LDMY-1.35 circular high vacuum roll to roll coating equipment

Equipment overview:

The maximum coating width of LDMY-1.35 high vacuum roll to roll continuous coating equipment is 1350mm, and the maximum roll diameter isΦ850mm; the maximum winding speed is 720m/min. This machine is a double chambers structure. The upper chamber is for winding, and the lower chamber is for coating; both upper and lower chambers are equipped with low temperature cryogenic capture coils. The equipment is at the leading level in China, and it is one of the new generation of roll to roll coating equipment developed on the basis of the original roll to roll coating equipment to meet the further needs of users

This equipment has the following characteristics：

High-performance vacuum system configuration, faster pumping rate, excellent performance, and economical benefits

Large observation window and flash evaporation observation window are designed for easy observation and operation.

The automatic substrate feeding unit is designed, which is easy to operate and more humanized.

The secondary tension cooling roller is added to ensure the accuracy and reliability of the roll to roll coating drive control.

Single-sided suspension evaporation, using 2 expander rollers and 1 pre-expander roller.

The roll to roll system adopts Siemens motor PLC control system and technology, constant tension control mode.

The operation system adopts advanced Siemens touch screen for operation and control.

The roll to roll drive control has the function of calculating the roll diameter and coated substrate length, and realizes machine shutdown according to the roll diameter or coated substrate length.

The top of the evaporating crucible is spring-loaded and loaded in a staggered arrangement, with high

evaporation efficiency, good uniformity, safe and reliable clamping, and convenient and quick boat replacement.

The temperature control of the crucible adopts integrated thyristor voltage regulation technology, which has stable performance and high reliability.

Each group of wire feeding is separately controlled by a micro motor, and the wire feeding speed can be adjusted independently.

Equipped with a large-area low-temperature cryogenic capture device, which can quickly and effectively capture water vapor and improve the efficiency of vacuum pumping.

An infrared camera monitoring device is installed on the unwinding side of the chamber to display the unwinding substrate in real time.

It can realize the functions of automatic vacuuming, automatic boating and automatic coating.

Equipment composition:

The equipment is mainly composed of vacuum pumping system, vacuum chamber, substrate winding system, aluminum evaporation system, water cooling system, electrical control cabinet, evaporation operation table and other parts.

Vacuum system:

The vacuum working chamber of the equipment is large and the coating gas load is high, which requires the vacuum system to have a fast pumping speed. In the upper chamber, a two stage roots pump is used as the main pump, which has a large air pumping capacity at 10^{-1}Pa, and timely pumps out the attached water vapor and other media released as the substrate is opened; the lower chamber uses a new K series high vacuum oil diffusion pump as the main pump, which has high vacuum limit, wide working pressure range, high pumping speed and fast start-up, ensuring high vacuum and effective pumping speed during coating. The 2X-15 rotary vane pump is used as the holding pump of the main pump to save energy. The backing pump is a mechanical pump. The entire

vacuum pumping system is equipped with excellent performance and is economical.

Vacuum chamber:

The vacuum chamber body is a cylindrical horizontal structure of φ2400×2173mm. It is divided into two working chambers: the upper substrate winding chamber and the lower evaporation coating chamber. A long observation window is set on the upper part of the front of the chamber to observe the winding status of the substrate and the quality of the film layer in the working state; A long strip-shaped flash observation window is set at the lower part of the front to observe the working status of the wire feeding and evaporation system; Two rectangular observation windows are set on the top for observing the substrate flattening condition; three circular observation windows are set on the upper part of the back of the chamber for observing the unwinding condition. One end in the axial direction of the chamber body is a connecting flange with the same diameter, which is connected to the transmission winding system, and the other end is a special-shaped interface, which is connected to the wire feeding evaporation system. Meissner tubes are installed on the inner walls of the upper and lower working chambers, which are refrigerated by the low-temperature condensation system, and the residual water vapor molecules in the system are captured at high speed during condensation coating, which can reduce the high-vacuum pumping time by 20% to 50%, and improve the vacuum chamber working environment, improve the adhesion of the film layer, and ensure the quality of the coating. The double-chamber structure design separates winding and evaporation, and configures vacuum systems with different requirements, so that a large amount of gas released from the substrate is first discharged from the substrate winding chamber without affecting the vacuum degree of the evaporation coating chamber; The work of the coating chamber will not pollute the transmission mechanism of the winding chamber. It not only guarantees the coating quality, but also reduces the cost, saves energy, shortens the pumping time, and improves the production

