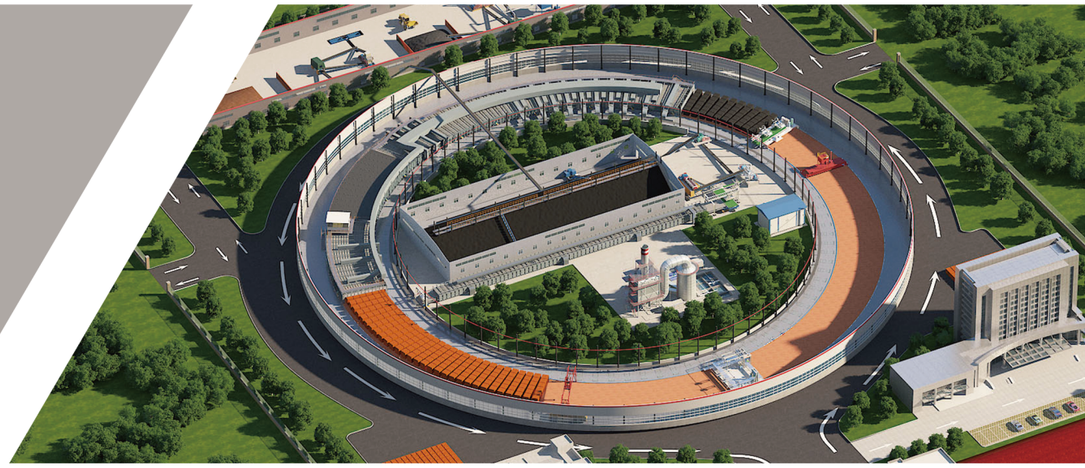
Halstec Engineering

Introduce advanced Chinese technology and equipment to the world;
Actively promote the internationalization process of Chinese brick & tile industry;
Establish good international image and reputation for Chinese artisans who have devoted lives for brick & tile industry!

豪斯泰克
Halstec Engineering

2024
Halstec Engineering
Designer and Manufacturer



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豪斯泰克 Halstec Engineering

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About Us

Company Details
Halstec Engineering Co., Ltd is a professional and high-tech enterprise for brick making machines and burning kilns. We own one experienced and powerful design team, who can undertake the turnkey projects, provide different customization accord-ing to customer land condition, capacity requirements, automatic degree, invetment etc. After around 20 years development, Halstec now has become one comprehensive company, which integrating the technology, design, manufacturing, and trading.

With more then 20 years history, Halstec has serves more than 100 customers in the whole world, and business scope covers over 20 countries, such as Uzbekistan, Kazakhstan, Russia, Zimbabwe, Angola, South Africa, Vietnam, Myanmar, Indonesia, etc. Products and service have been comprehensively confirmed by all customers.

Halstec insists to provide one-stop and round service including kiln design, kiln con-struction, brick machine manufacturing, staff training, in-time after sales service, etc. We take “Honest, Innovation, Responsibility, Win-win” as operation principle to create value for customers, employees, shareholders and whole society. Halstec will serve the whole world clients with best quality products, design and service.

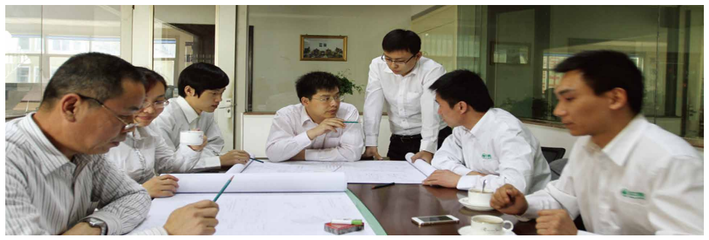
History
With a rich legacy spanning more than two decades, Halstec has firmly established itself as a leading provider of comprehensive brick manufacturing solutions. Since our inception, we have been at the forefront of the industry, offering expertise in brick facto-ry design, brick machine supply, kiln design, and kiln construction. Our unwavering commitment to excellence has enabled us to set up over 200 successful brick factories across China and export our machines to more than 20 countries worldwide.

Driving Growth and Innovation:
In our pursuit of excellence, Halstec swiftly gained recognition for its cutting-edge designs, state-of-the-art brick machines, and advanced kiln technologies. Over the years, we have invested heavily in research and development, constantly refining our products and processes to offer efficient, sustainable, and cost-effective brick manufac-turing solutions. Our commitment to delivering the highest quality has earned us the trust and loyalty of our customers both at home and abroad.

For over 20 years, Halstec has been a trailblazer in the brick manufacturing industry. Through our expertise in brick factory design, brick machine supply, kiln design, and kiln construction, we have set up numerous successful brick factories across China and exported our advanced machines to countries worldwide. With a customer-centric approach, a drive for innovation, and a passion for excellence, Halstec Co., Ltd. remains committed to providing comprehensive and sustainable solutions that empower our clients and contribute to the growth of the global brick manufacturing industry.

Mission:
Introduce advanced Chinese technology and equipment to the world; Actively promote the internationalization process of Chinese brick & tile industry; Establish good interna-tional image and reputation for Chinese artisans who have devoted their lives for brick & tile industry!

