



Luoyang Juxing Kiln Co., Ltd.

National high-tech enterprises and specialized and innovative enterprises

Luoyang Juxing Kiln Co., Ltd.

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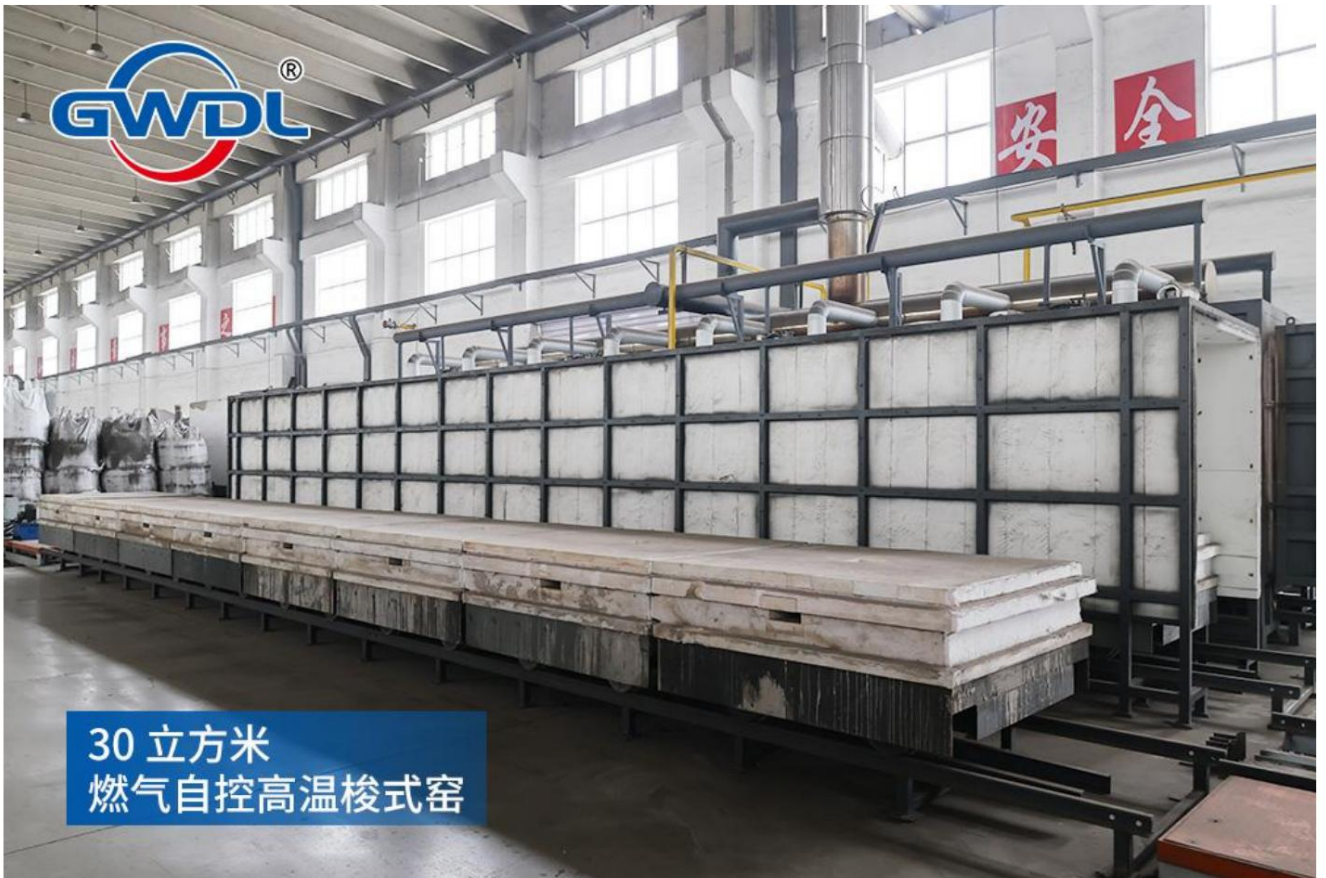
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Part One

Technical solution and quotation for a 37 cubic meter gas-fired automatic shuttle kiln





I. Main Technical Parameters

1. Applications: High-temperature sintering of alumina powder.
2. Total volume inside the kiln: 37m³
3. Estimated production capacity: 35-50 tons
4. Effective loading volume inside the kiln: 16.8 m³
5. Kiln internal dimensions: Length x Width x Height = 14300 x 1740 x 1500 mm
6. Kiln operating temperature: 1250 °C
7. Kiln design temperature: 1300 °C
8. Number of material stacks inside the kiln: 8
9. Number of kiln cars: 24 units (8 inside the kiln, 8 for cooling, kiln) (8 spare units)
10. Kiln door structure: Hinged kiln door structure
11. Burner: high-speed burner
12. Number of burners: 18 units, 230kW/unit;

12. Kiln fuel: Natural gas, QDW>8600kcal/bm³, requiring the main gas pipeline pressure in front of the kiln to be 8000-12000 kcal /bm³.

