ZHONG 中弘机械
ZHONGHONG MACHINERY

GUANGDONG ZHONGHONG MACHINERY MANUFACTURING CO., LTD

公司图册

COMPANY PROFILE

LEADING TECHNOLOGY, PRAGMATIC INNOVATION, INTEGRITY SERVICE

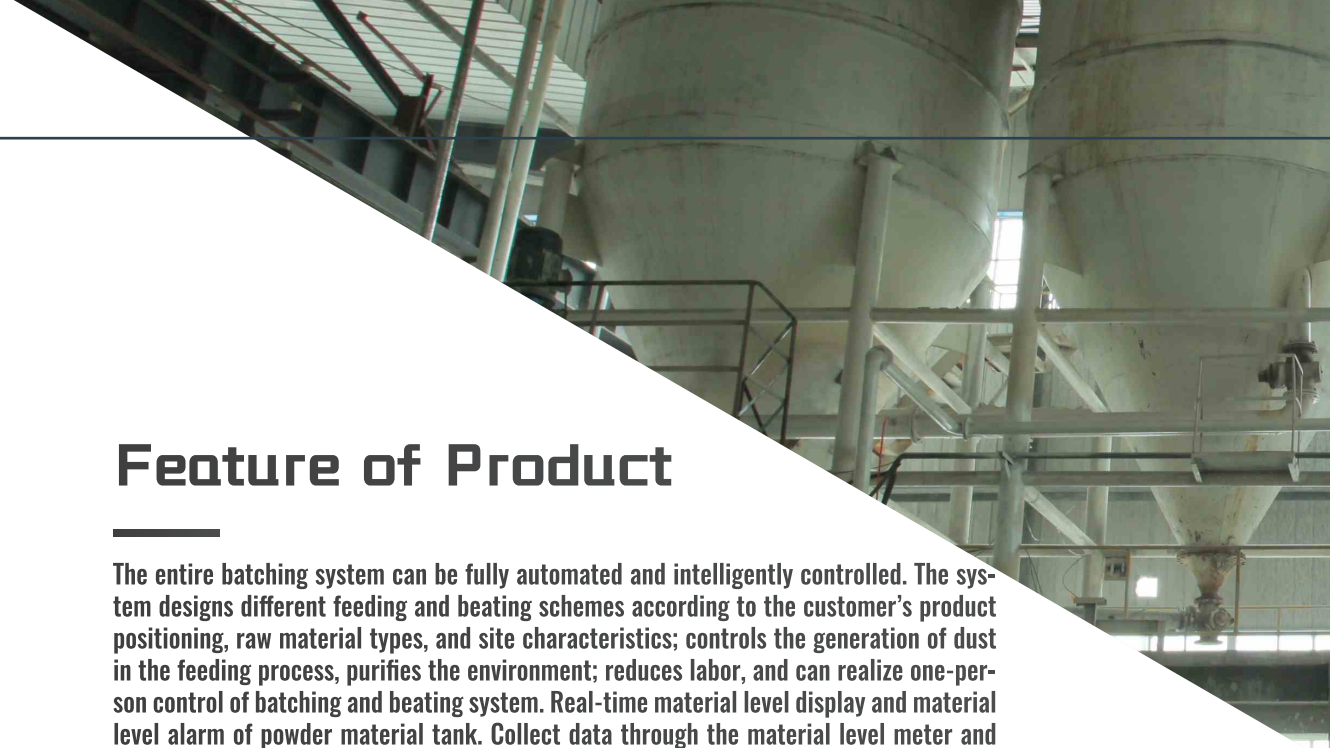


WISDOM AND INNOVATION, WITH INGENUITY



Company Profile

GUANGDONG ZHONGHONG MACHINERY MANUFACTURING CO., LTD. IS A COMPREHENSIVE ENTERPRISE INTEGRATING R&D, MANUFACTURING, SALES AND SERVICES. THE COMPANY IS LOCATED IN FOSHAN, A CITY IN THE HINTERLAND OF THE GUANG-DONG-HONG KONG-MACAO GREATER BAY AREA, WHICH IS A VIBRANT NATIONAL STRATEGIC PLAN. THE COMPANY HAS GATHERED A GROUP OF SKILLED AND EXPERIENCED ENGINEERS AND TECHNICIANS FROM THE FIELDS OF MECHANICAL DESIGN AND MANUFACTURING, ELECTRICAL AUTOMATION AND OTHER FIELDS. AT THE SAME TIME THE COMPANY HAS A GROUP OF MECHANICAL PROCESSING EQUIPMENT AND A GROUP OF SKILLED TECHNICIANS AND SKILLED WORKERS. THE COMPANY'S MAIN PRODUCTS ARE CEMENT FIBER BOARD AND CALCIUM SILICATE BOARD PRODUCTION LINE EQUIPMENT, CERAMIC EQUIP-MENT, CEMENT WAVE TILE PRODUCTION LINE EQUIPMENT, LIGHTWEIGHT COMPOSITE WALLBOARD EQUIPMENT. THE PLANT COVERS AN AREA OF NEARLY 10,000 SQUARE METERS, WITH COMPLETE AND MATURE TECHNOLOGY AND OVERALL SOLUTIONS. THE COMPANY IS COMMITTED TO MAKING LIGHTWEIGHT CONCRETE BUILDING MATERIALS EQUIPMENT TO THE EXTREME. AT PRESENT, IT HAS DOZENS OF EQUIPMENT PRODUCT PATENTS AND STRONG TECHNICAL FORCE. AT PRESENT, MORE THAN 60 PROJECTS HAVE BEEN COMPLETED AT HOME AND ABROAD. THE COMPANY HAS BEEN FULLY RECOGNIZED BY CUSTOMERS AND CONTINUES TO IMPROVE, INNOVATE AND DEVELOP IN THE FIELD OF INTELLIGENT MANUFACTURING.