Halstec has a well-established management structure and strong technical force. We have more than 20 directly affiliated sections, including scientific research centers, research and development bases, mechanical manufacturing, construction and installation, quality control, marketing, foreign projects, and after-sales services. We have a high-quality and experienced excellent team composed of 8 technical chief engineers, 32 senior engineers, 60 technical personnel, and a kiln construction and installation engineering team of over 1000 people. We are a professional sintering kiln design and construction company with the largest scale in the domestic wall material sintering kiln industry, as well as metallurgical engineering construction qualifications, environmental engineering construction qualifications, mechanical and electrical engineering construction qualifications, steel structure construction qualifications, and labor contract qualifications.

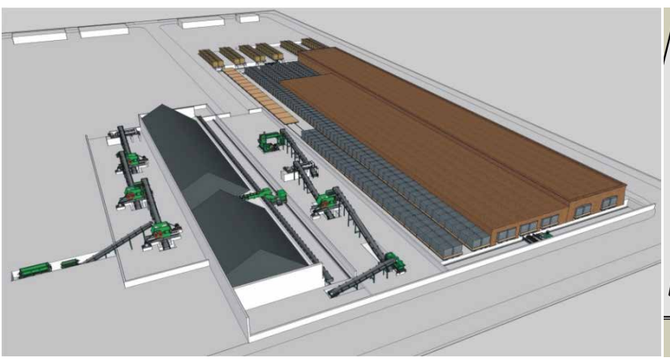


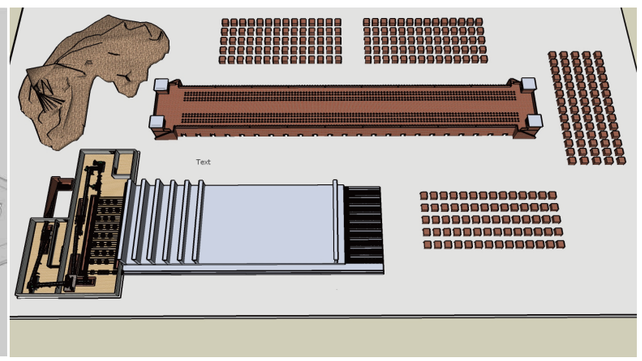
Certificates

QC Profile

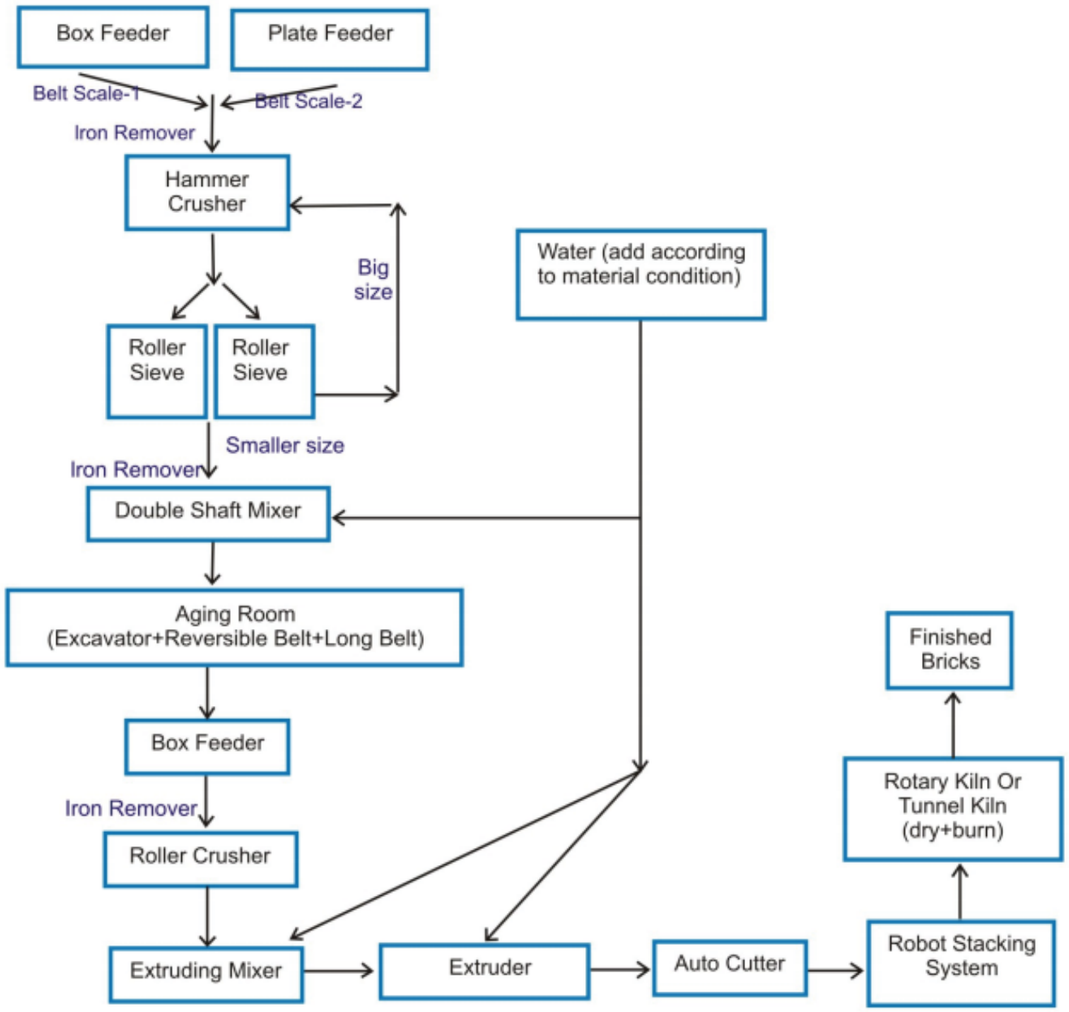
Patents

Brick Plant Whole Line 3D Design





Brick Plant Working Procedure



Brick Making Machines

Material Feeding Machine

Box Feeder

Raw Materials: clay, shale, coal gangue, slurry, coal, etc.
Function: to supply the raw materials
Model: GD65 GD80 GD100 GD120
Capacity·m3/hr: 9-30 15-50 30-70 60-100
Power: 4kw 5.5kw 7.5kw 11kw