Pa is stable and adjustable;

13. Maximum instantaneous gas consumption: 130 bm³ /h

14. Firing method: The burners are arranged in two rows, alternating vertically and horizontally, on the side walls of the kiln body. A rotating airflow surrounds the material stack, and the material stack is located at the bottom of the kiln car.

Smoke extraction:

15. Control method: Distributed Control System (DCS). The system can automatically control kiln temperature, kiln pressure, and combustion air pressure.

It includes functions such as flame detection/automatic ignition and interlocking alarm protection for electromechanical equipment;

II. Loading the kiln

The loading of vehicles into the kiln is interconnected and mutually influential with the gas flow within the kiln, significantly impacting the temperature uniformity of the kiln. In actual production, loading should be optimized based on the product specifications and shape, as well as the kiln's internal dimensions, to maximize the kiln's load capacity, minimize temperature differences within the kiln, and improve the product's firing qualification rate.

III. Equipment Description

The kiln consists of a kiln body, a combustion system, a flue gas system, a kiln door and track, and a monitoring and control system.

It consists of several parts.

1. The kiln body

and lining materials meet the requirements of the highest firing temperature. The inner layer is a 10mm polycrystalline alumina fiber blanket, the middle layer is a zirconium-containing fiber module, and the outermost layer is high-quality aluminosilicate fiber insulation. The composite fiber structure provides excellent thermal insulation.

This allows for a reduction in the thickness of the kiln walls, significantly reducing the weight of the kiln and greatly decreasing the kiln's build-up.

Reduced heat dissipation and decreased heat storage result in significant energy savings. The composite fiber structure of the furnace lining enables the shuttle-type...

Kiln furniture has low thermal inertia, which is beneficial for automatic kiln control.

The kiln roof structure is consistent with the furnace wall structure, and the anchors are made of 310S heat-resistant steel, a mature and reliable technology.

The flat roof structure facilitates kiln loading, reduces upper voids within the kiln, and helps minimize temperature differences between the upper and lower parts. Kiln body...

The outermost insulation layer uses 10mm AC650 aerogel material, which is based on glass fiber and...

Prepared using a nanocomposite process, it provides optimal heat preservation below 650°C. In this kiln...

The material effectively blocks hot airflow, and its heat insulation effect at operating temperatures is more pronounced than that of traditional materials, which can greatly reduce heat loss

and improve the comfort and safety of the environment around the furnace.

The kiln body shell is a square steel snap-on structure, and all external decorative panels are powder-coated, resulting in a stable structure.

Low surface temperature and attractive appearance.

2. Combustion System

High-speed temperature-regulating gas burners are selected, and the high burner outlet velocity at low temperatures facilitates the sweeping of gas within the kiln.

The circulation enhances the convective heat transfer in the kiln, uniformizes the temperature inside the kiln, and the temperature difference between the flue gas entering the kiln and the product temperature is small, which helps to reduce cracking of the product at low temperatures.

The burner nozzle is made of 310S material, which has good resistance to high-temperature oxidation. The burner shell is made of carbon steel, and the inner surface...

Applying high-temperature paint can effectively prevent high-temperature erosion of the burner.

The kiln has 8 internal kiln cars and 9 fire channels. Each fire channel is equipped with 2 burners, for a total of 18 burners. They are arranged in two rows on the side wall, and there is an observation hole opposite each burner to facilitate observation of the combustion status of the burners.

Each burner is equipped with a flame detection device. Once the flame of the burner goes out, an audible and visual alarm will be triggered, and the gas solenoid valve will automatically cut off the gas supply. After the operator confirms the situation on site, automatic ignition can be achieved on-site or remotely.

The airflow inside the kiln rotates around the material stack, and the flue gas enters the exhaust port on the kiln car platform through the gaps around and at the bottom of the material stack. Then it enters the underground flue, where the flames inside the kiln swirl and the kiln temperature is uniform.

Combustion air is supplied by a separate high-pressure blower, and the combustion air duct is made of carbon steel to ensure product performance.

Performance-wise, both the gas and air pipelines before the kiln adopt a ring-loop design to balance the resistance of the medium before the burner. All combustion air outlets use flexible connections, and the combustion air fan base is equipped with rubber shock-absorbing pads to reduce fan vibration and noise. To reduce noise, the high-pressure fan can be placed in a separate fan room.

Natural gas is flammable and explosive. Therefore, gas pipelines are equipped with an automatic overpressure safety venting system. When the gas pipeline is overpressurized, the venting system automatically opens the venting valve to release the gas, preventing damage to the solenoid valves and other automatic control components of the automatic control system when the gas pressure is too high, and preventing accidents from happening.