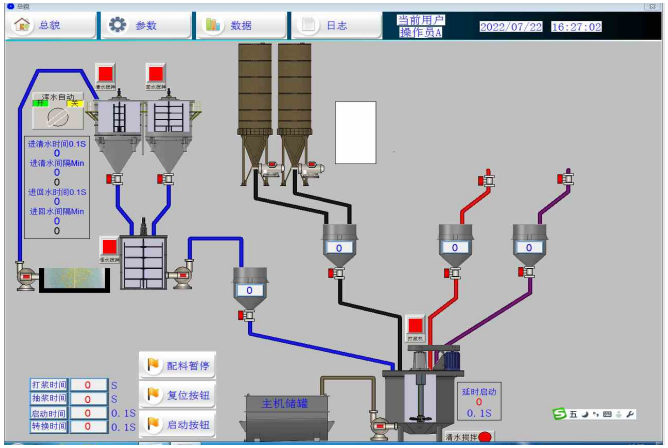


Pulp System

The company selects high-consistency, medium-consistency, and low-consistency paper shredders according to the user's main pulp raw material types; adopts metering belt feeding, and configures water metering methods according to whether the shredding method is continuous or intermittent. Water measurement methods are divided into: flow meter + automatic adjustment valve, measuring tank + weighing method of weighing sensor. The company is equipped with an automatic shredding control system to automatically control the shredding process, reduce labor intensity, reduce manual intervention in the shredding process, and make the shredding effect more stable. Note: The paper system equipment is selected according to the customer's product positioning and raw material source, and the specific equipment purchase is handled by the customer.

Dosing system

This system is mainly for batching pulping according to the technical formula requirements of product raw materials.Different materials are divided into one or more pulping processes, and the required supporting equipment will have different changes.



Feature of Product

The entire batching system can be fully automated and intelligently controlled. The system designs different feeding and beating schemes according to the customer's product positioning, raw material types, and site characteristics; controls the generation of dust in the feeding process, purifies the environment; reduces labor, and can realize one-person control of batching and beating system. Real-time material level display and material level alarm of powder material tank. Collect data through the material level meter and compare it with the production material amount to prevent the phenomenon of no material or bursting of material. The raw material batching system only needs to set the dry material ratio and fill in the moisture content of each raw material, and the weighing amount can be automatically calculated and adjusted without manual conversion to ensure the stability of the slurry concentration. Various tanks, including powder tanks, clean water tanks, metering tanks, and pipes, can be designed and arranged according to the customer's products and site conditions. The company can provide specific drawings such as tanks.







Feature

Level Control

The slurry stirring storage tank can realize all liquid level control, and the liquid level can be displayed in real time; the stirring blade of the stirring tank can alarm for faults. The failure of the discharge valve of the metering tank can be warned in advance to prevent the sudden failure of the valve resulting in batching errors. The valve switch of the feeding and discharging valve has a self-learning function, which automatically adjusts the opening and closing parameters according to the incoming material to ensure accurate measurement.

Administrator Settings

The system is set up with administrator users and multiple operator users. The operator can only change the material characteristic parameters (such as moisture content) and perform daily production operations. Administrators can enter and modify process recipes, view production-related data, and output and print production record sheets, as well as change the operating authority of operators. The administrator can also modify the screen display information according to the actual needs of customers, which ones should be displayed, which ones should not be displayed, and which ones can only be viewed. The system has three working modes: automatic, semi-automatic and manual.

Confidentiality

The batching computer and operating system are uniformly placed in the batching central control room to increase confidentiality, and irrelevant personnel are not allowed to enter.



Flowing Board Host

Flow slurry method is a general method for forming fiber cement board and calcium silicate board. The equipment structure is different from the copying method, easy to control operation and maintenance, less slurry loss, and better product performance. This is suitable for the production of various quality boards, especially low-density lightweight boards.



Feature of Product

1. The new headbox headstock process is combined with the thickness automatic control system to ensure that the board surface is flat and the thickness is uniform.

2. The vacuum box panel is made of special wear-resistant materials, and different panel slotting methods and structures are used according to different dehydration stages. It configures different vacuum box widths according to different dehydration stages, and keeps the slurry in a low vacuum area to maintain a certain turbulence, which is conducive to the formation of small material layers. The new vacuum box is annealed, the vacuum box is dimensionally stable and the panel flatness is high.

3. The felt adopts an automatic tension control system to ensure the constant tension of the felt, which is beneficial for sizing and stable formation of the material layer. High-pressure cleaning and high negative pressure water absorption system are added to the felt cleaning, so that the felt is cleaned more uniformly, with better air permeability and water permeability, reducing the resistance to the cloth beater and prolonging the life of the felt.

4. Equipped with three-point laser thickness measuring device and compensation system, the operator can more accurately know the thickness of the material layer in real time. The slab thickness is uniform and controllable.

5. Both the upper and lower pressing heads are equipped with automatic pressure control systems. During the slab forming process, different pressures and control processes can be set according to the thickness of different products, so as to realize the automatic control of the slab forming process pressure, which is beneficial to different Thickness of sheet production.

6. The machine head is equipped with a forced retraction induction device and a transmission quick braking system, which can stop the machine within 2 seconds when the blade retracts failure, effectively protecting the felt and the breast roller. In order to prevent the forming cylinder from mis-operating the knife at low speed, the equipment is equipped with the forming cylinder low-speed knife discharging protection function, which effectively protects the cutting knife and the blank receiving belt. The device is also equipped with felt slip protection. The system automatically judges that the felt slips, and if the felt slips, it immediately brakes and stops, and at the same time cuts off the headbox discharge valve.