Plate Feeder

Raw Materials: clay, shale, coal gangue, slurry, coal, etc.
Function: to supply the raw materials
Model: GL65 GL80 GL100
Capacity·t/hr: 15-40 20-50 50-80
Power: 5.5kw 7.5kw 11kw

Difference: Box Feeder for soft materials; Plate Feeder for hard materials

Material Coarse Crushing Machine

Jaw Crusher

Raw Materials: medium to hard materials with low moisture content and large blocks
Function: to crush raw materials into smaller size
Model: PE500×750 PE250×1000
Capacity·m3/hr: 20-80 10-32
Power: 45kw 30kw

Hammer Crusher

Raw Materials: medium and fine crushing of medium hard bulk materials such as coal, gangue, shale, etc.
Function: to crush raw materials into smaller size
Model: PC800×600 PC900×900 PC1100×1100 PC1200×1200
Capacity·ton /hr: 15-25 20-40 35-50 50-80
Power: 55kw 90kw 132kw 185kw

Material Sieving Machine

Round Roller Sieve

Function: to separate big size materials and return back to crusher
Model: XS6000×2000 XS6000×2200 XS6000×2600
Capacity·m3/hr: 50-70 60-80 90-120
Power: 11kw 18kw 21.5kw

Material Fine Crushing Machine

Tooth-Roller Crusher

Raw Materials: medium and fine crushing of medium hard bulk materials such as coal, gangue, shale, etc.
Function: to further crush raw materials into particle size of ≤ 2mm
Model: SGC900×900 SGC1000×1000
Capacity·m3/hr: ≥100 ≥120
Power: 30+30kw 37+37kw

Roller Crusher

Raw Materials: medium and fine crushing of medium hard bulk materials such as coal, gangue, shale, etc.
Function: to further crush raw materials into particle size of ≤ 2mm
Model: GS800×600 GS1000×900 GS1000×1000 GS1200×1000 GS1200×1200 GS1400×1400
Capacity·m3/hr: ≥15 ≥25 ≥60 ≥70 ≥85 ≥100
Power: 37+18.5kw 55+37kw 55+75kw 75+90kw 90+110kw 110+132kw

Mixing Machine

SJ Series Double-shaft Mixer

Function: to mix raw materials and water together
Model: SJ3600×420 SJ3600×520 SJ3600×520 SJ3600×620
Capacity·m3/hr: 30-45 60-90 60-100 80-130
Power: 75kw 110kw 132kw 160kw

SJJ Series of Extruding Mixer

Function: to mix raw materials and water together
Model: SJJ3 600×420 SJJ3600×520 SJJ3600×520 SJJ3600×570
Capacity·m3/hr: 50-60 60-80 60-85 80-120
Power: 110kw 132kw 160kw 200kw

Difference: SJJ series has extrusion function

Material Digging Machine

DW45 Hydraulic Multi-Bucket Excavator

Function: in the aging room, to dig prgcessed materials onto the belt, then transported to the next machine
Model: DW45 BQDW50
Capacity·m3/hr: 40-60 45-75
Power: 16.5kw 28.5kw

Mud Extruding Machine

Double Stage Vacuum Extruder

Function: to extrude the mud strip out at the vacuum condition
Model: JKY55 JKY60/60G-40 JKY60/60Z-40 JKY60/60A-40 JKY70/70-40 JKY75/75-40
Capacity·bricks/hr: 11000-25000 28000-35000 20000-30000 28000-38000 35000-45000
Power: 185+90kw 280+132kw 250+110kw 355+160kw 400+160kw
Vacuum Degree·MPa: ≤-0.092
Allowed Pressure: 4.0
With vacuum pump, air compressor, working platform

Brick Cutting Machine

Double Automatic Cutting System

Function: to cut the mud strip into the pieces of bricks in required size
Model: ZQPQ30 ZQPH30 ZQPH36 ZQPH48 SQPH36 SQPH48 SQPH54
Capacity·stripe/min: ≤20
Capacity·pieces/hr: ≤36000 ≤43000 ≤57000 ≤60000 ≤80000
Gas Source: ＞0.6
Power: 14.7kw 18.8kw 20.2kw 22.8kw

Brick Stacking Machine

Robot Stacking System

Function: to stack the bricks on the kiln car or drying cart
Model: SBZ+2ROB SBZ/B+2ROB BPJ+1ROB
Capacity·block/hr: ≤30000 ≤36000 ≤22000
Gas Source·MPa: 0.8
Power: 50kw 55kw 16.5kw

Frame Stacking Machine

Function: to stack the bricks on the kiln car or drying cart
Model: MPJ
Capacity·block/hr: ≥35000 ≥25000
Power: 20.4-30.4kw 20.4kw

