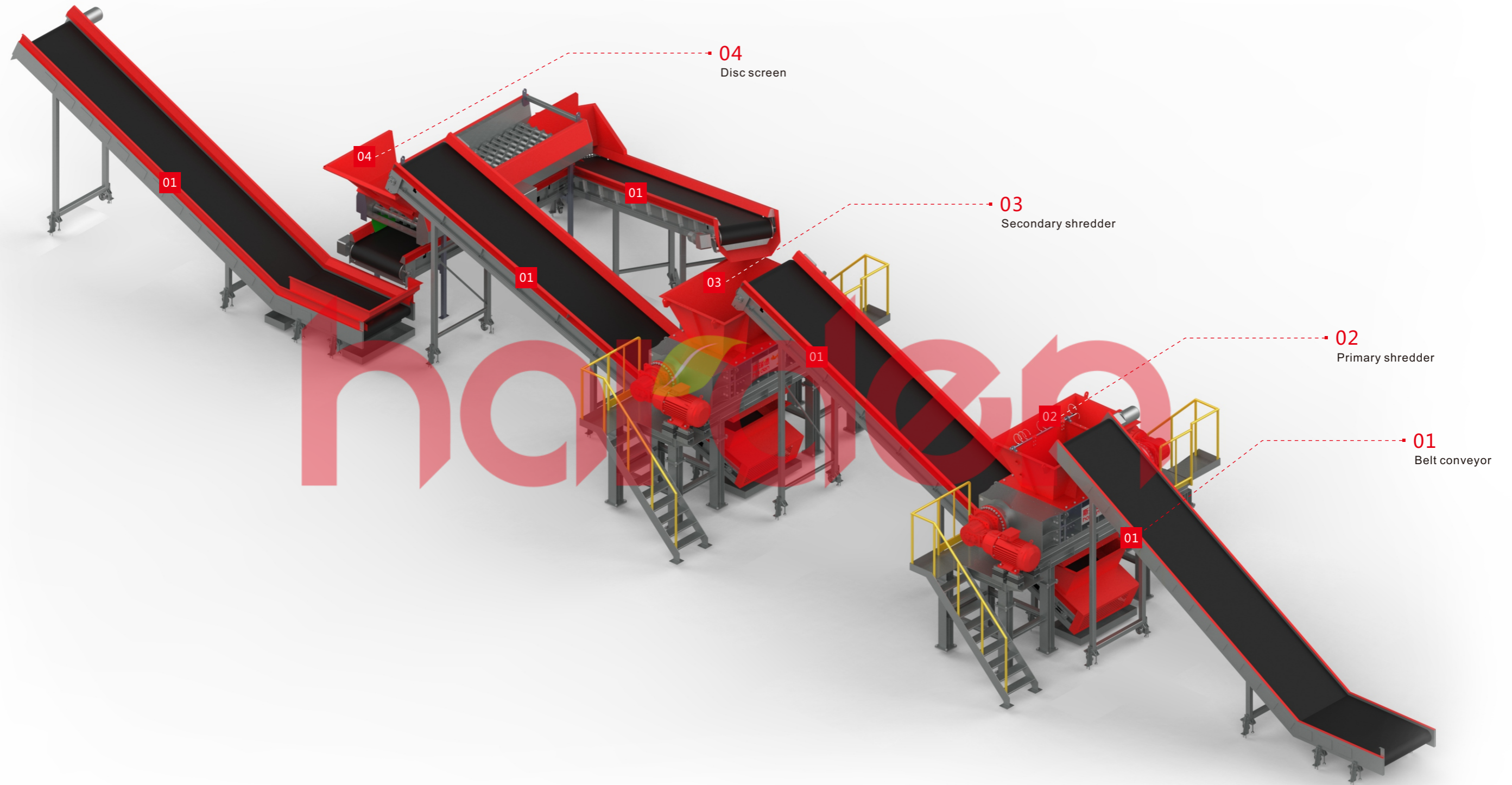
Pyrolysis

The shredded waste tires produced by condensation process can be used for fuel engine power generation; Non-condensable combustible gas can be used for gas power generation after desulfurization process. Crude carbon black after separation can be processed into cracked carbon black for commercial application.