Gas pipeline assembly:



3. Smoke exhaust system

Flue gas enters the lower branch flue of the kiln car through the exhaust vents on the kiln car platform, and after being collected, is introduced into the exhaust fan through the main flue for venting. A thermocouple is installed before the exhaust fan inlet to detect the flue temperature, and a cold air inlet is also provided. The flue gas temperature automatically adjusts the air volume to ensure that the exhaust fan operates at a safe operating temperature.

4. Kiln door and track line

The kiln uses a hinged kiln door, and a car storage line is provided on the outside of the kiln for loading and unloading kiln cars. The door is a hinged kiln door structure, with a compact overall structure, good sealing performance, and space-saving design. The kiln car platform is... The welded steel structure and the design and material selection of the kiln car masonry structure meet the operating temperature and load requirements of the kiln. The seal between the kiln car masonry and the kiln body adopts a tortuous sealing structure. The kiln door and kiln body are sealed with a tortuous seal, resulting in a large sealing depth and a good overall sealing effect for the kiln. The kiln is equipped with a manual trolley, which enables the kiln car to enter and exit the kiln, and can also transfer between tracks. The movement of kiln cars entering/exiting the kiln and the movement of transfer cars.

5. Measurement and Control System

5.1 Kiln monitoring and control point layout: a.

Temperature monitoring and control: 10 thermocouples (9 S-couples and 1 K-couple), distributed on the side wall of the kiln and in front of the exhaust fan, used to measure the temperature at various points in the kiln and flue.

b. Kiln pressure monitoring and control: 1 point c.

Combustion air monitoring and control: 1 point d. Gas

safety monitoring and control: 11 points (9 points for flame, 2 points for pressure) [5.2 Control Scheme](#): To

meet the requirements of the

new intermittent high-temperature gas-fired shuttle kiln in terms of product variety, quality, energy saving, and consumption reduction, a suitable automatic control system is necessary for comprehensive automatic control of the kiln. Sufficient expansion capabilities are also provided in the system to accommodate network connectivity needs for factory-level enterprise management. Therefore, we adopt the internationally recognized distributed control system scheme to implement comprehensive automated control of the kiln.

Since its inception, distributed control systems (DCS) have consistently evolved around the principles of flexible, decentralized functional structure and reliable, safe maintenance. Starting from systems engineering, it employs a hierarchical structure to consider the dispersion of system functions and hazards, thereby improving reliability, reducing equipment complexity and investment costs, and facilitating maintenance and technological upgrades. Its guiding principle is to divide a complex object into several sub-objects, then use local controllers as the first level, directly acting on the controlled object. The second level is a coordinating controller that operates the various local controllers, enabling the subsystems to coordinate and cooperate to complete the overall system task. The third level focuses on optimizing the control and management system. Specifically, in a kiln control system, we decompose it into several subsystems for distributed control, and

then a second-level controller keeps the system operating in an optimal state.

Based on the design scheme of this high-temperature gas-fired shuttle kiln, we will divide the system according to its functions and requirements.

Automatic control is achieved through two subsystems and one control management layer. [5.2.1 Kiln](#)

[Thermal Parameter Control Subsystem](#):

The system achieves multivariate decoupled control and local optimization control of kiln temperature and pressure. [5.2.2 Kiln Electromechanical Equipment Control and Safety Control Subsystem](#):

[This subsystem](#) implements logical sequence control of kiln fans and valves, as well as safety interlock control designed to adapt to the special characteristics of gas fuel. This system ensures the safety of kiln equipment and personnel under normal operating conditions, equipment malfunctions, and human error (non-destructive operation). For example, it can alarm and promptly cut off gas supply when gas or combustion air pressure is too low or kiln temperature rises abnormally. Operation can only be resumed after the fault is cleared and confirmed by the operator. Furthermore, if the operator does not start the exhaust or combustion fans according to the operating procedures, the system will not recognize the operation to ensure safety. Each burner is equipped with an automatic ignition and flame detection device. If the flame goes out at low temperatures, automatic ignition can be achieved. If ignition fails, the system will immediately alarm, and the emergency shut-off valve of the main gas pipe will cut off the gas supply. [5.2.3 Control Management Layer](#): This subsystem enables coordinated management of the two subsystems and provides a human-machine interface. This kiln can operate

multiple firing cycles (maximum of 30 set firing curves), and features a series of mechanical control

actions, temperature control, and pressure control. It utilizes a touch screen, programmable logic controller (PLC), and artificial intelligence instruments.

The system comprises meters, sensors, and electric actuators forming a hierarchical control system. Through touchscreen communication and the development and use of configuration software, a stable, reliable, and comprehensive monitoring and data acquisition system is formed, facilitating centralized factory management. This system can achieve real-time monitoring of the work site and production process, data transmission, real-time processing, firing process selection, recording of internal and external kiln temperature and pressure data, display of historical trend curves, data report generation, alarm information prompts, and other functions, all presented intuitively and vividly through multiple dynamic screens. [5.2.4 Control Methods of Kiln Thermal Parameters](#)

The control of kiln thermal parameters is a complex system characterized by multiple variables, tight coupling, and slow time-varying behavior. Our control method combines system coordination with local control to achieve order reduction and linearization, aiming to unify robustness and optimal control.