Kiln Operating Machines

Hydraulic Pusher

Function: to push the kiln car into the kiln
Model: Single Cylinder Double Cylinder
Pushing Force·t: ≤5
Stroke·mm: <2100
Power: 3.7+5.5kw 3.7+11kw

Tunnel Kiln Ferry Pusher

Function: to ferry, pull and push the kiln car
Model: BDL-3.5
Pushing Force·t: ≤3.5
Pulling Force·t: ≤1.5
Stroke·mm: <1900
Power: 4+2.2+22kw

Tunnel Kiln Pusher

Function: to push the kiln car into the kiln
Model: DCJ-30 DCJ-60
Pushing Force·t: ≤30 ≤60
Stroke·mm: <3500 <5000
Power: 18.5kw 30kw

Brick Packaging Machine

Auto Finished Brick Packing System

Function: to pack fired bricks in piled, easy for brick transportation
Model: XDDB01
Capacity·block/hr: 8000-12000
Gas Source: 0.5-0.75
Power: 40kw

Tunnel Kiln Introduction

When the green bricks are gotten,it is time to consider how to dry and burn the green bricks. Halstec provides advanced design for brick drying and burning, including movable rotary tunnel kiln, prefabricated tunnel kilns, roller kilns, Hoffman kilns etc. Here we will share a detailed discussion of these advanced kilns.

Movable Rotary Tunnel Kiln

-suitable for different raw materials
-various types of finished bricks
-higher output, lower failure rate
-save energy, no pollution
-coal, natural gas as burning fuel
-no need kilns cars, pushers or ferry cars
lower maintenance cost
-land area: 30,000-50,000M2
-kiln top without blowers to ensure the stable kiln movement
-fully automatic for whole production line
-easy management and production

Prefabricated Tunnel Kiln

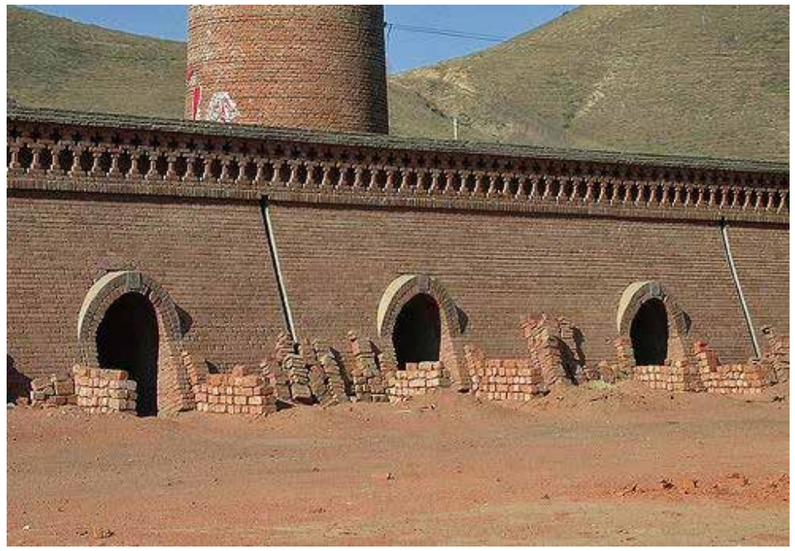
-suitable for different raw materials, especially workable for the solid waste treatment
-various types of finished bricks
-higher output, lower failure rate
-save energy, no pollution
-coal, natural gas as burning fuel
-need kilns cars, pushers and ferry cars
-land area: 20,000-30,000M2
-short construction period
-fully automatic for whole production line
-easy management and production

Roller Kiln

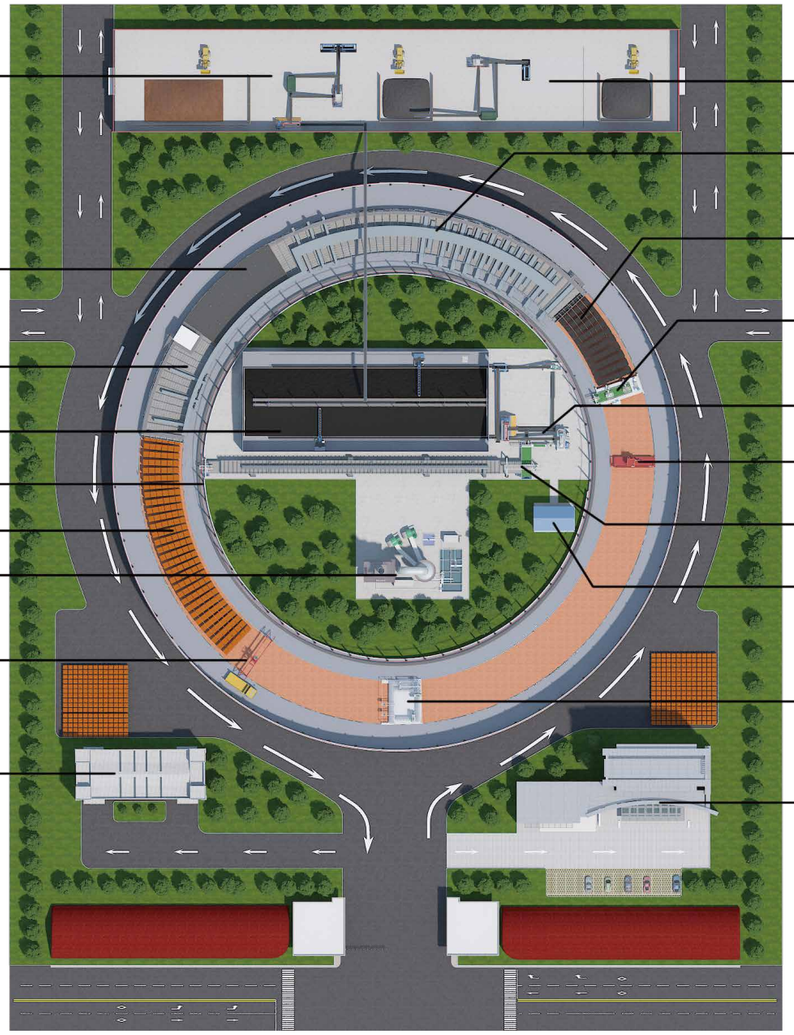
-suitable for different raw materials
-various types of products
-higher output, lower failure rate
-save energy, no pollution
-no need kilns cars, pushers or ferry cars
lower maintenance cost
-land area: 20,000-30,000M2
-fully automatic for whole production line
-easy management and production