Feature



Headbox

The pulp feeding method of the headbox adopts double-tube feeding and the flow rate is automatically controlled by the homogenizing roller to achieve uniform pulp distribution. A pair of short-blade stirring rollers are used in the headbox to generate high-strength, small-amplitude turbulence to prevent fiber aggregation and mortar sedimentation.



Forming Cylinder

It has a thru-axle design. The knife edge is embedded with wear-resistant sheet, which is stable and durable. The ejection cylinder adopts the mandatory protection function, which has a low failure rate, is easy to maintain, and can be adapted to the production of various specifications of plates.



Thickness Measurement Double-sided Display

The standard forming thickness of the main machine is 5mm-25mm, and the specification of the forming cylinder can be adjusted to produce various specifications such as 1220mmX- 2440mm-3050mm. Through the thickness measuring device, the knife out of the forming cylinder can be controlled, and the thickness is displayed on a double-sided display screen, which is convenient for operators to observe and adjust in time.

Copy Method Host

The copying method is another general method for forming fiber cement board and calcium silicate board. The paper fiber processing requirements are high, the slurry concentration is low, the structure is complex, the operation requirements are high, and it is difficult to control. The products are mainly medium and high density.





1

Free Combination

It can be specially customized according to customer requirements, using a combination of multiple cages.

2

Structural Optimization

The overall structure is optimized, and integral cages, independent cages, and independent extraction cages can be used.

3

Material Selection

Net wheel, stirring dynamic balance adjustment. The net cage is integrally processed, with precise dimensions, durability and good feeding.

4

Concentration control

Slurry mixing system adopts imported flow meter plus proportional adjustment, which is closed-loop control, which can control the flow of slurry and water, and automatically control the concentration of slurry.

High Pressure Water Jet Cutting Equipment

It is mainly used for cutting requirements of various specifications and sizes of products.





1

Long Lasting

1.For the first time, a long-stroke high-performance supercharger is used to improve the service life of parts. 2. Dual oil circuit control design realizes quick switching of booster assembly and improves equipment stability.

2

Adjustable Pressure

It can meet the cutting of plates of different thicknesses and flexibly adapt to production needs.

3

Equipment Stabilization

It adopts an automatic variable pump to adjust the oil supply adaptively, stabilize the oil pressure and reduce the oil temperature. The water supply pump imported from Italy is adopted, with low energy consumption and high performance.

4

Safe and Convenient

It is matched with Omron PLC control, user-friendly operation interface, simple and easy to understand. Perfect automatic protection function to ensure safety.



Stacker

The three-station stacker is mainly composed of a frame, a suction cup lifting part, a trolley part, a pneumatic part, etc., and is controlled by the trolley walking servo. There are two types of stackers: one is the traditional suction cup short stroke cylinder lifting with lifting platform, and the other is no lifting platform, suction cup long stroke servo motor lifting. Two types of stackers can be configured according to actual needs.

Features of Stacker

1
Specifications are Adjustable

According to the needs, the specifications of the suction cups can be adjusted to meet the use requirements and meet different production needs.

2
Adjustable Speed and Easy Maintenance

According to the requirements of different production capacity, the speed can be adjusted arbitrarily, and it is easy to maintain.

3
Stable and Durable

It is a double beam design, imported servo system, and stable in extreme working conditions.

4
Precise Positioning

Servo control, product diagonal is stable, and stacking position is precise.



Stacker Classification



Short Stroke

The short stroke stacker is a traditional suction cup short stroke cylinder lifting and lifting platform. Its biggest advantage is less investment, simple maintenance and higher cost performance.

Long Stroke

The suction cup is raised and lowered by a long-stroke servo motor, and the trolley is servo-controlled, with a coherent action, which is easy to connect with the subsequent automation equipment. There is no lifting platform to reduce oil pollution. However, the investment is high, the technical level of maintenance personnel is required to be high, and the daily mechanical and electrical maintenance requirements are high.



The stacker in the factory



The stacker in the factory

QUALITY ASSURANCE

The stacker's template trolley and slab trolley can cooperate with the tractor to realize automatic control and reduce the labor intensity of workers. The stacker is also equipped with template and slab suction detection. If the suction cup does not pick up the template, the template suction cup will automatically pick up the template again.

Return crushing

The purpose of this system is to ensure that the slurry concentration of the wet blank return material is stable, so as to achieve a stable concentration of the entire slurry system.



Precise Measurement

The return material and production water are measured separately to ensure the concentration stability of the return material slurry.



Billet Crushing

Equipped with dual-shaft crushing for the characteristics of wet blanks, the mixing is faster after the blanks are crushed.



Return Material Stirring

The unique stirring impeller method makes the stirring more uniform, and the conveyed slurry will be more delicate.



Automation

The complete system realizes unmanned operation, fully automatic and manual switching.

Template Cleaning and Brushing Machine



The new and unique template cleaning and brushing machine is independently developed for the production of high-end plates, so that each template can be cleaned and evenly brushed with oil. Using dry and wet separation, the system has the function of automatic stacking of templates, which will not damage the templates.



Clean and Tidy

Cleaning and oil brushing are separated independently to keep the on-site environment clean, making the production environment more beautiful and tidy.



Sweeping and Oiling

Multiple groups of sweeping rollers and combination of squeezing rollers can clean more cleanly and brush oil more evenly.

