

Find mechanical parts manufacturer?

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Integrated services

Level II flaw detection standard

Three industries

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After a long-term operation, large rotary kiln and grinding mill always begin to have various problems. Some spare parts are worn out all the year round, and the failure appears to affect the operation of the equipment. Once a kiln accident occurs, it will cause huge loss because of production stoppage. It with takes 10-15 days to stop the kiln and handle accident, and the output value loss can reach millions, while the cost of planned pre-check is much lower. Therefore, the regular maintenance of large rotary kiln and grinding mill, and replacement of the spare parts, can effectively extend the service life of the components.



As a well-known service provider for large kiln and grinding mill, CHAENG can produce large mechanical spare parts (1-150tons) for building materials, cement, metallurgy, mining and other industrial industries, including ball mill trunnion, girth gear, vertical mill roller and table, rotary kiln shell segments, support roller, etc. CHAENG is large parts supplier for many famous enterprises such as China National Building Material Group, Shanshui Cement, Lafarge, Taimu, and Wannianqing cement, TaTa.

Main Mechanical Parts Product

Rotary kiln shell

The rotary kiln shell, used as the supporting and rotating parts of the kiln, is exposed to high temperature for a long time during operation. So kiln mouth section is often burned and deformed, it is necessary to replace it when the damage is serious.



The causes of deformation of the kiln shell

1. Over-high output increases the wear of kiln mouth shell, and causes the overheat deformation of the kiln shell.
2. The heat flow is too large but the cooling zone is short or even no. The working environment of the kiln mouth is bad, the temperature of outlet material is 1300-1400°C, and the secondary air temperature is 1000-2000°C.
3. The cylinder temperature is too high, the thermal expansion is large, while the strength of the high temperature resistant materials is seriously attenuated.
4. The guard bolts at kiln mouth are loosen, so that the refractory materials fall off, and thus the shell is burnt.
5. Improper handling during burning contaminated soil causes severe corrosion of the cylinder shell.
6. The corrosion of sulfur, phosphorus and chlorine on the kiln shell reduces the thickness and strength of the kiln cylinder, also reduces the plasticity of the steel and increases the brittleness of the steel, which may lead to brittle failure of the kiln cylinder.



It can be concluded that it is very necessary to regularly detect the running condition of the components of the equipment, find problems and timely replace the parts, and improve the economic benefits of the enterprise, and effectively extend the service life of the equipment!

Only produce large kiln shell?

No

No, CHAENG can supply 1-150tons large mechanical parts according to drawings.

Other steel casting spare parts

Besides rotary kiln shell segments, CHAENG also launched a full range of spare parts services fro rotary kiln and grinding mill, including rocker arm, grinding roller and grinding table for vertical roller mill; girth gear, support roller and riding ring for rotary kiln; girth gear and trunnion for ball mill, to provide customers with large mechanical spare parts needed in the whole kiln and mill, meeting the needs of different industries.



Ball mill trunnion
Material: ZG230-450
Weight: 5-30T
Used in: Ball mill

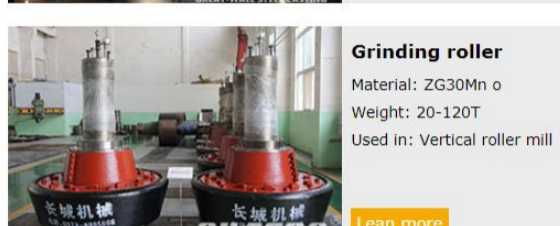
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Girth gear

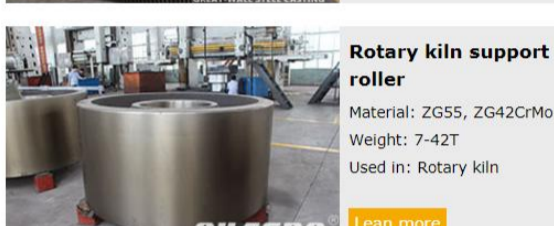
Material: ZG45, ZG42CrMO
Weight: 10-80T
Used in: Ball mill, rotary kiln

[Learn more](#)



Grinding roller
Material: ZG30Mn o
Weight: 20-120T
Used in: Vertical roller mill

[Learn more](#)



Rotary kiln support roller

Material: ZG55, ZG42CrMo
Weight: 7-42T
Used in: Rotary kiln

[Learn more](#)

Making Process

After years of development and experience, CHAENG has accumulated rich experience in casting, and has a large casting base in the north of Henan. Continuously introducing advanced casting equipment at home and abroad, and optimizing the process technology, CHAENG forms a systematic production process to ensure the quality of castings.

Making process of rotary kiln shell

Process introduction

The rotary kiln shell is made of steel plate such as boiler plate and Q235C plate, requiring highly on dimensional accuracy and geometric tolerances.