Taking the firing temperature control of this kiln as an example: We deploy 9 sets of temperature sensors (thermocouples) to correspond to the 9 burners on the kiln sidewall. The temperature in this area of the kiln is collected and input into the touch screen database. The temperature field distribution inside the kiln is simulated by software. The gas supply (pressure) and combustion air flow of each burner are controlled by the field control station in the distributed control system, which drives the electric valves on site for AI single-loop digital control.

Temperature control is automatic. Temperature signals are transmitted via thermocouples to an AI-powered temperature controller. After fuzzy adaptive computation, a linear signal is transmitted to a linear flow control valve during the low-temperature discharge stage to control the kiln's temperature rise. During the heat preservation and medium-high temperature stages, the control signal is transmitted to the electric valve in the combustion air duct, which controls the kiln temperature by adjusting the valve's opening. Throughout the kiln's temperature control zone, a self-developed zoned balanced stirring rule constraint control scheme is employed. This improves the convection intensity and velocity of the hot air flow within the kiln's temperature field. While ensuring independent temperature control for each unit, mutual constraints between these units are also guaranteed, providing a reliable technical guarantee for minimizing the temperature difference within the kiln. Flow meters are installed on the main gas pipe and the main combustion air pipe to detect the total gas flow and combustion air flow during kiln operation, controlling the combustion process to achieve the optimal air-fuel ratio, thus achieving energy saving and consumption reduction in kiln operation.

The system employs our company's unique control algorithm, which combines low-temperature stage combustion air with a high excess coefficient flow rate proportional combustion control with continuous proportional adaptive fuzzy control during the heat preservation and medium-high temperature stages. (The advantage of the low-temperature combustion air with a high excess coefficient flow rate proportional combustion control method is that it raises the temperature according to the process curve at low temperatures and ensures oxygen-rich combustion in the kiln during the low-temperature stage, resulting in significant energy savings compared to the traditional secondary air temperature-regulating combustion method. The advantage of the heat preservation and medium-high temperature stages is that it ensures optimal air-fuel ratio combustion, and the burner flame ejection speed is fast, thereby achieving uniform mixing of the atmosphere in the kiln and reducing the temperature difference in the kiln.) This allows the system to optimize unit control according to the control objective function predetermined by the operator during operation, providing reliable technical support for industrial production.

The combustion air pressure control before the burner is a separate control loop, consisting of an AI artificial intelligence regulator and a combustion air fan frequency converter. The system automatically and stably adjusts the combustion air pressure according to the preset combustion air pressure through the fan frequency converter, so that the burner can burn stably at different temperature stages, the combustion air fan can operate normally throughout the entire combustion process, and it is also beneficial to save energy.

Kiln pressure control is a separate control loop, controlled by an AI artificial intelligence regulator based on actual measurements inside the kiln. The pressure value is compared with the set value, and the exhaust volume is automatically adjusted by the frequency converter of the exhaust fan, thereby achieving... Automatic control of the entire kiln pressing process. [5.2.5 Control Management](#)

Layer: This subsystem is the core of the distributed control system, comprising two main functions. First, it centrally manages the various independently operating controllers and participates in high-level control calculations within the system. Operators use the centralized control station within this subsystem to view the overall system operation and participate in the control operation of each subsystem. Its database system can store a large amount of valuable system operation data for users, which can be used to modify and improve the system's knowledge base offline to achieve intelligent optimal control. The following explanation uses the control of the firing temperature in a shuttle kiln as an example. Factor values directly acquired via the touchscreen: kiln

temperature and temperature field distribution.

Factors such as kiln

pressure. Factors determined manually: the required firing temperature profile, and the kiln

pressure versus firing time profile, etc.

The above factors are input into the system, and after applying the knowledge base and boundary and condition constraints, the system outputs a control decision. The system is then integrated into the kiln thermal parameter control subsystem, changing their control setpoints and adjusting corresponding regulating valves to ensure stable firing temperature and normal kiln pressure. [5.2.6 Production](#)

Quality Management Database: The control layer includes a comprehensive production quality management database, which can continuously display and record the changes in thermal parameters for each kiln car throughout the entire firing cycle, from kiln entry to exit. This includes temperature curves, pressure curves, and the corresponding operational status of electromechanical equipment. Data can be saved for 3 months and can be backed up for long-term storage. This database facilitates the improvement of the user's comprehensive quality management system. [5.2.7 Alarm and Accident Handling](#)

Functions:

This system should handle a large number of monitoring alarm points, and users can set the alarm limits for the monitored values arbitrarily (see attached table). When the limit is exceeded, the touch screen will use advanced multimedia technology to issue an alarm and bring up the accident handling screen, while recording the accident handling process.