Blanket Positioning Belt (return belt conveyor, optional)

After the forming cylinder reaches the required thickness, the blank is torn off and laid flat on the belt. In the next step, after high-pressure water cutting vertical and horizontal cutting, it is sent to the positioning machine to complete the blank suction work.





Features of the Blanking Machine

1

Neat Deck

The equipment is equipped with automatic slag blowing device to ensure the quality of the board surface.

2

Size Adjustable

Single- and double-knife cutting, the size of the cutting product can be adjusted arbitrarily.

3

High Automation

Frequency conversion servo control makes the transmission more stable and precise.

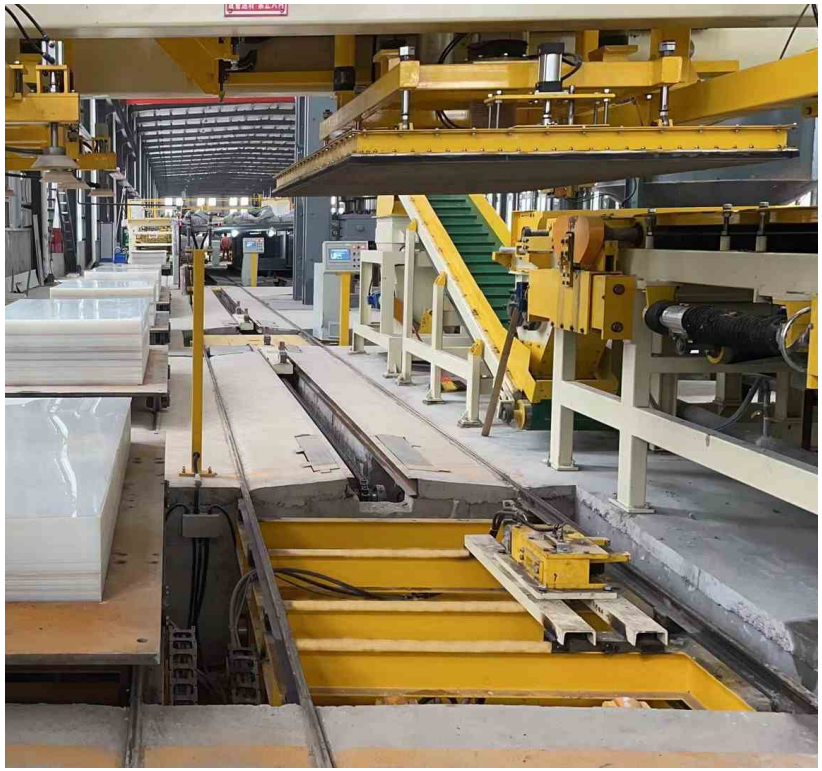
4

High Production Efficiency

According to the customer's site conditions, a return belt can be selected, which is easy to maintain. The transition plate between the belts is arbitrarily adjusted by the cylinder, which is more convenient for cleaning waste.

Hydraulic Lift Platform

Lifting tonnage: 3 tons, 5 tons, 10 tons, 13 tons, 20 tons, 24 tons and other options. The trolley is fixed by hydraulic and pneumatic clamping methods, and can be equipped with return and unstacking trolleys.

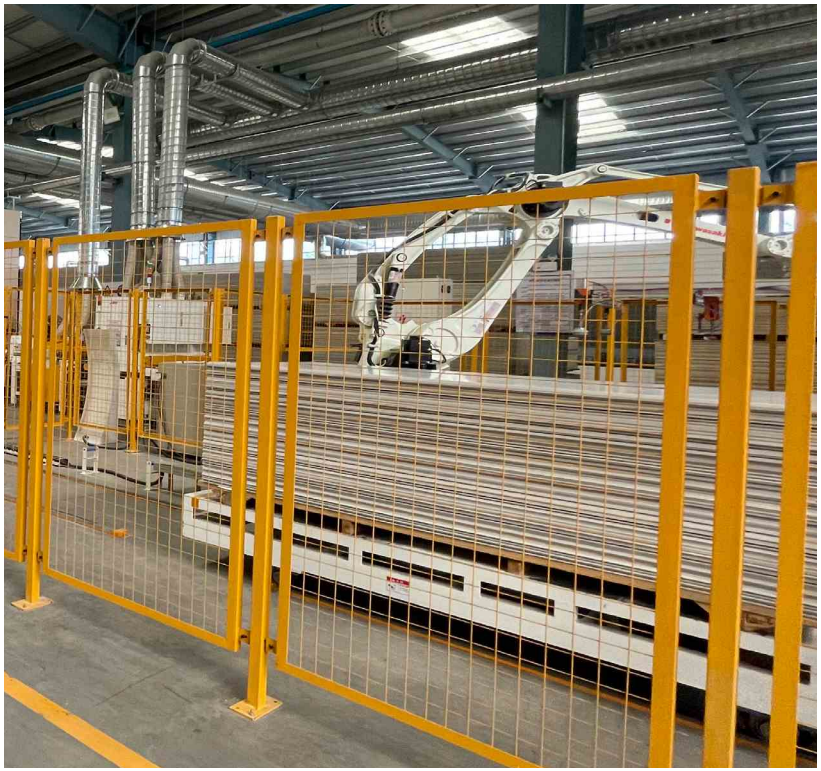


Features

1. Reasonable structure, safe and reliable, good stability.
2. There are safety functions for ascending and descending.
3. Sturdy and durable, easy to maintain, equipped with automatic refueling function.

