
**CDZL series atmospheric pressure hot
water chain grate boiler**



Installation instruction

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Directory

I、 Brief introduction to boiler Structure	1
I、 Introduction of the structure	1
II、 The combustion process	1
III、 Technical characteristics	1
II、 Installation instruction	2
I、 Installation preparation	2
II、 Lifting of boiler and auxiliary machinery	3
III、 Boiler installation	3
IV、 Auxiliary installation	4
V、 Hydrostatic test	4
III、 Operating instruction	6
I、 Oven	6
II、 Cooking stove	8
III、 The fire	9
IV、 Boiler operation management	10
V、 sewage	11
VI、 The water quality requirements	12
VII、 Operation management of chain grate	13
VIII、 Matters needing attention of economizer and dust collector	14
IX、 The furnace	14
X、 Maintenance and maintenance	16
XI、 New CDZL series boiler use characteristics	18
XII、 instructions	19

I、 Brief introduction to boiler Structure

I、 Introduction of the structure

The new CDZL series boiler is single pot cylinder vertical type water and fire tube shell boiler, and the burning equipment is chain grate. The water cooling wall on both sides of the furnace is the radiation heating surface, the two wings of the furnace are the convection heating surface, the boiler tube is arranged in the convection heating surface, the front and back arch adopts the new technology of heat-resistant concrete integral pouring and ramming, the outer side of the boiler main engine is the three-dimensional protective plate shell.

II、 The combustion process

With fuel from coal bucket on the front of the fire grate, grate, a preheated coal carbonization, ignition, combustion, state slag fall into slag bucket, row from time to time by the slag machine, smoke throat between before and after the arch can form vortex mixing with air, and heating before arch, improve fire condition, the upper arch export smokestack into two wings convection bank, through smoke box before into the smoke pipe, After the dust collector, from the induced draft fan to the chimney discharge.

III、 Technical characteristics

(1) The tube is composed of tube-sheet and smoke tube, so that the cylinder is changed from quasi-rigid body to quasi-elastic body structure, and the tube-sheet area is cancelled to reduce the stress. The smoke pipe is changed from two return to single return, which solves the problem of tube plate crack.

(2) The lower part of the drum is arranged with an ascending pipe row, which eliminates the dead water area at the bottom of the drum, so that the sludge is not easy to deposit, and the high temperature area of the drum can be cooled well, preventing the bulge at the bottom of the boiler shell.

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- (3) The use of high efficiency heat transfer pipe, to achieve the effect of enhanced heat transfer, to achieve the boiler temperature rise, pressure fast characteristics, improve the thermal efficiency of the boiler.
 - (4) Compact structure, compared with the same type of boiler, the external size is small, save the investment of boiler house infrastructure.
 - (5) Stable operation, convenient adjustment, and sufficient output.
 - (6) The use of smoke tube to enhance heat transfer, improve the heat transfer coefficient and thermal efficiency, because the flue gas in the tube Disturbance, smoke pipe is not easy to accumulate ash, play a role in self-cleaning.
 - (7) In the furnace, the heat-resistant concrete integral casting of high efficiency and energy saving furnace arch is used to improve the coal ignition conditions, and the independent air chamber is used to achieve reasonable air distribution, so that an aerodynamic field conducive to combustion is formed in the furnace, thus expanding the adaptability of coal.
 - (8) The furnace arch and the outlet smoke window of the boiler have a certain dust removal function. The original dust concentration of the boiler is controlled below the standard, which ensures that the dust emission of the boiler reaches the target stipulated by the state environmental protection.

II、 Installation instruction

I、 Installation preparation

- (1) Determine the installation unit. Installation unit must have the corresponding boiler installation qualification!!
- (2) the boiler must have quality and technical supervision department examination qualified furnace personnel operation!!
- (3) Organize the staff to learn installation technical measures, safety technical measures, "Hot Water Boiler Safety Technical Supervision Regulations" (hereinafter referred to as "water Regulations"), GB50273-1998 "Industrial Boiler Installation Engineering Construction and Acceptance Code", and be familiar with boiler drawings and related technical documents.