Serial Number	Alarm Name	Alarm Level		chain
		Major faults	Minor faults	

01 Gas pressure lower limit	ÿ		Start the kiln shutdown interlock
02 Low air pressure limit 03 Other	ÿ		Start the kiln shutdown interlock
low pressure limits 04 Combustion	ÿ		Sound alarm
fan major malfunction 05 Smoke	ÿ		Start the kiln shutdown interlock
exhaust fan major malfunction 06	ÿ ÿ		Start the kiln shutdown interlock
Comprehensive electrical			Start the kiln shutdown interlock
malfunction 07 Kiln		ÿ Audible alarm	
temperature overheating		ÿ Audible alarm	
09 Thermocouple failure 10 Instrument air supply pressure low limit		ÿ Audible alarm	
11 UPS Failure 12	ÿ		Sound alarm
Other Failures		ÿ Audible alarm	

5.2.8 Report Output Function:

This system can print production reports according to the user's required format, with printing methods including instant printing, Scheduled printing, class reports, daily reports, etc.

5.2.9 User-friendly interface:

This system utilizes the principle of human-computer interaction and fully leverages the advanced capabilities of current touchscreen graphics technology. This creates a user-friendly interface. Kiln operators can follow the Chinese prompts on the touchscreen screen. The system can be operated without the need for specialized electrical personnel. For safe operation, the system is equipped with input... The instruction security check can correct for erroneous operations. Additionally, operations are divided into two levels. Modifications to some process parameters, such as temperature profile settings, pressure settings, and control parameters, are required. You must enter the corresponding password to operate the system, ensuring its secure operation.

IV. Kiln Design Features

1. The composite fiber structure used for the kiln lining can reduce the thickness of the kiln walls and significantly reduce [burden/stress].

The lighter kiln significantly reduces the kiln's heat storage capacity, thus minimizing heat loss and providing [advantages].

Significant energy-saving effect.

2. The outermost layer of the kiln insulation uses **10mm AC650** aerogel material, which is based on glass fiber.

The substrate, prepared using a nanocomposite process, provides optimal thermal insulation performance below 650ÿ.

As a result, this material effectively blocks hot airflow in this kiln, allowing for operation at permissible temperatures.

The insulation effect at temperatures below a certain degree is more pronounced compared to traditional materials, significantly reducing heat loss and providing better insulation.

This improves the comfort and safety of the environment surrounding the furnace.

3. The traditional method of leaving expansion joints in kilns has been changed, which has improved the sealing performance of the masonry.
4. The kiln door and the kiln body adopt a tortuous sealing structure, which has a large sealing depth and good sealing effect.
5. The combustion system uses high-speed, high-temperature-adjustable burners with a large adjustment ratio, arranged in a staggered pattern to improve airflow circulation within the kiln.

The small temperature difference between the flue gas outlet temperature and the product temperature during the low-temperature stage helps reduce the defects of cracking in low-temperature products.

6. Using under-platform exhaust is also a measure that helps improve the temperature uniformity inside the kiln.
7. All combustion air fans and exhaust fans are controlled by frequency converters, ensuring stable combustion air pressure and kiln pressure.

Maintain normal combustion in the burner.

8. A linear regulating valve is used to control the air-fuel ratio, making the adjustment range and output linearity more precise.

Assure.

9. Distributed control systems (DCS) have powerful control functions, are easy to configure, and are reliable in operation.
10. Considering the flammability and explosiveness of natural gas, the natural gas pipeline is equipped with a venting solenoid valve before each burner.

All kilns are equipped with flame detectors and gas solenoid valves, and are interlocked with PLCs to ensure kiln safety.

Safe operation of the furnace system.

11. This kiln can be manufactured at Juxing Factory, shipped as a whole, and assembled on-site, or it can be installed at the client's location.

Factory-site construction allows for flexible delivery.

12. Safety standards comply with both EU **CE** certification and US **NFPA 86** standards. V. Kiln Quotation, Payment Terms, and

Schedule:

(I) Price quote for a 30 cubic meter gas-fired self-controlled high-temperature shuttle kiln and supporting equipment: RMB 1,230,900 (including...)