Hoffman Kiln

-suitable for different raw materials
-various types of finished bricks
-coal as burning fuel
-low Fuel Consumption
-no need kilns cars, pushers or ferry cars
-small Investment
-land area: 20,000-30,000M2
-short construction period
-easy management and



Effect Diagram of Movable Rotary Tunnel Kiln



Advantages Of Movable Rotary Tunnel Kiln

1. Kiln Top Without Blowers

Two centrifugal blowers are installed on the ground, and two cut-off doors are set at the entrance of the drying chamber, so that the smoke will not enter the workshop and pollute the working environment. Under normal working condition, no need to conduct huge range of maintenance for kin body within 10 years, no need to conduct huge range of maintenance for refractory materials within 5

2. Intelligent Burning

Bricks stay on the ground, while kiln moves to finished the drying and buning. This design integrates mechanization, automation and intelligence, and has realized automatic roasting and intelligent walking of the kiln body.

3. Circular Chimney Seamless Connection

The connection between the annular flue and the drying section is sealed at the movable condition. There are three ways for users to choose.

1. Ring Slot Ring Sliding Cover

The upper m outh of the annular flue is a fully open with annular slot-shaped opening. The annular opening of the flue is in contact with the sliding cover plate fixed on the movable kiln body.

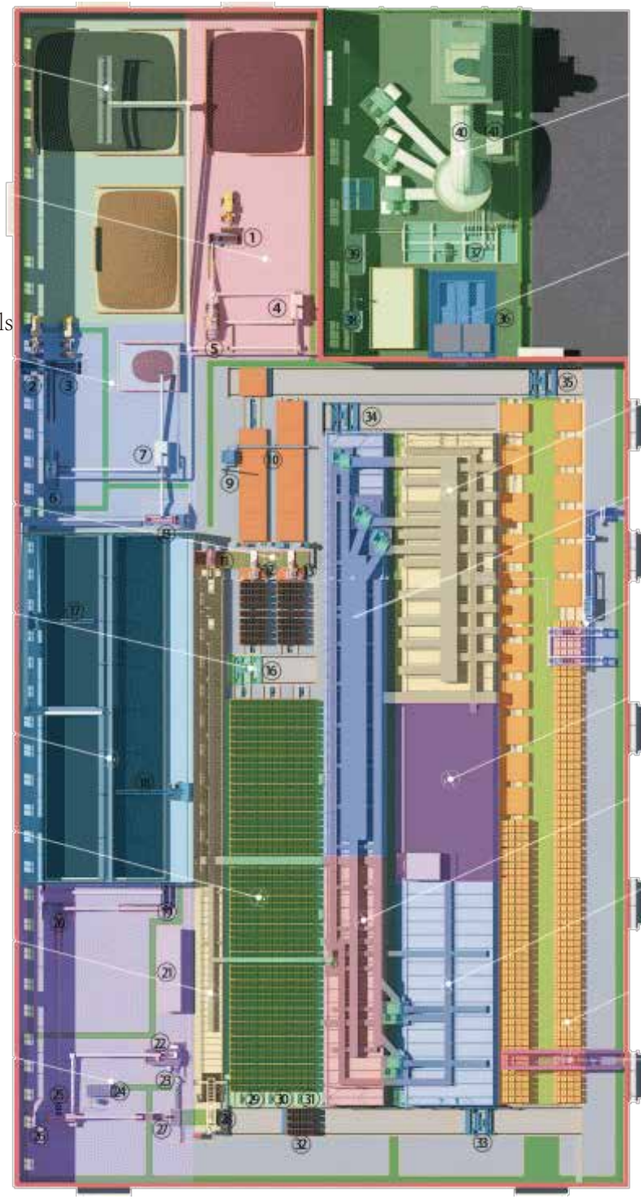
2. The Ring Groove Hole And Movable Cover Plate

The upper mouth of the annular flue is not fully open. There are a series of smoke exhaust holes at equal distances related to each intake and discharge distance of the kiln body.

3. Ring Groove Hole And Sliding Cover

The upper mouth of the annular flue is not fully open. There are a series of equidistant smoke exhaust holes related to each intake and exhaust distance of the kiln body. The smoke ust holes are covered with a sliding cover with a sealing skin.