(4) Before boiler installation, boiler body, combustion equipment, parts, auxiliary machinery and accessories should be checked, checked and counted according to technical documents, and make good records.

II、Lifting of boiler and auxiliary machinery

(1) Boiler body, combustion equipment, auxiliary machinery, accessory packing boxes, instrument packing boxes should be hoisted according to the hoisting position specified by the factory. If the hook is damaged in any position, the user shall be responsible for it.

(2) Heavy vehicles, lifting equipment, wire ropes and winches required for bundling must have sufficient load capacity, and should meet the technical specifications.

(3) Before lifting, please select lifting equipment according to the size and weight of large pieces marked in the technical specifications, and formulate corresponding safety precautions.

III、Boiler installation

(1) The boiler foundation shall be redesigned by the civil engineering department according to the local soil quality and the foundation drawing provided by the manufacturer.

(2) After the boiler foundation reaches strength, it should be checked and accepted according to the boiler drawing, and three datum lines for the whole boiler should be drawn:

A. Longitudinal reference line -- cylinder center or combustion equipment center.

B. Horizontal reference line -- center of front shaft of chain grate or center line of slag extractor.

C, elevation datum line -- a number of relevant locations can be selected around the foundation for marking, and the relative deviation between the markers should not exceed 1mm.

(3) Before the boiler main engine is in place, the slag extractor and slag bucket are put into the slag pit, and then the boiler is in place according to the positioning center line of the drawing. After assembling the lower part of the

boiler, the upper and lower parts should be assembled. The upper and lower parts should be aligned and cushioned firmly, and the inside and outside should be poured twice.

(4) Installation position dimension deviation and inspection method according to GB50273-1998 "Industrial Boiler Installation Engineering Construction and acceptance code" implementation.

IV、Auxiliary installation

(1) Before the installation of dust collector, induced draft fan and blower, the air damper, the air lock and the transmission part of dust collector should be checked to be qualified before installation. Check whether there are defects such as stuck and air leakage after installation. Finally switch on the power test, check whether the motor steering is correct, whether there is friction vibration phenomenon, whether the motor temperature is normal. In order to ensure good lubrication of induced draft fan bearing at high temperature, effective cooling measures should be taken for bearing seat and lubricating oil should be added regularly. When the induced draft fan starts in cold state test operation, the flue gas regulating door should be closed to prevent the motor from burning out due to excessive starting current. The longest running time in cold state should not exceed 5 minutes.

(2) When the length, elbow and cross-sectional area of the flue duct connected with the blower and induced draft fan change greatly, the smoke and wind resistance should be recalculated, the flow rate and pressure head of the drum and induced draft fan should be checked to meet the actual needs of the boiler.

(3) Step-down starter should be installed if the motor power of the boiler auxiliary engine exceeds 15kW.

(4) Hydraulic test shall be carried out according to relevant regulations after installation.

V、Hydrostatic test

Hydrostatic test should be done for assembled boiler after welding of pressure element is finished or after overhaul of pressure element.

The test pressure shall conform to the requirements in Table 1.

Table 1 Test pressure of hot water boiler

The name says	Boiler rated outlet pressure P	Try to check pressure
The boiler body	$< 0.6\text{MPa}$	$1.5P$ But not less than 0.2MPa
The boiler body	$0.6 \sim 1.2\text{MPa}$	$P + 0.3\text{MPa}$
The boiler body	$> 1.2\text{MPa}$	$1.25P$

The following work should be done before hydraulic test:

- A. Conduct internal cleaning and surface inspection of the tested part.
- B, check whether the pipe is blocked.
- C. Install pressure gauges (not less than 2) that have been checked.

The hydrostatic test shall meet the following requirements:

A. After the boiler is filled with water, condensation on the metal surface should be eliminated.

B, the boiler hydraulic test, the water pressure should be slowly up and down. When the water pressure rises to the rated outlet pressure, the pressure boost should be suspended to check whether there is any leakage or abnormal phenomenon, and then the pressure boost to the test pressure. The welded boiler shall be held at test pressure for 5 minutes and then lowered to rated outlet pressure for inspection. Pressure shall remain constant during the inspection.