(Freight, taxes, and installation costs, etc.) See the table below for details: Attachment: Price List for a 30 cubic meter high-temperature automated shuttle kiln

Table (Luoyang Guoju, 1250) -- 2 sets of kiln cars

Serial Number	Materials	Specification	Quantity	Unit	Total Price	Remarks
I.	Refractory and thermal insulation materials		1 set		25.01	
II.	Metallic materials		1 set		20.74	
III.	Auxiliary equipment					
	1. Combustion fan	JWC-11A	1			1.51 Huayue/Lihua Company
	2. Exhaust fan	Y4-73, 8D	1			2.13 Huayue/Lihua Company
	3. High-speed gas burner (230kW/piece)					Taiwan, 18 sets, 4.88 (presumably referring to a price range or unit), Shanming/Shi Neng/An Ran
	Pipeline insulation		1 set		1.57	Juxing Company
	5. Manual trailer		1			Taiwan 5.50 Torch Star Company
IV.	Measurement and control system					

			1 set	18.05		
V. Costs of Standard Parts and Auxiliary Materials			1 set		3.57	
VI. Kiln construction cost			1 set	4.85		
VII. Mechanical installation			1 set	8.85		
cost VIII. Electrical installation			1 set	of tables	2.45	
cost IX. Transportation			1		2.25	
cost X. Commissioning			1		2.20	
service cost XI. Travel			1		3.50	
expenses XII.			1		4.10	
Management fee XIII. Taxes: 13% Value Added Tax			1		7.93	
	Total - 10,000 yuan				110	

Note:

(1) This quotation is valid for 30 days;

(2) This quotation does not include kiln foundation treatment materials and construction;

(3) This quotation does not include gas supply, pressure reduction, and metering systems for natural gas, etc.

(4) This quotation does not include kiln car support bricks, kiln flooring and other kiln furniture materials.

(5) Kiln delivery time: 65 days

(ii) Payment method

Item No.	Payment Node	Payment percentage	remarks
1. Deposit	After the contract was signed.	30%	
2. Payment before the main	equipment arrives on site.	40%	Ship in bulk
3. Cold-state acceptance payment:	After kiln installation and before commissioning.	20%	
4. After the kiln is heated and the	payment is received.	5%	
5. Warranty deposit, warranty period	expires after 1 year.	5%	

(III) Schedule

Item No.	Schedule	Remark
1. Provide basic diagram	Within 15 days after signing the contract and receiving the deposit	concrete floor 200mm <small>The above is not required.</small>
2. Within	35-55 days after signing the material procurement and factory prefabrication contract and receiving the deposit.	
3. Shipping	Within 5-7 days after receiving payment for the goods	

4. On-site installation, masonry, and cold-pressed goods	within 20-40 days after arrival at the site.	
5. Heat adjustment and delivery	After on-site installation	

Appendix 1: Scope of Liability for Both Buyers and Sellers of Gas-Fired Shuttle Kilns 1:

ÿ indicates the responsible party; "-" indicates outside the scope of responsibility.

project	Buyer's and Seller's Remarks	
Refractory materials for the kiln body (including masonry)	ÿ Design, fabrication, and installation	
steel structure of the kiln body	1ÿ Design, production, and installation	
Kiln front piping (gas and air ducts)	Design, fabrication, and installation.	
Kiln temperature measuring device and temperature control system	Design, fabrication, and installation	
Cables and cable trays	ÿ One	The cable used from the power cabinet to the kiln control cabinet
Smoke exhaust system	1ÿ Directly exit from the top of the workshop building	
Transportation (Luoyang to Buyer's Factory)	1. ÿ Unloaded items and move them to the first floor of the installation site.	
Buyer unloads and moves goods on site	ÿ One	A forklift (3 tons) is required for unloading and moving the goods to the installation site.
On-site installation and trial operation, one-time project. (Electricity, gas, water)	ÿ	ÿ The buyer needs to have a designated contact person participate.
Construction at the handover point	ÿ One	According to the seller's requirements, it was delivered to the kiln.
On-site 2nd project (Electricity, Gas)	1ÿ	
Materials used in the two on-site projects	1ÿ	
Electricity, gas, water, etc. during trial operation	ÿ One	
Kiln furniture required for trial operation	ÿ One	
Samples during trial operation and sample loading and unloading	ÿ One	
Kiln maintenance during trial operation	ÿ One	
Daytime debugging	ÿ	ÿ Setting equipment operating parameters and establishing relevant temperature profiles for acceptance testing. (Excluding the commissioning of production conditions)

Night surveillance	ÿ	ÿ	Alarms or anomalies occurred during nighttime debugging and operation from 17:00 to 08:00. In order to prevent damage to parts, the equipment needs to be stopped immediately, or the components should be removed. For single-issue repairs, the issue details will be reported to the seller's on-site team the following day. Debugging personnel
Installation and handling tools	ÿ		The buyer is responsible for the necessary handling tools during installation.