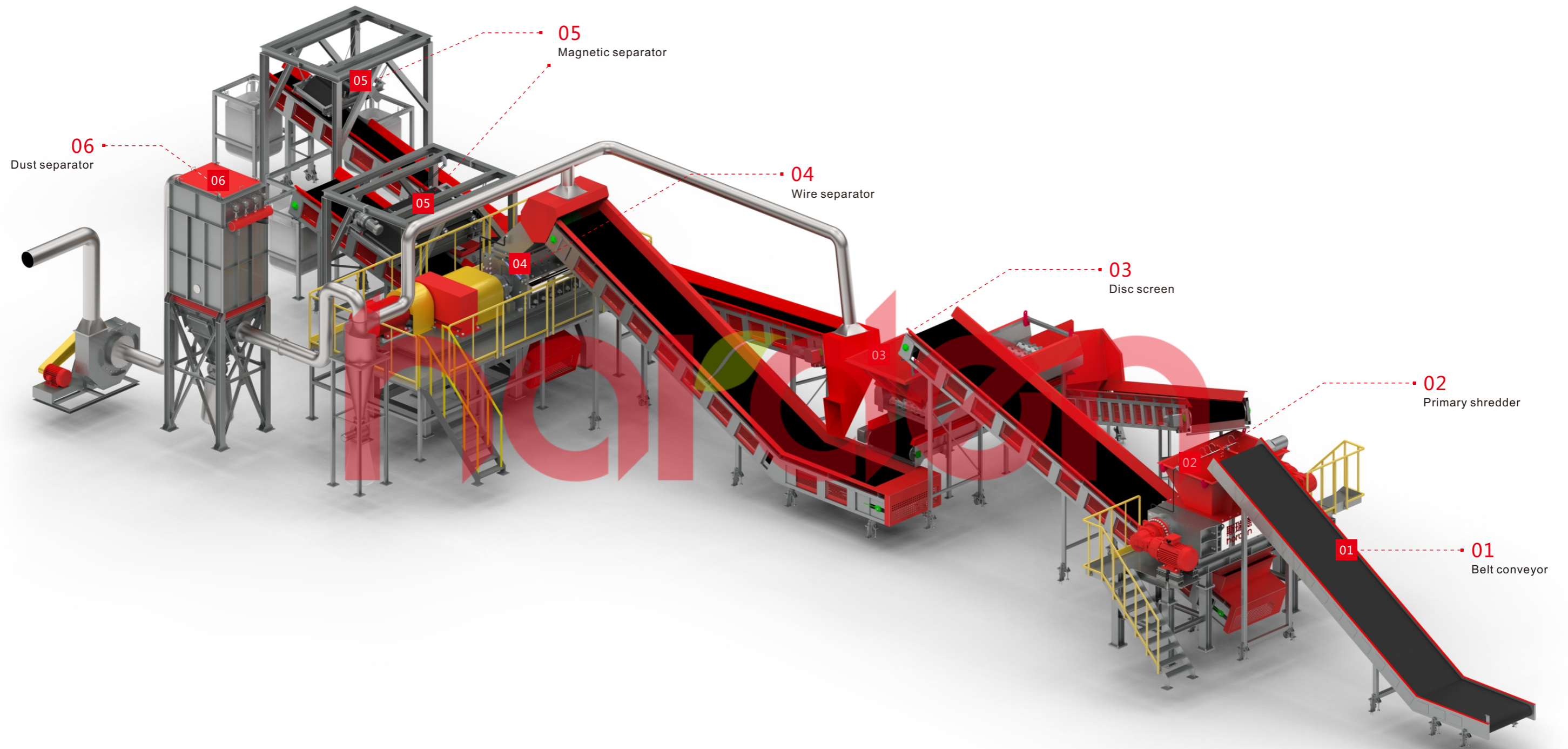
A TDF-Single stage shredding



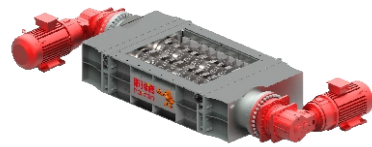
B TDF-Double stage shredding



C Pyrolytic pretreatment

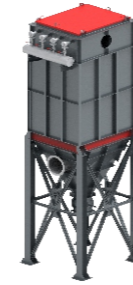


Double shaft shredder



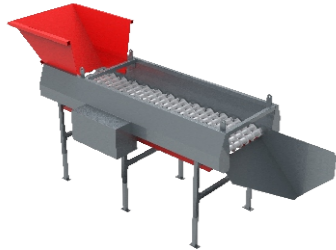
The intelligent double shaft shredder has the characteristics of low speed, and large torque, which can adapt to the shredding work of various tires and ensure long-term stable operation. The tool adopts imported cold work die steel, which has the characteristics of high strength, high toughness, strong wear resistance, strong impact resistance and so on. The detachable tool structure can realize rapid disassembly and multiple blade surfaces can be fully used, with low maintenance cost and short replacement cycle.

Dust separator



Because the dust pollution may be generated in the process of shredding and conveying, the bag dust separator can be selected to collect the dust generated in the system through the pipeline, effectively improves the working environment, protects the staff and equipment.

Disc screen



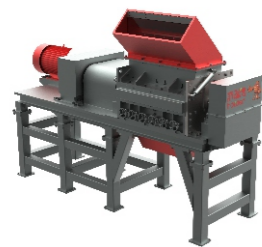
By adjusting the disc rolling gap to screen the desired particle size. The unqualified material will be returned to shredding system for shredding again. The disc made of wear-resistant alloy steel is not easily damaged and is suitable for all kinds of harsh working conditions. At the same time, the reasonable design of modularization and the flexible setting of handling capacity adjustment make the material not easy to accumulate or wind up in the screening process, and the maintenance of equipment is simpler and faster.

Conveyor



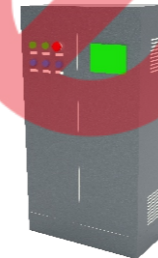
Feeding conveyor adopts galvanized chain plate transmission, has the characteristics of strong impact resistance, large bearing capacity, strong wear resistance. Discharging conveyor adopts buckle type sealing cover structure, has the characteristics of good sealing effect, simple disassembly, easy cleaning. The discharging opening is equipped with a scraper cleaning device and a chute, and the bottom is installed with a dust collecting plate to collect rubber powder, which not only makes the site clean, but also fully recover the output.