The hydrostatic test should be carried out when the ambient temperature is higher than 5°C , otherwise anti-freezing measures must be taken. The water used in the hydraulic test should be kept at a temperature higher than the surrounding dew point to prevent condensation on the surface of the boiler, but the temperature should not be too high to prevent vaporization and excessive temperature difference stress, generally $20\text{-}70^{\circ}\text{C}$.

The boiler is qualified when it meets the following conditions after hydraulic test:

1. There is no water drop and water mist on the metal wall and weld of the pressure element;
- 2, after the hydrostatic test, no visible residual deformation.

III、Operating instruction

Warning: do not oven in accordance with the prescribed method, will make the furnace wall cracking, deformation, collapse, affect the safe operation of the boiler!

I、Oven

(1) The following conditions should be met before the oven:

(1) All the boilers and their auxiliary devices have been assembled and the hydrostatic test has passed.

(2) The furnace masonry and insulation engineering should be finished, and the furnace air leakage test passed, check whether the debris in the flue is clean.

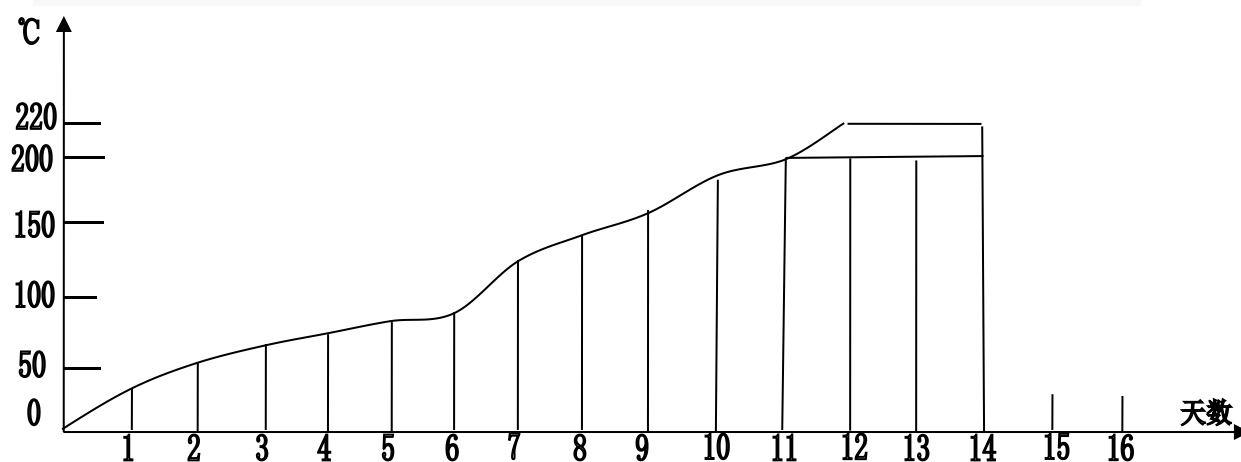
(3) Water level meter, temperature meter and other thermal and electrical instruments used in ovens should be installed and tested.

(4) Boiler feed water should comply with the current national standard GB/T1576-2008 "Industrial Boiler Water quality".

⑤ The expansion indicator on the drum and box should be installed and adjusted to zero in cold state.

The temperature measuring point or the mortar sampling point on the furnace wall should be set up.

⑦ There should be oven temperature rise curve. The relation curve between oven time and flue gas temperature can be carried out by referring to the following figure:



⑧ Pipeline, air duct, flue, ash channel, valve and baffle should be marked with medium flow direction, opening direction and opening indication.

All channels inside and outside the ⑨ furnace should be cleaned.

(2) The oven can be carried out by flame, steam and other methods according to the site conditions; Steam ovens are suitable for all types of boilers with water walls. The fuel for the chain grate should not be metal sundries such as nails.