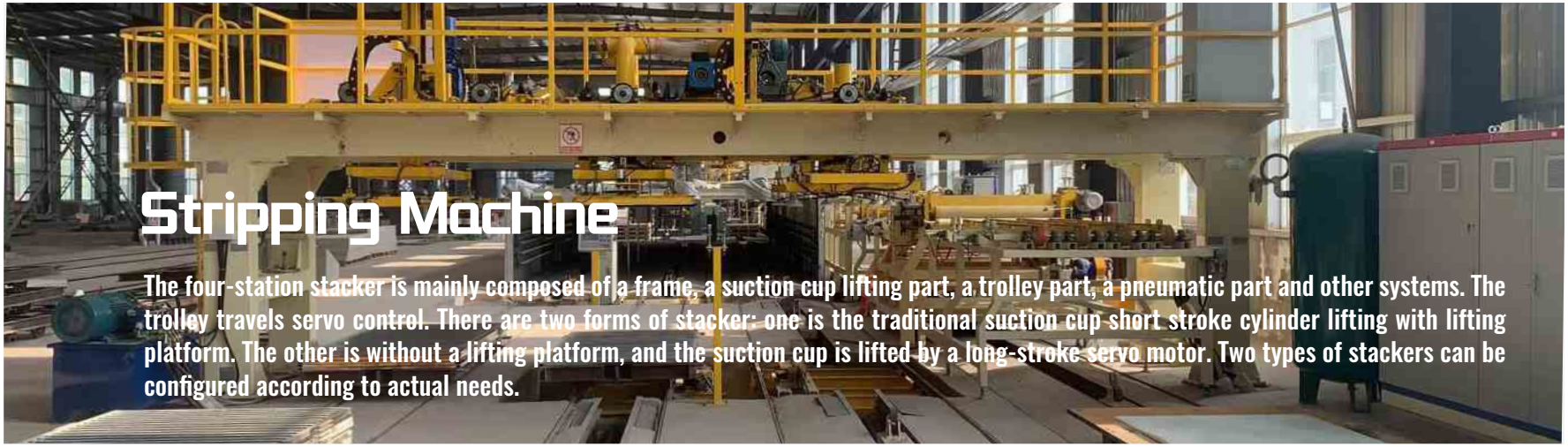
Manipulator

The manipulator is mainly used for sanding or polishing the upper and lower plates on the production line, and multiple stations are taken into account to achieve the intelligent needs of manufacturers.



Features

1. Reduce labor and multi-station.
2. Low noise and high environmental protection benefits.
3. Sturdy and durable, enhance the image of the factory.



Stripping Machine

The four-station stacker is mainly composed of a frame, a suction cup lifting part, a trolley part, a pneumatic part and other systems. The trolley travels servo control. There are two forms of stacker: one is the traditional suction cup short stroke cylinder lifting with lifting platform. The other is without a lifting platform, and the suction cup is lifted by a long-stroke servo motor. Two types of stackers can be configured according to actual needs.

Features of stripping machine

1

Intelligent Control

Automated systems to reduce personnel operations.

2

Easy Maintenance

Fully consider the customer's daily maintenance status, fast and easy maintenance, and reduce the loss caused by downtime.

3

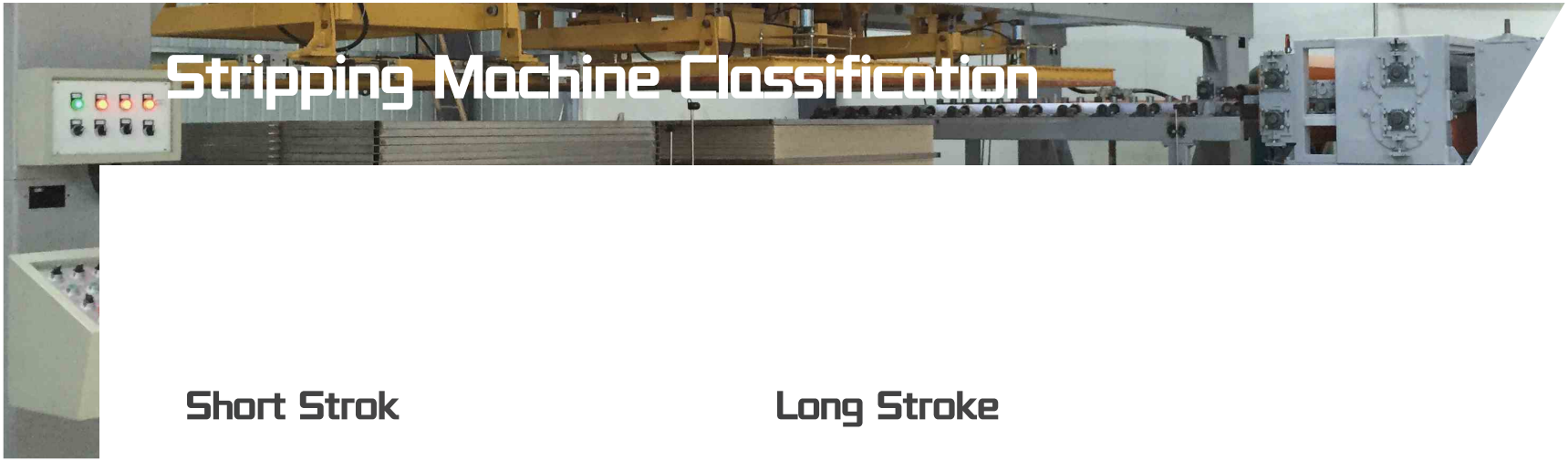
Security Guarantee

For different parts, different warning colors are used to warn, and the system has its own safety alarm, which fully considers the safety of on-site staff.

4

Strong and Durable

The materials used are solid, and the paint treatment is beautiful and clean, which greatly enhances the company's image and enhances product visibility.