Appendix 2: Scope of Liability for Both Buyers and Sellers of Gas-Fired Shuttle Kilns

ÿ indicates the responsible party; "-" indicates outside the scope of responsibility.

project	Buyer's	Seller's	Remarks
Kiln foundation (below ±0 part)	ÿ		One includes foundation embedded parts, etc.
Refractory material for underground flue of kiln (Including masonry)	ÿ	-	
Preparation of installation site	ÿ1		Before equipment and materials are brought to the site, the ground must be properly maintained and vehicle access roads must be available.
Ground repair	ÿ		If the ground is damaged during installation
On-site management	ÿ1		Site maintenance and dust control; when site maintenance or dust control measures are required, relevant materials... Materials and construction shall be the responsibility of the buyer.
Goods storage	ÿ1		The placement of goods on site and the safe management of items, especially valuables, must be properly secured. Entrusted to a designated person for supervision
Waste disposal	ÿ	ÿ	The seller's subsequent handling of construction waste after placing it at the location designated by the buyer.
Kiln Operation Manual			1 copy of Chinese instruction manual
Official application service	1ÿ		If the buyer requires the seller to provide necessary information during the application process, the seller shall... Will assist in providing
Reserves and consumables	ÿ1		To avoid affecting on-site construction within the seller's responsibility, the seller shall prepare the necessary materials. The type, quantity, and post-construction disposal of spare parts and consumables shall be the responsibility of the seller. Fang decided
Offices and restrooms	ÿ		Free use of rest areas and restrooms for the seller's staff
Performance testing and acceptance	ÿ	ÿ	During performance testing, the buyer's designated representative should accompany the seller's debugging personnel. conduct
Unresolved matters			If a specification sheet does not mention that all items are the responsibility of the buyer, then the buyer is responsible for all of them.