(3) Oven method and matters needing attention

(1) The flame should be in the center of the furnace, the oven should be used in the early stage of slow baking, the fire after the initial stage should be uniform, and slowly increase day by day.

② The chain grate should be rotated regularly in the oven process, and the grate should be prevented from burning.

(3) The temperature rise of the oven should be measured according to the flue gas temperature after the superheater (or the equivalent position); According to different furnace wall structure, the temperature rise should meet the following requirements:

A. The temperature rise of the heavy furnace wall on the first day should not be greater than 500C, and the temperature rise every day after that should not be greater than 200C, and the smoke temperature in the later period should not be greater than 2200C;

B. The temperature rise of light brick furnace wall should not be greater than 800C per day, and the later smoke temperature should not be greater than 1600C;

C, after the refractory castable furnace wall maintenance expires, can start the oven; The temperature rise should not be greater than 100C per hour, the later smoke temperature should not be greater than 1600C, and the duration within the maximum temperature range should not be less than 24h.

(4) When the furnace wall is particularly wet, the heating rate should be properly slowed down and the oven time should be extended.

(4) Oven, should often check the expansion of the masonry. When cracks or deformation signs appear, the heating rate should be slowed down, and the cause should be identified, and the corresponding measures should be taken.

(5) If the oven meets one of the following requirements, it shall be judged as qualified:

A, when the furnace wall mortar sample method is used, in the middle of the walls on both sides of the combustion chamber, 1.5 ~ 2m above the grate, or 1 ~ 1.5m above the burner and the middle of the two sides of the superheater, the mortar sample at the t-shaped cross seam of the clay brick and red brick is measured 50g each, and the water content should be less than 2.5%.

B, when the temperature measurement method is used, in the middle of the two sides of the wall of the combustion chamber, 1.5 ~ 2m above the grate, or 1 ~ 1.5m above the burner, the temperature at 100mm of the outer face of the red brick wall should reach 500C, and continue to maintain 48h; Or determine the superheater on both sides of the wall clay brick and insulation layer of the joint temperature should reach 1000C, and continue to maintain 48h.

(6) The actual temperature rise curve should be measured and drawn in the oven process.

II、Cooking stove

(1) The purpose of the boiler is to add NaOH and Na₃PO₄ in the boiler for chemical treatment, using alkali

To remove the oil and rust in the boiler to ensure the uniform heating and normal operation of the boiler.

The dosage of the boiler should meet the requirements of the technical documents of the equipment. If there is no requirement, it should meet the requirements in the following table:

Drug name	Dosage (Kg/m ³ water)	
	Rust thin	Rust thicker
Sodium hydroxide (NaOH)	2~3	3~4
Trisodium phosphate (Na ₃ PO ₄)	2~3	2~3

Note: ① The drug is calculated according to 100% purity.

(2) When there is no trisodium phosphate, sodium bicarbonate can be used instead, and the amount is 1.5 times that of trisodium phosphate.

③ Sodium carbonate boiler can be used alone, and its quantity is 6kg/m³ water.

(3) When dosing, furnace water should be at low water level.

(4) The cooking time is generally 2-3 days.

(5) During the cooking period, take the furnace water regularly for analysis, and the basicity of the furnace water should not be lower than 45mmol/L, otherwise, supplement should be added.

(6) After the boiler is finished, the sediment in the drum and the collection box should be cleaned, the valve inside the boiler and the liquid medicine should be washed, and the sewage should be checked whether it is blocked.

(7) The following requirements shall be met after cooking:

(1) There should be no oil on the inner wall of the drum and collecting box.

② There should be no rust on the metal surface after wiping the attachment.

(8) The boiler work can be carried out at the later stage of the oven.

III、The fire

Warning: the temperature should not be raised too fast when the fire, to avoid uneven heating of each component, produce excessive stress, affect the service life of the boiler!