Effect Diagram of Large Cross-section Tunnel Kiln



Raw Materials Workshop

Crushing Workshop

Automatic Raw Materials Mixing Workshop

Automatic Stacking System

Bricks Conveying System

Aging Room

Green Bricks Storage Workshop/ Waiting Line

Fast Drying System

Bricks Forming Workshop

Smoke Purification Treatment System

Kiln Car Maintenance Track

Preheading Section of Tunnel Kiln

High Temperature Drying Section

Automatic Unloading and Packing System

Burning Section of Tunnel Kiln

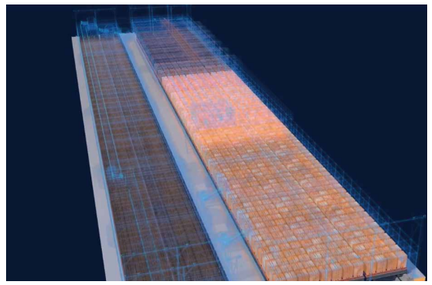
Low Temperature Drying Section

Cooling Section

Finished Bricks

Bricks Clamping Crane

Advantages Of Large Cross-Section Multi-Type Energy-Saving Tunnel Kiln

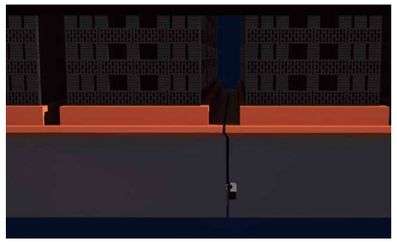


1. Quality Assurance

Large section kiln can ensure the yield, reduce the fire speed and ensure quality. Heat value for burning can be reduced, greatly lower energy consumption of products, appropriate extension of burning time, and solve the problem of black bricks, and adhesion issue between finished bricks.

2. Energy Saving

Multi-sided kiln walls are omitted, reducing heat consumption of each side kiln wall by 8%, and the same output can reduce heat consumption by 30% compared with a single tunnel kiln. The operation is stable and reliable.



3. Easy Operation of Kiln Car

It solves the problems of heavy operation of the original large- section kiln cars. The higher degree of automation and digital roasting control reduce the influence of human factors, reduce the calorific value and labor costs, and ensure high quality and product qualification rate.

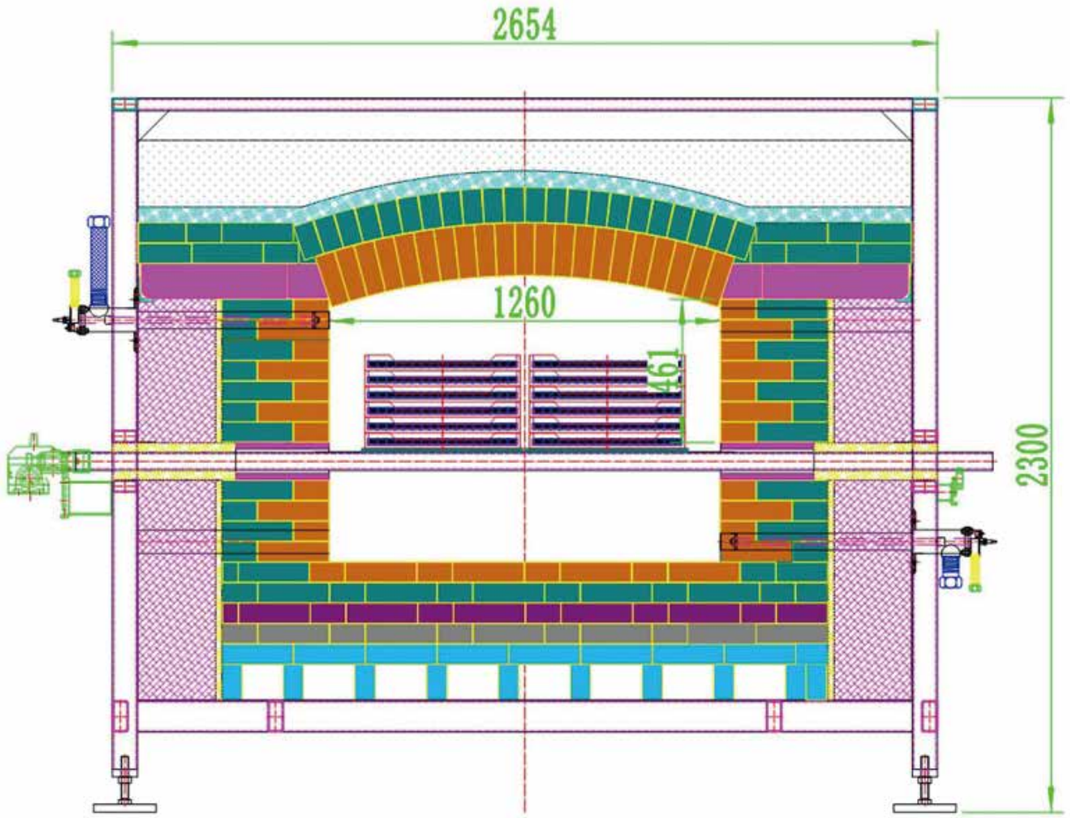
4. Environmental Protection

The gas discharged from the low- temperature preheating section and high-temperature drying section of the dryer is reused in the cooling section of the burner kiln. And the moisture discharged from the constant-speed drying section is sent to the smoke desulfur system, reduce the sulfur and oxygen content of the exhaust gas.