Stripping Machine Classification

Short Strok

The short stroke stripper is a traditional suction cup short stroke cylinder lifting platform. Its biggest advantages are less investment, simple maintenance and higher cost performance.



The stacker in the factory

Long Stroke

The suction cup is lifted and lowered by a long-stroke servo motor, and the trolley is servo-controlled, with coherent movements and easy to connect with subsequent automation equipment. It has no lifting platform, which can reduce oil pollution. However, the investment



The stacker in the factory

QUALITY ASSURANCE

The stacker's template trolley and slab trolley can cooperate with the tractor to realize automatic control and reduce the labor intensity of workers. The stacker is also equipped with template and slab suction detection. If the suction cup does not pick up the template, the template suction cup will automatically pick up the template again.

Splitter

The plate separator is mainly a process that automatically separates and stacks the slab and the steam curing pad after the autoclave completes the reaction.





Features of splitter

1

Automatic de-steam curing pad

Automatically divide the board, reduce labor intensity, reduce product damage, and improve yield.

2

Multifunctional suction cup

The multi-function suction cup, the protective plate and the steam curing pad do not need to be replaced, which improves the work efficiency.

3

ON-LINE PRODUCTION

It can be produced in line with drying, saving costs and improving production efficiency.

Tractor

The chain traction control is adopted, which is simple, reliable, and easy to maintain. It can also be equipped with an automatic traction system to realize the automatic operation control of the trolley between the stacker and the stripper. This reduces labor costs, improves work efficiency, and ensures the production safety of customer factories.



Features

1. High degree of automation, reducing labor costs.
2. Remote control, easy to operate.
3. Smooth operation and easy maintenance.
4. Roller conveyor, crawler conveyor optional.

Shuttle car

Batches of slabs (templates) are transported to trolleys (single car, double car) through tractor type and crawler type. Then, the trolley with the slab (template) is transferred from one station to another through the traversing car (single car, double car).



Features

1. Reasonable structure, safe and durable.
2. Optional design for single and double cars, automatic positioning, docking track.
3. Through PLC control, automatic track selection and arrangement are realized.
4. Smooth operation, adjustable speed and easy maintenance.
5. It is matched with traction positioning (track)/crawler conveying positioning to realize automatic operation.

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Post Processing Line

The post-processing sanding and edging lines are all conveyed by rollers. According to different types and specifications of plates, reasonable configuration and layout can be made to suit the characteristics of each manufacturer's site.





Roller Table Features

1

Full roller conveying

With self-correction function, and can be used stably for a long time.

2

Frequency conversion speed regulation

Optional frequency conversion control, suitable for different speed production for thick and thin plates.

3

MULTI-SPECIFICATION ADJUSTMENT

It can realize the production of any specification within the range of length 1600-3050mm.

90 degree U-turn Machine

The right-angle U-turn machine or the linear rotary U-turn can be selected according to the characteristics of the customer's site. The right-angle U-turn machine adopts the method of roller connection and chain conveying. The overall structure is durable, the production efficiency is high, and the whole production line looks more complete.





Polisher

The independent research and development of four-head and six-head swing polishing machines can make the plate polishing rich in brightness and meet the customer's standard, and can choose a separate combination to improve the production capacity.





Dryer

We have developed a low-density board dryer, which is equipped with a condensate recovery device, and the energy saving effect is very obvious. At present, the low-density board dryer is used in Guangzhou Eternit, and the operation is stable and the effect is good.



Dryer Features

1

High temperature

Special research and development structure, uniform heating.

2

Automatic temperature control

It can display the internal temperature and provide automatic temperature control.

3

Energy saving and high efficiency

Equipped with a condensate recovery device to reduce production costs and improve production efficiency.

Flip Machine

The flipping machine has two structures, horizontal and vertical flipping, which can be selected and applied according to the requirements of the product and the production process.



Flip machine features

1

Reasonable structure

Select high-quality steel, stable and durable.

2

Speed adjustable

It can be automatically adjusted according to the production rhythm.

3

The effect is obvious

Reduce labor intensity and reduce breakage.

Grinding and Chamfering

The maximum cutting thickness of the edger can cut 5-25mm plates, and the horizontal grinding can be equipped with an electric width adjustment device to reduce the time when changing sizes.





Edger Features

- Precise and stable diagonal
- Frequency conversion training, high production efficiency
- Equipped with a dust sweeping device to improve the cleanliness of the board surface
- Solid material
- Safe and reliable
- Quality is guaranteed

Upper and lower triggers

The loading and unloading machine is equipped with the function of automatic loading and unloading, which reduces the number of personnel, labor intensity, and human damage. At the same time, it can also be equipped with a stacking and traversing trolley, which reduces the forklift conversion time and improves production efficiency.





1

Smooth and stable

The double-beam structure ensures the stable operation of the trolley.

2

Automatic control

Stable operating system with high degree of automation.

3

Auxiliary upper plate device

Aiming at the problem of sheet sticking, we developed the upper plate device by ourselves to reduce labor and improve production efficiency.