(1) before the fire, the boiler should be comprehensively checked :(including fans, pumps, valves, meters and electrical meters, etc.) whether the equipment is normal, close all the water valve, and then the treated water is slowly injected into the boiler, and the water temperature is generally not higher than 40℃. Check the boiler inside and outside, there is no left tools and other sundries in the drum and box, there is no welding lump or sundries in the furnace, and the temporary partitions and plugs set up on the water supply pipe and sewage pipe should be removed completely; The cover plate of manhole and hand hole has been installed and the screws have been tightened. The furnace wall and furnace arch have no cracks, deformation or collapse. The furnace wall is in contact with the drum and collecting box Have enough expansion gap, in its internal according to the requirements of the filler. Furnace door, ash door and inspection door are flexible and tightly closed. Drum, induced draft fan air regulating door, air regulating performance is good.

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- (2) Check the main safety accessories. Should meet the requirements of "water gauge"; Whether there is leakage in pipes, valves, manholes, hand holes, flange connections, etc. If there is leakage, it should be eliminated.
 - (3) the door open when the fire ignition, placed in grate front wood such as kindling, it is strictly prohibited to nail) ignition, driving the induced draft fan damper, increase the natural ventilation, ignition and burn, the small flue gas damper, intermittent open induced draft fan, after being ignited material burns, began to manually add coal, it can be open air blower. When the coal seam is burning, the ignition door can be closed, add coal to the coal scuttle, open the grate intermittently, and strengthen the observation of the fire at the right side of the fire door, appropriate fire, until the front arch hot coal can be continuously ignited, adjust the drum air volume, the negative pressure of the furnace is maintained at 20-30Pa, so that the combustion is becoming normal.
 - (4) After the fire, the boiler water level will gradually rise, should be observed at any time. The normal water level can be maintained by releasing water.
 - (5) Check whether manhole and hand hole cover leak, tighten manhole, hand hole and flange bolts.
 - (6) When the boiler is put into normal operation, then check each part of the boiler again to find out whether the condition of each part is normal.

IV、Boiler operation management

- (1) The boiler must keep the prescribed normal water level during operation.
- (2) Each shift shall at least carry out the following work:
 - ① Flush the glass water gauge once.
 - ② Check the tightness of drum, collecting box, blowdown valve and trap.
 - ③ According to the water quality of the boiler, all the blowdown valves discharge one to two times.
 - ④ Whether all pumps are in good condition or not, should be tested in succession, with a short-time start operation method to check the work of each feed pump.
- (3) Often pay attention to the relationship between wind pressure and combustion, and must control the negative pressure at the exit of the combustion chamber for 20-30Pa, so that the boiler does not spray flue gas to the outside.

(4) Often patrol around the boiler, such as found in the furnace wall, furnace door gas leakage situation, should be repaired immediately, and listen to there is no special sound, these sounds may be the boiler water leakage, steam leakage situation, must pay attention to eliminate.

(5) Every one hour to the boiler body, electrical equipment, water pump, all kinds of valves, all kinds of instruments and auxiliary equipment for a circuit inspection.

(6) When opening the valve or cock, the sledgehammer or other objects are prohibited to knock, and the valve handle is not allowed to be extended to open forcefully.

V、sewage

Warning: not according to the regulations of sewage discharge, will lead to drum drum drum, collection box and water wall pipe blockage, resulting in pipe explosion until the boiler burned, crack, explosion!!

(1) Continuous sewage discharge or water discharge is to make the furnace water basicity does not exceed a certain concentration, in line with the furnace water basicity requirements. Sewage discharge and water discharge should be controlled by adjusting the opening of the drainage valve or water discharge valve according to the results of chemical analysis.

(2) Regular sewage or water discharge is to eliminate the sediment in the drum, and the salt content of the furnace water can be adjusted to meet the requirements of the salt content of the furnace water.

(3) Regular sewage discharge should be carried out at low load, and the time should be as short as possible, so as not to affect the water cycle.

(4) The boiler water should be discharged at high water level when discharging, and the water level in the drum should be paid close attention to when discharging, and the water level in the drum should be reduced by 25-50mm every time.