Wire separator



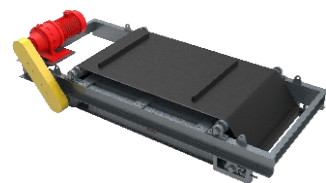
The rubber blocks are cut by cutters and fixed-knives of the separator, and the qualified rubber particles and steel wires are sorted out through the screen mesh. The front and back symmetric design structure of the fixed-knives can realize the change of four cutting edges, improves the service life of the tool; The tool can be repaired by wire cutting. The cutting chamber and screen are designed with hydraulic opening and closing devices, so that the maintenance and replacement of the tool and screen become more convenient.

Electric control system



Main control cabinet and control platform are independent, touch screen + button control mode, user-friendly interface design, easy to operate; Automatic mode can realize automation operation, manual mode can control the operation of single equipment. According to the actual needs, different modes can be selected at any time to operate. Acousto-optic alarm, fault visualization, automatic reminder of equipment maintenance and other intelligent functions, easy to deal with the fault and maintenance work. The full coverage video monitoring device can communicate with the central control system, monitors the running condition at any moment.

Magnetic separator



The type of magnetic separator is permanent and self-discharging. It can fully separate the steel wire in the rubber powder and rubber particles after the process of shredding. Also, it can improve the metal recovery rate, to ensure the purity of rubber powder and rubber particles, so that the selected material can achieve the maximum value of utilization.

Remote analysis



Harden has established a monitoring and diagnosis system with a central database as the core, which can accurately provide real-time working pictures of the equipment. Component automation expert system provides basis for fault diagnosis, efficient energy saving and efficient decision making; The message push system of equipment information reminder and warning which faces to service-oriented ensures the scheduled maintenance of the equipment, and gives early warning to the illegal operation.