Appendix 3: Design Scheme Drawings

Figure 1. Process layout diagram GWDL30--00

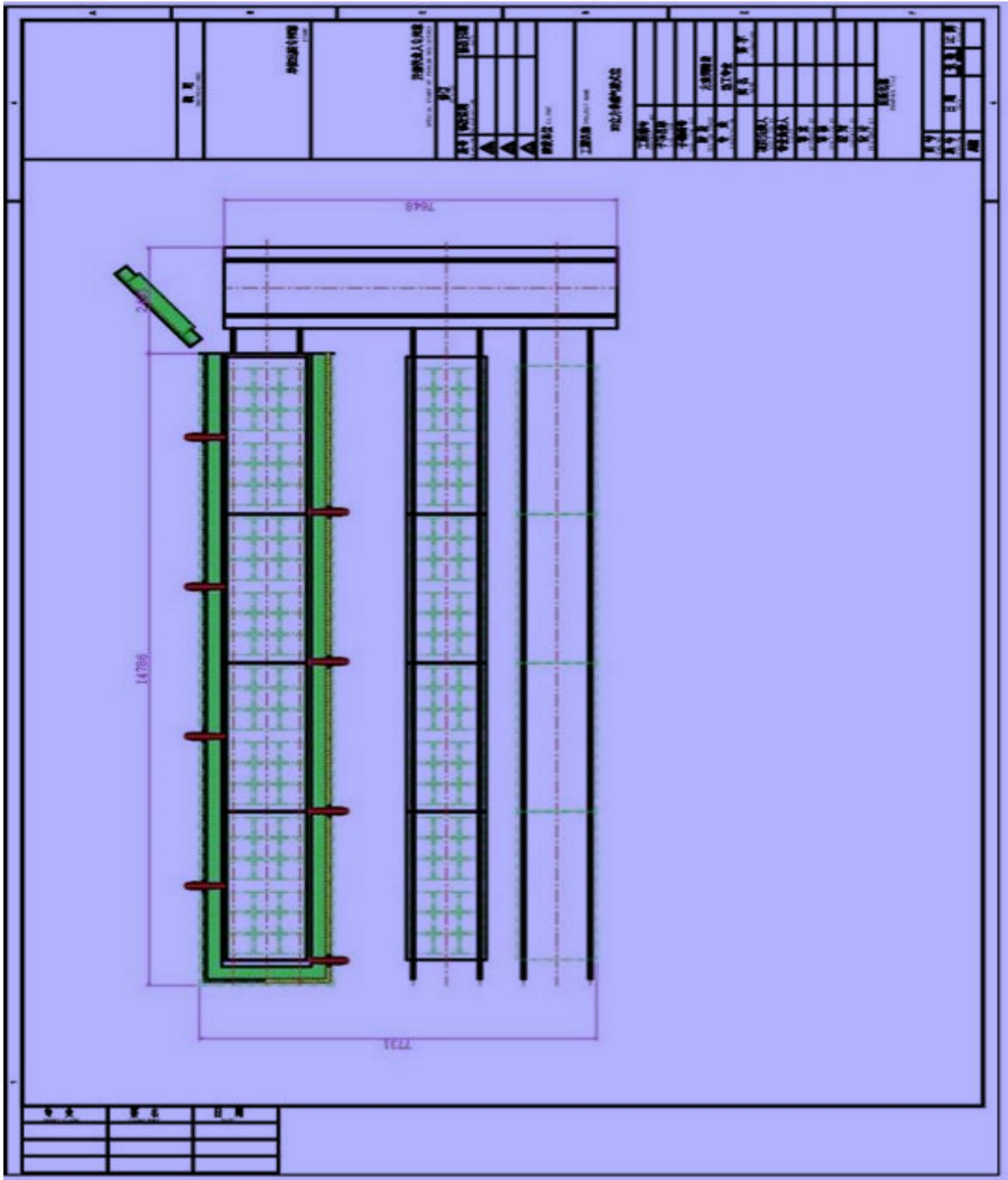
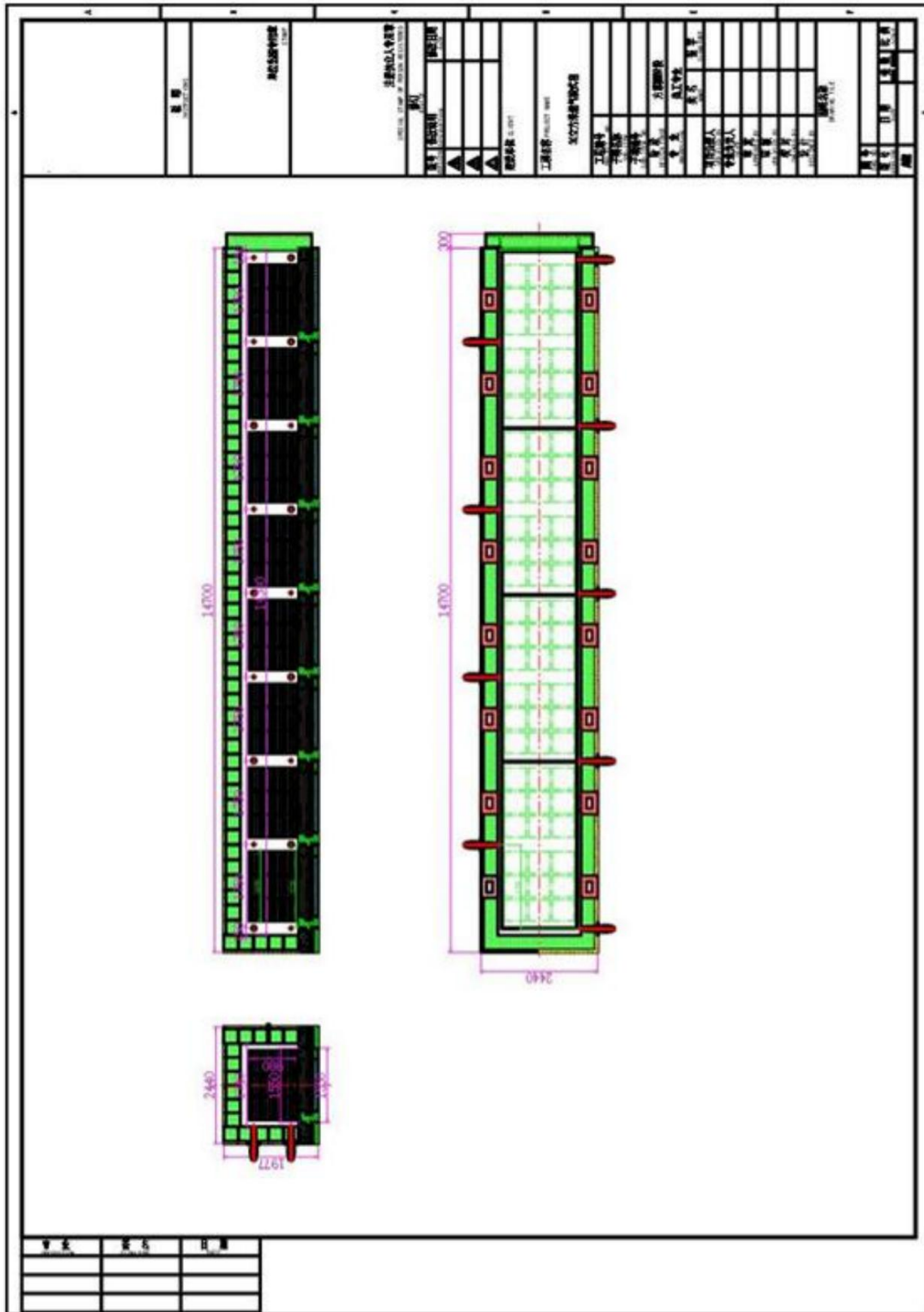


Figure 2. Scheme 3 View 30SSY-01



Part Two

Intellectual Property Statement

The design concept, technical solution, design sketch, customer list, equipment photos, and cost of the 30 cubic meter gas-fired self-controlled shuttle kiln, issued by Luoyang Juxing Kiln Co., Ltd. on February 12, 2025, are exclusive, non-public, and intellectual property-related technical documents proposed by Luoyang Juxing Thermal Energy Engineering Co., Ltd., and all rights are reserved by Luoyang Juxing Thermal Energy Engineering Co., Ltd.

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Thank you to get in touch with us!

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