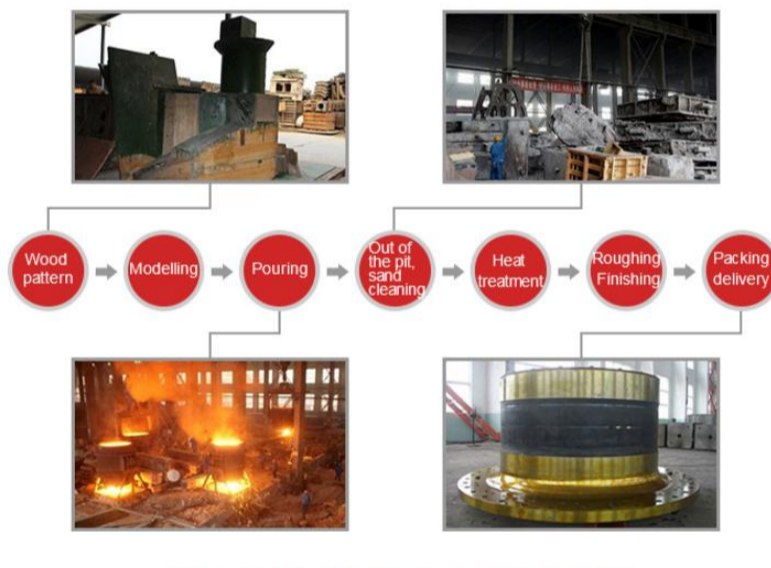
Due to transportation reasons, the rotary kiln is composed of shell segments. Because the outer circle of the kiln cylinder is not processed, the perpendicularity of the end face to the center of rotation cannot be directly measured. In the process design, the perpendicularity of the end face is converted into parallelism and the coincidence of the axes at both ends according to the structure of the cylinder.



CHAENG adopts local forming method to design specific manufacturing process and welding method of single-segment cylinder according to the detailed requirements of the drawings. After the assembly and welding of the cylinder, perform the post-weld treatment, including non-destructive testing, post-weld heat treatment and pressure resistance test to ensure the high quality of kiln shell.

Making process for spare parts of kiln & mill

For products such as ball mill trunnion and girth gear, vertical mill grinding roller and table, rotary kiln shell and tyre in building material industry, machine frame in metallurgy and ceramic industries, CHAENG can select appropriate wooden mold for modeling design, and uses CAE software to simulate the casting process. Strictly according to the process procedures to produce high-quality steel castings: wood mold - modelling - pouring - heat preservation - out of the pit, sand cleaning - heat treatment - roughing, finishing - packing and delivery.



The Strength of CHAENG

CHAENG is a member of China Foundry Association and Henan Foundry Association. It is the first batch of announcement enterprises in Henan Province that meets the "Entry Requirements for Foundry Industry" and is a large steel casting production base in northern Henan. CHAENG, with an annual production capacity of over 30,000 tons, mainly produces carbon steel, manganese steel and high alloy steel castings with a single weight of 1-150 tons according to drawings.

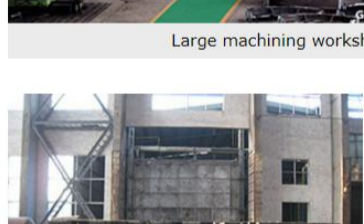
Production strength



Large machining workshop



Large assembly workshop



6.5x6.5x16m annealing furnace
Meet various annealing requirements



WA11-120 CNC bending machine
can roll 120mm plate



Edge planer of 16m in length
to guarantee the welding quality.



Ø8m twin column heavy vertical lathe



Large lathe for machining kiln shell



100T large crane

Testing equipment



Universal strength tester



OBLF direct-reading spectrometer



Electric vibrating screen



Hammer sampling machine

Project Cases

CHAENG has strong casting and machining capabilities, and large annual output. We strictly follows the level-2 national inspection standard and implements 360° non-destructive testing system to ensure the quality of steel castings. CHAENG has close cooperation with many companies of various industries, supplying them with spare parts with good performance to improve the practical effect of the equipment and extend the service life of the equipment. CHAENG has won the high praise of customers!



Rotary kiln shell segments

Ø4.8x2.47m rotary kiln shell for Jiangxi Wannianqing Cement

Ø4x6.84m rotary kiln shell for Lafarge Holcim Cement

Ø4.2m rotary kiln shell for Guangdong Cement Company



Other spare parts

Girth gear for Jiangsu cement company

Rotary kiln tyre for Russian customer

Girth gear for Turkish customer

Ball mill trunnion for Hebei cement company

Services of CHAENG

Quick response within **24h** **365** days' continuous service



Reliable choice



Guaranteed quality



Considerate service



High cost efficiency



Fast delivery



One year warranty

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