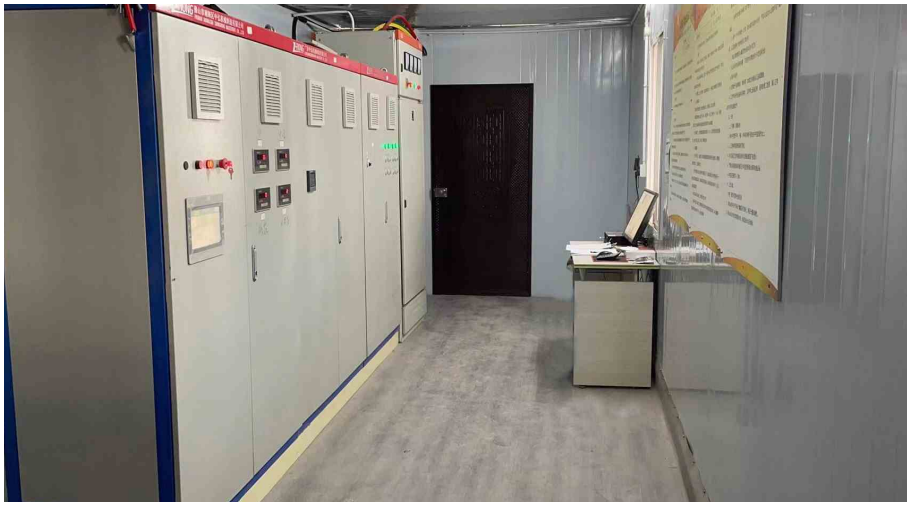
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Multi-specification adaptation

Multi-specification plates can be selected, which is convenient and fast to convert, saving time and effort.

Electronic Control System



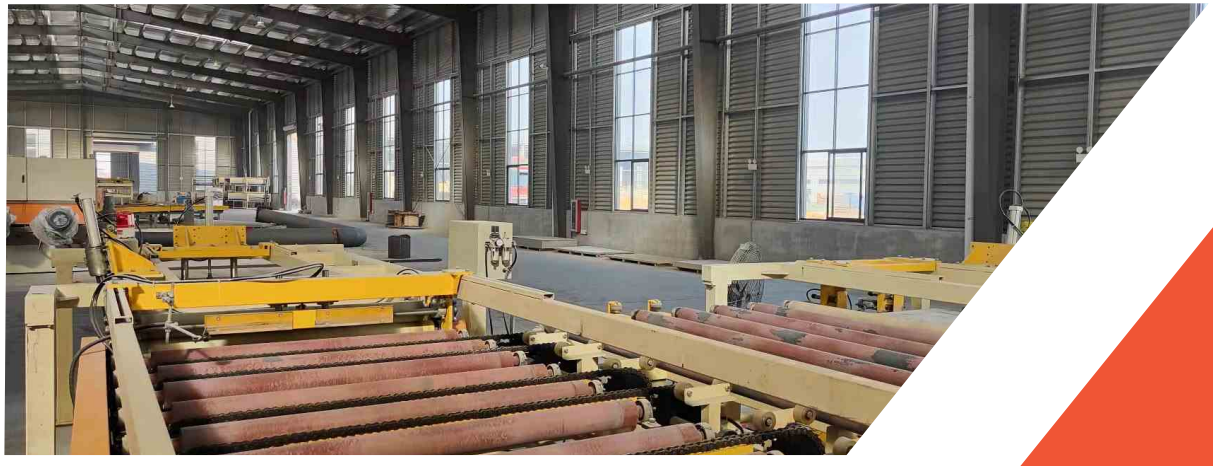


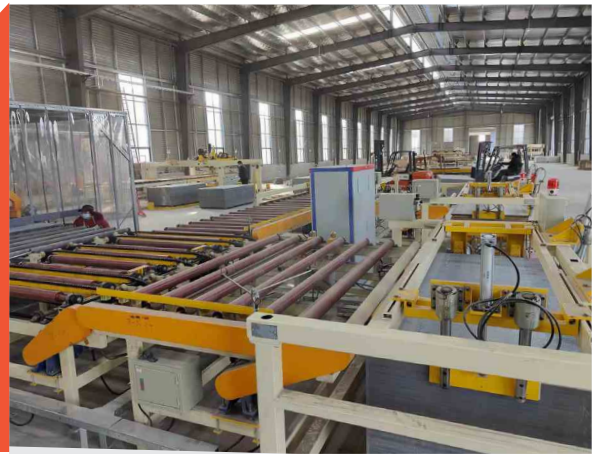
Electronic control system features

- The entire production control system is designed and developed by ourselves.
- The automation and intelligence are high, and the labor is reduced
- The linkage/independent operation is interdependent to avoid the overall paralysis caused by failure.
- Fully consider safety production, supporting alarm reminder device.
- Continuously optimize, stabilize and upgrade the software system.
- Quality is guaranteed

Sorting by Thickness Measurement, Automatic Stacking

Automatic production can be realized, and it can be automatically sorted according to ultra-thick products, ultra-thin products and qualified products;





Features

1

Accurate measurement

Imported laser thickness measuring probe is adopted, with high accuracy and minimal error.

2

Stacked neatly

Equipped with a leveling machine to ensure the neatness of the boards when stacking.

3

High automation

Equipped with a lower plate stacking auxiliary device, it can reduce the number of operators, reduce costs and improve production safety.

4

High production efficiency

Equipped with a connected stacking system to reduce the time for forklifts to change the wooden frame to improve production efficiency.

Deep Processing

We have deep processing equipment developed for sheet product classification and application scenarios, such as slitting machines, slotting machines, and engraving machines.





Dust Removal, Deodorization Sound Insulation and Noise Reduction

Eliminate dust pollution, eliminate gas odor and other clean production, reduce noise, achieve safe production, clean production, and protect the environment.







Assistive systems

Mainly used for micro-pressed sheet and high-density sheet, currently commonly used 5000T, 7000T, 9000T, 10000T



Autoclave

The high-temperature and high-pressure professional equipment selected according to the characteristics of the cement fiber board and calcium silicate board generally adopts the upper-opening door structure.



Boiler

It mainly provides heat energy for the autoclave and dryer, which can be divided into coal-fired boilers and gas-fired boilers. Generally, gas-fired boilers are commonly used.