(5) Sewage discharge operation procedures are as follows:

First completely open the second valve (since the drum or header direction, then the first valve slightly open, to preheat the drainage pipeline, to open the

first valve (no impact on the sewage pipe should be sound at this moment, if there is any impact sound should turn down the first valve to impact sound disappeared, then slowly open), pay attention to control emissions. The procedure for closing is the opposite of the above.

(6) If two or more than two boilers use the same sewage main, and there is no check valve on the sewage pipe, two or more groups of sewage valves are prohibited to work at the same time.

(7) Do not use lever to extend the handle to open the drain valve.

(8) If the end of the sewage pipe is not through to the sewage box or sewage well, and there is no protection equipment, it must be sure that no one near the end of the sewage pipe can be discharged, so as to avoid accidents in the discharge.

(9) After the discharge is finished and the blowdown valve is closed, the blowdown valve should be checked whether it is tight. The inspection method is to close the blowdown valve, after a period of time, in the pipeline leaving the second blowdown valve by hand to test whether it is cooled, if not cooled, there is leakage at the blowdown valve.

VI、The water quality requirements

Warning: the water quality does not meet the requirements, will make the sediment precipitate the drum, the lower part of the collection box and form scale, damage the water circulation, make the pipe overheating, deformation, tube burst, and even make the boiler shell over-burning resulting in boiler crack and explosion!!

The feed water of the boiler should be free of sediment and other sediments, and the water quality should meet the requirements of GB/T1576-2008 "Industrial Boiler Water Quality" standard.

The water quality of atmospheric pressure hot water boiler should comply with the following table:

project	To the water	Pan of water
Suspended solidsmg/L	≤ 20	—

Total hardnessmmol/L	≤ 6	—
Total alkalinitymmol/L	—	—
pH (25℃)	≥ 7	10~12
Dissolve solidsmg/L	—	—

VII、Operation management of chain grate

Attention: often observe whether the grate operation is normal, such as deviation, fracture should be adjusted and replaced in time!

- (1) Should check the mechanical transmission of the chain grate and the sound of the gear box is normal, whether the parts are clean, whether the oil pipe is blocked, all oiler and oil cup should be filled with enough lubricating oil, and should be refueled regularly, check whether the operation of the cooling equipment is normal.
- (2) Check whether the lifting of the coal gate and the transmission of the air regulating door of the air chamber are stuck or abnormal.
- (3) check whether the grate is broken, falling off the grate and other debris.
- (4) check whether the safety clutch (or safety shaft) spring of the speed regulating machine is screwed too tight or too loose, so it can not be safe.
- (5) check whether the coal in the boiler coal scuttle is decoal, should avoid in the operation of the grate sheet exposed and occurrence of defire and other phenomena.
- (6) The thickness of the coal seam is generally between 80-120mm, and the thickness of the coal seam is adjusted by lifting the coal gate according to the coal quality and combustion condition. When the load changes, it is appropriate to adjust the grate speed to adapt to the load.
- (7) The burning of coal should generally start at about 200 ~ 300mm from the sluice gate. Under no circumstances is burning allowed under the sluice gate.
- (8) The amount of air required for combustion in each air chamber should be controlled by a switch air damper according to the combustion of coal.

(9) The ash and coal leakage in the tribal ash hopper before the grate should be cleaned regularly. The ash removal door at the lower left of the boiler should be opened twice in each shift to remove the ash in the air chamber and ensure that the air chamber is not blocked.

(10) When the grate is stuck in operation, it should immediately shut down the speed regulating electromechanical machine and stop running.

Causes of grate sticking:

- ① The front and rear axles are not parallel, and the grate runs off.
- ② The grate is broken or the pin is loose, and the grate is stuck.
- ③ There is metal debris or slag stuck in the coal grate.
- ④ The guard plate of the anti-coke box on both sides of the grate is deformed, and the grate is stuck.
- ⑤ Grate chain is too loose or bad occlusion with the main shaft sprocket.

The spring of the insurance clutch is not enough after the spring clearance is pressed.

- ⑦ Grate lower guide and upper friction plate damage deformation and stuck.