5. High Degree Of Automation And Intelligence

The application of 5G technology and the central control room ensures that the kiln realizes automatic digital roasting, controls the firing speed of roasting, meets the needs of fully automatic brick unloading and packaging in the later period, and realizes the automatic and intelligent operation of the whole plant production.

Introduction of Roller Kiln



1. Roller Kiln Introduction

The roller kiln using natural gas as fuel has the characteristics of high-quality, high-efficiency, energy-saving, high-quality of finished bricks, and high degree of automation. The roller kiln is the new choice for the high-quality products.

The kiln body adopts a modular design, which ensures the manufacturing accuracy and shorten the installation time. The kiln utilizes high-grade refractory and thermal insulation materials produced in China. Products are burnt by the natural gas and the burning zone is made of mullite refractory bricks, refractory cotton, and thermal bricks which can keep the temperature and avoid the heat sendi ng. Such Roller Kilns can improve the quality of finished products with lower energy consumption.

2. Roller Kiln Working Procedure

The formed ceramic articles are placed in the crucible, and the crucible is placed on the rollers of feeding platform, and moved to the inside of the roller kiln by rollers,going through preheating section, burning section, and cooling section in sequence. The crucibles, after ceramic products were taken out, will be used for the the next working cycle.

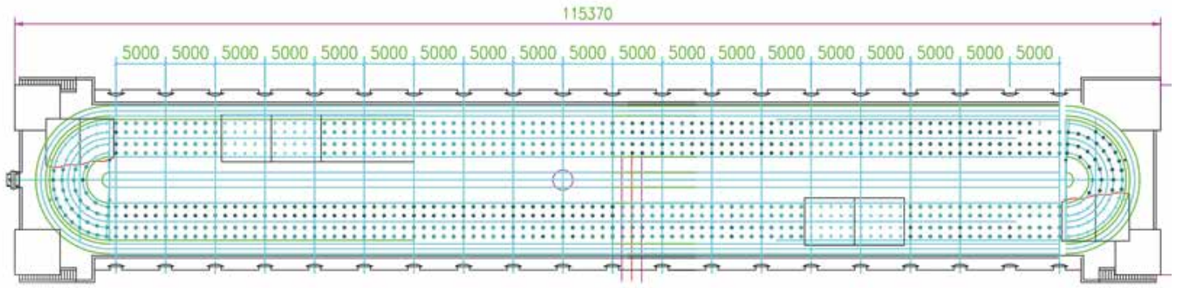
3. Roller Kiln Structure

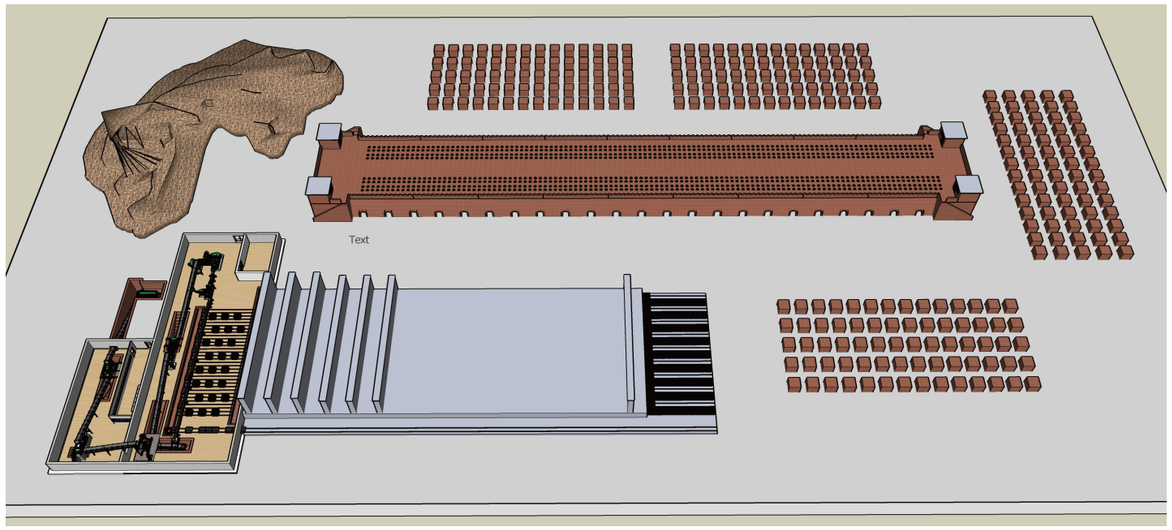
The roller kilns is made of kiln system, driving system, burning system, gas flu system, electrical control system, safety protection and interlock system, etc.

Roller Kiln Show

Finished Ceramic Products

Introduction of Hoffman Kiln





Hoffman Kiln Introduction

The Hoffman kiln is a kind of the kilns used in various branches of the ceramic industry. The kiln invented by a person of the same name in 1856 and is currently used in brick, clay, pottery, and refractory industries. This kiln is in the category of continuous kilns. In this kiln, the products are fixed and the fire is movable.