Ball Mill

Ball mill is one of the key equipment for pulping after the material is crushed. The characteristic of this type of milling equipment is that grinding balls are loaded into its cylinder as grinding media.





Air Compressor

It is provided to the production line equipment for stable, dry, air equipment with certain pressure.

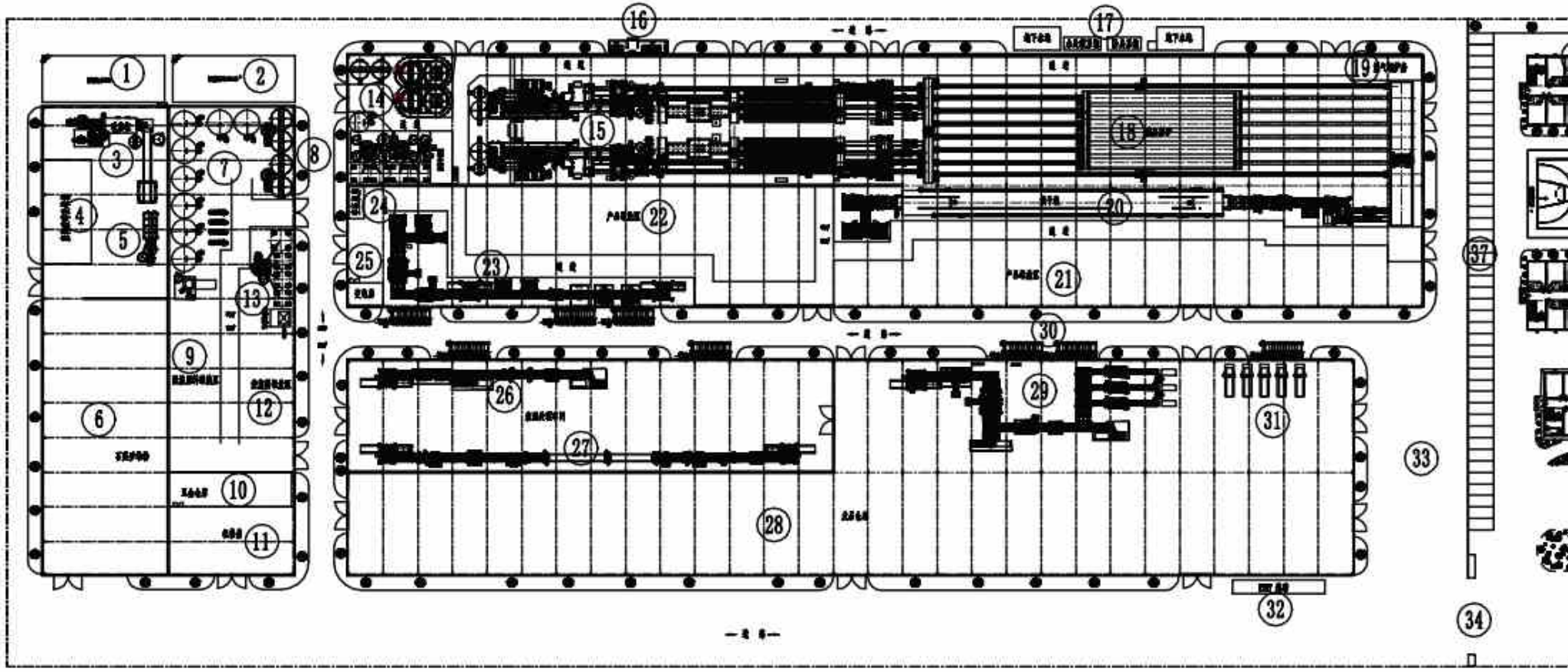


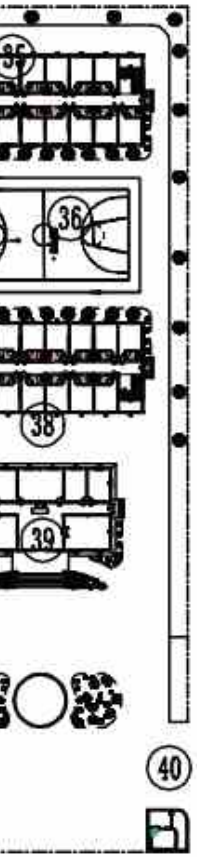
Sander

Equipment selected for the surface quality requirements of the sheet and the product thickness requirements.



Layout


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① Fire fighting pool	⑪ Machine repair room	㉑ Semi-finished product stacking	㉛ Slotted engraving area on the board surface
② Sedimentation tank	⑫ Bag storage area	㉒ Semi-finished product stacking	㉜ 120T weighbridge
③ Ball mill	⑬ Batching pre-pulping system	㉓ Sand surface grinding line with fixed thickness	㉝ Finished product loading area
④ Waste crushing area	⑭ Batching system	㉔ Air compressor room	㉞ Production workshop gate
⑤ Quartz sand mixer	⑮ Plate forming production line	㉕ Substation room	㉟ Dormitory
⑥ Quartz sand storage yard	⑯ Toilet	㉖ Board surface polishing and penetration production line	㊱ Stadium
⑦ Pulp preparation system	⑰ Deodorizing water treatment system	㉗ Primer coating production line	㊲ Parking area
⑧ Mortar storage tank	⑱ Autoclave curing	㉘ Finished product warehouse	㊳ Dormitory
⑨ Pulp board storage area	⑲ Gas boiler	㉙ Small plate cutting Slitting and slotting production line	㊴ Office building
⑩ Hardware warehouse	⑳ Drying dryer	㉚ Dust collector	㊵ The main gate of the company

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