(11) Check whether the lubrication and temperature of each transmission part are normal. Generally, the temperature is not allowed to exceed 60-70°C.

VIII、Matters needing attention of economizer and dust collector

(1) Should often check whether the insulation material of the economizer is in good condition. If there is any damage, repair it in time.

(2) It is strictly prohibited to have air leakage at the flange connection of the economizer, dust collector and smoke wind pipeline.

(3) Each shift should clean the ash at the bottom of the economizer and dust collector.

IX、The furnace

Boiler shutdown is generally divided into three cases:

(1) When the grate plate is stuck or broken, in order to quickly remove the fault, the temporary fault should be stopped (also known as short time fire pressure).

(2) For inspection or repair, the boiler water should be completely stopped when released.

(3) Emergency furnace shutdown in special circumstances.

Due to the different conditions of the above three types of furnace shutdown, the specific steps are described as follows:

(1) Temporary furnace shutdown:

Temporary fault stop furnace, first close the blower, slightly open the induced draft fan, stop the grate operation, remove the coal gate under the coal gate, prevent burning coal gate, quickly deal with the fault. Such as in 1-2 hours can not be solved

Failure, should be turned into a temporary stop furnace, continue to solve the fault. Attention should be paid to the water level change of the boiler.

(2) Temporarily stop the furnace:

In addition to paying attention to safety and proper maintenance of equipment, keep the normal water level of the boiler when temporarily stopping the furnace.

Specific steps: before stopping the furnace, according to the heating situation, can stop the coal supply 20-30 minutes in advance, grate speed to the slowest, open the ignition door, so that the coal on the grate left the gate 200-300mm, stop the grate rotation, put down the gate, to prevent a large number of cold air into. Let the coal burn out, and finally stop the blower.

(3) Complete furnace shutdown:

Complete shutdown is planned, the general operation 1-3 months should stop the furnace once, stop the furnace pay attention to safety and maintenance equipment, according to the steps of temporary shutdown.

(4) Emergency furnace shutdown:

Warning: once the boiler water shortage accident, do not feed water to the boiler, otherwise, it will lead to the boiler explosion!!

When one of the following situations occurs in the operation of the boiler, the boiler should be stopped immediately and the relevant departments should be notified.

①The boiler water level is lower than the lowest visible edge of the water level gauge;

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- ② Continuously increasing water supply and other measures, but the water level continues to drop;
 - ③ The water level of the boiler exceeds the highest visible water level (full water), and the water level can not be seen after water discharge;
 - ④ Feed water pump all failure or feed water system failure, can not feed water to the boiler;
 - ⑤ The water level gauge or safety valve all fail;
 - ⑥ The pressure gauge set in the steam space is invalid;
 - ⑦ Boiler components damage and endanger the operation personnel;
 - ⑧)The combustion equipment damage, the collapse of the furnace wall or boiler hook rack was burned red and other serious threats to the safe operation of the boiler;
 - ⑨)Other abnormal conditions endanger boiler safety

(5) Steps of emergency furnace shutdown:

A. Stop blowing and then stop blowing.

B. Reduce the furnace gate to the lowest point, quickly eradicate the coal stored in the coal scuttle, and open the ignition door to remove the coal accumulated on the upper part of the grate.

C, with the fastest speed to make the grate rotation, the furnace cinder and coal through the slag eliminator all removed, and finally stop the grate rotation.

D, due to water shortage accident and emergency stop the furnace, it is strictly prohibited to feed water to the boiler, to prevent the boiler from sudden temperature or pressure change and expand the accident. If there is no water shortage phenomenon, can take alternating water and sewage depressurization measures Shi.

X、 Maintenance and maintenance

(1) It is not allowed to smoke positive pressure combustion in the furnace to prevent burning coal gate, fire door, fire door, etc.

(2) If the front arch is found to be broken and fallen off, the furnace should be stopped for repair within 24 hours.

(3) Each shift should check the lubricating oil in the front and rear shaft oil cups, fans and reducer bearing seats of the chain grate, and the oil should be refueled in time in case of oil shortage.