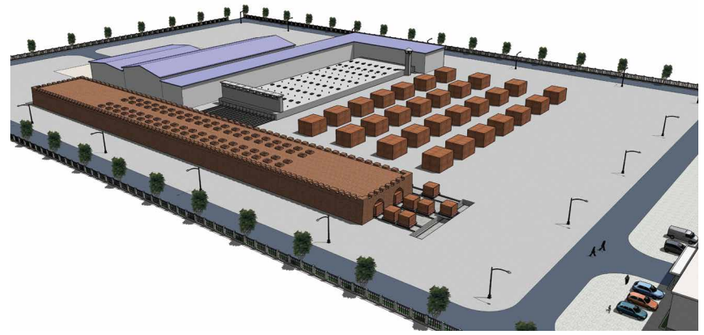
The Hoffman kiln is a long tunnel that is made in the form of a ring or ellipse, dividing it into chambers. The Hoffman kiln chambers are connected by channels or doors embedded in the separating walls of the chambers. Each room also has an outlet door that is used for loading and unloading the kiln. The size of the Hoffman kiln is expressed by these doors; for example, a 34-door kiln is a kiln with 34-chambers, and each door connected to a brick-making chamber (or other products). The place where the fuel sprays are located is also on the roof.

The Hoffman kiln can be divided into pre heating zone, burning zone, and cooling zone. After entering the annular kiln, the green bricks do not move, while each zone moves along the circular kiln path as it continuously loads, bakes, and exits the kiln. After the fuel is fed into the kiln through the coal feeding hole of the roasting zone, it burns between the gaps in the stack, generating heat to heat the bricks.

Characteristics of Hoffman Kiln

1. Low Fuel Consumption

During the roasting process, the vast majority of the air required for fuel combustion comes from the hot air that has already been preheated in the cooling zone. When the flue gas after combustion passes through the preheating zone, it can be used to fully preheat the bricks, making its exhaust temperature only around 100-120℃. Therefore, the heat of fuel combustion can be reasonably used, resulting in low fuel consumption.



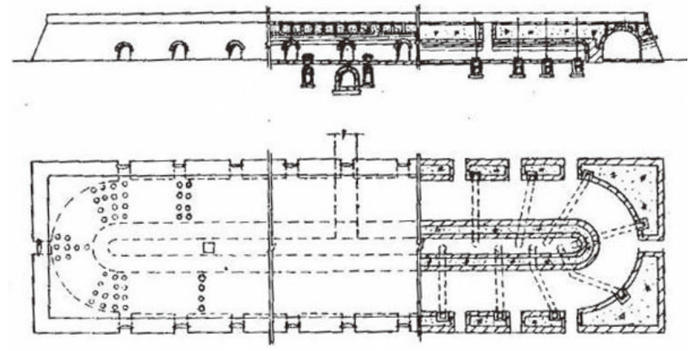
2. Small Investment

Hoffman kiln has low fuel consumption, and the required supporting mechanical equipment and steel consumption are low, resulting in smaller investment.

3. Continuous Production with High Yield and the Ability to Use Various Fuels

The Hoffman kiln adopts a one-time ignition method and continuously cycles roasting without interruption.

The Hoffman kiln can use solid fuels, such as coal gangue, coal, fly ash, and coke

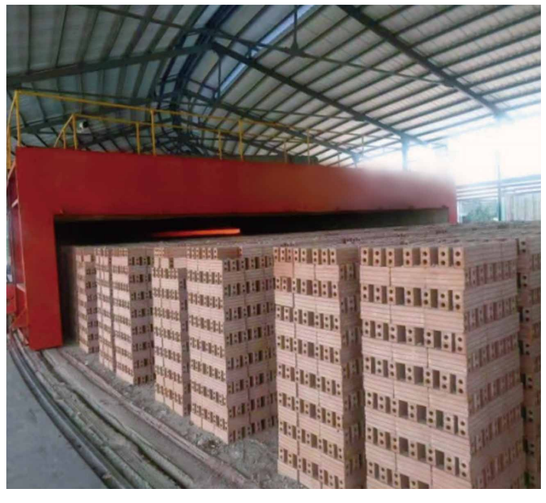


Quang Binh, Vietnam

Project: Quang Binh, Brick Factory
Location: Quang Binh, Vietnam
Kiln Capacity: 400,000-500,000 bricks /day
Materials: shale, river sludge, construction waste, industrial tailings

The project is located in Quang Binh, Vietnam. Previously adopts the natural drying and tunnel kiln. The whole project successfully started the production in 2017, with higher output, lower energy consumption.

Huang Gui, Vietnam



Project: Huang Gui Brick Factory
Location: Huang Gui, Vietnam
Kiln Section: 11.8m
Kiln Capacity: 400,000-500,000 bricks /day
Materials: shale, river sludge, construction

Uzbekistan

Project: Uzbekistan Rotary Kiln
Location: Tashkent
Kiln Section: 12.98m
Kiln Capacity: 800,000 bricks /day
Materials: mountain earth, coal gangue

Project: Huang Gui Brick Factory
Location: Huang Gui, Vietnam
Kiln Section: 11.8m
Kiln Capacity: 400,000-500,000 bricks /day
Materials: shale, river sludge, construction

Aksu, China

Project: Aksu Dingsheng New Building Materials Co., Ltd
Location: Aksu, Xinjiang
Kiln Section: 12.98m
Kiln Capacity 400,000-500,000 bricks /day
Materials: shale, coal gangue, construction waste

Finished Bricks

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