(4) Each fan has violent vibration, should be stopped for inspection, generally caused by internal impeller wear, should be replaced.

(5) It should check whether the slag machine is stuck, and not allow too much slag in the slag bucket.

(6) The bottom of the boiler on the ground can not be water, to prevent moisture corrosion base.

(7) The new furnace should be checked once after 2-3 weeks of operation, and the boiler should be stopped for inspection once in 2-3 months of operation.

Check content:

① Remove the dust on the upper part of the rear arch and the flue on both wings and the dirt on the surface of the pipe on the heating surface.

② Open the smoke box to remove the soot in the pipe, and look at the wear of the pipe. Whether the insulation layer of the smoke box falls off, if any damage should be repaired in time.

③ Whether there is crack or fall off the front and back arch.

④ grate idling, check whether the grate plate is broken, whether the side guard plate is burned out, deformation.

⑤ Open the manhole and hand hole, remove the sediment such as scale in the drum and the box, and check the inside of the pipe on the water cooling wall of the heating surface of the furnace. If the scale thickness is more than 2mm, it should be manually removed or chemically cleaned.

⑥ The driving part of the auxiliary machine is cleaned and refueled.

(8) long-term maintenance method of boiler: there are two dry method and wet method, dry maintenance method should be used for more than a month, wet maintenance method can be used for less than a month:

① Dry maintenance method:

After the boiler is stopped, put cold water, and clean the internal dirt thoroughly. With micro fire in the chamber of a stove or furnace drying (note that do not use fire, and then 10 to 30 mm of massive quicklime (CaO) place the plate installed inside the drum, not make contact with the metal calcium lime, lime, the weight of the drum volume 8 kilograms per cubic meter of the calculation, and then put all the manhole, hand hole, pipe valve closed, checked every three months

At a time. If the quicklime is broken into powder, it must be replaced immediately. Remove quicklime and tray when boiler is in operation again.

② Wet maintenance method:

After the boiler is stopped, the water is put out of the oven, the internal dirt is completely removed, washed clean, and the treated water is re-injected to the full, the pot water is heated to 100℃ so that the gas in the water is discharged out of the oven, and then all the valves are closed. Wet maintenance is not easy to be used in cold climates, in order to avoid damage to the boiler by freezing water.

XI、New CDZL series boiler use characteristics

New CDZL series boiler because of the use of a series of new scientific research results, a new breakthrough in technology, in order to ensure the correct implementation of these characteristics, the use of the boiler is also different from the general, the following aspects hope users to pay attention to the use.

(1) Because the boiler has the characteristics of high furnace heat load and fast temperature rise, so the water quality requirements are also stricter. In general, the use of untreated water or unqualified water into the boiler is strictly prohibited, and the content of suspended solids and sediments in the water is strictly controlled.

(2) the water wall tube in the furnace should be regularly checked, such as surface over-burning, deformation or internal scaling, should be replaced or removed immediately, and timely adjust the heat load of the boiler, to prevent the occurrence of blockage, tube explosion accident.

(3) This series of boiler adopts smoke tube and energy saving furnace arch, so there are requirements on the fan, especially the pressure head and flow rate of induced draft fan. In the flue design, the flue length should be shortened as far as possible, the elbow should be reduced, and the cross-sectional area of the circulation should be increased. If it cannot be avoided, the smoke wind resistance should be calculated, and the pressure head and flow rate of the fan should be checked.

(4) The design of the boiler requires that the boiler itself has a certain dust removal performance. Therefore, the upper part of the boiler back arch, the furnace exit window, the front smoke box two wings of the flue entrance are all ash, often to these parts of the ash.

XII、 instructions

(1) When the customer needs to inquire the technical documents of CDZL type boiler from the manufacturer, the contract number and the general drawing number of the boiler shall be explained.

(2) To inquire the boiler manufacturing quality, the boiler product number should be stated (on the boiler nameplate).

(3) If the boiler is transferred, all the random technical data must be handed over at the same time.