Roll to roll system:

Winding system is the core component of continuous web coating equipment. Stable transmission and constant line speed are the key points, while increasing the speed and solving the substrate alignment and wrinkle are the difficulties. The system is mainly composed of winding and unwinding mechanism, tension measurement and control mechanism, coating roller and speed control mechanism, tracking guide and auxiliary components, etc. The entire transmission system is installed on a movable platform, which is convenient for entering and exiting the vacuum chamber as a whole, and is convenient for loading and unloading substrate operations and maintenance. It adopts SIEMENS AC servo motor tension control technology, which has high sensitivity and fast response speed. It can be preset and digitally displayed, with accurate control and convenient operation.

Evaporation system:

Each group of wire feeding independent actuators is designed, which are individually controlled by micro-motors, which can not only adjust the total speed, but also adjust the speed independently. Adjust the amount of wire feeding to ensure the uniformity of the coating. The design of the evaporation unit should comprehensively consider the various conditions of the equipment operation index, and the optimal selection of the evaporation parameters is very important. The evaporation distance and evaporation interval are the main factors affecting the coating uniformity, thickness, splash, speed, etc. The top of the evaporation crucible is designed with a spring top holding method, and the temperature control of the crucible adopts the integrated thyristor voltage regulation technology, which has stable performance and high reliability, ensuring evaporation efficiency and uniformity.

Water cooling system:

The water cooling system consists of two parts: evaporative cooling and vacuum pump cooling. Each set of evaporating electrodes and vacuum pumps has an independent sufficient cooling pipeline design. There is a water cut-off alarm device on the water inlet pipe, and the return water of each return water pipe is clear and considerable.

Electric control system:

The electronic control operating system is the command organization for the operation of the equipment, responsible for the collection, analysis and processing of information. The vacuum system adopts PLC program control mode, which is divided into manual and automatic control, which is safe and reliable. The application of digital closed-loop tension control technology makes the transmission synchronous, accurate and reliable; The voltage, current and wire feeding speed of each group of crucibles can be adjusted independently or collectively, and all of them have numerical display, which is very intuitive. The touch screen displays the detailed working status and process of the system, and the automatic control and humanized design meet the operation requirements of the coating process and reflect the perfection of the equipment design.

Other requirements:

The heating power can be adjusted by the operator. The water cooling baffle of the evaporation source can be "opened" and "closed". There are length meters, tension, speed and other displays. Imported bearings are used for winding, unwinding and coating rollers. Each wire feeding group is individually controlled by the motor, which can be adjusted both centrally and separately. The speed of aluminum wire feeding is displayed. The whole machine has a water cut off alarm. Except for evaporative cooling water pipes, other cooling water pipes shall be purchased and installed by users on site. Winding transmission control has functions such as calculation of roll diameter and coated film length, and shutdown according to roll diameter. A camera monitoring device is installed on the unwinding side of the chamber to display the unwinding substrate in real time.

Coating roller freezing system:

Equipped with 1 cooling and heating exchange unit. The working medium of the unit is ethylene glycol, and its refrigeration temperature is 25℃ to -20℃. Moreover, the unit can quickly perform cold and heat exchange to ensure the needs of the coating and meet the needs of rapid reheating before the coating roller is exposed to the atmosphere

after the coating is completed. It has an independent control panel and can realize remote control.

Low temperature cryogenic capture device:

Equipped with 1 low-temperature cryogenic capture unit: the capture area is 2.0 ㎡, and the cryogenic working temperature is ≤-120℃. High-speed capture of residual water vapor molecules in the system during condensation coating, shorten the high vacuum pumping time, improve the working environment of the vacuum chamber, improve the adhesion of the film, and ensure the quality of the coating.

substrate requirement :

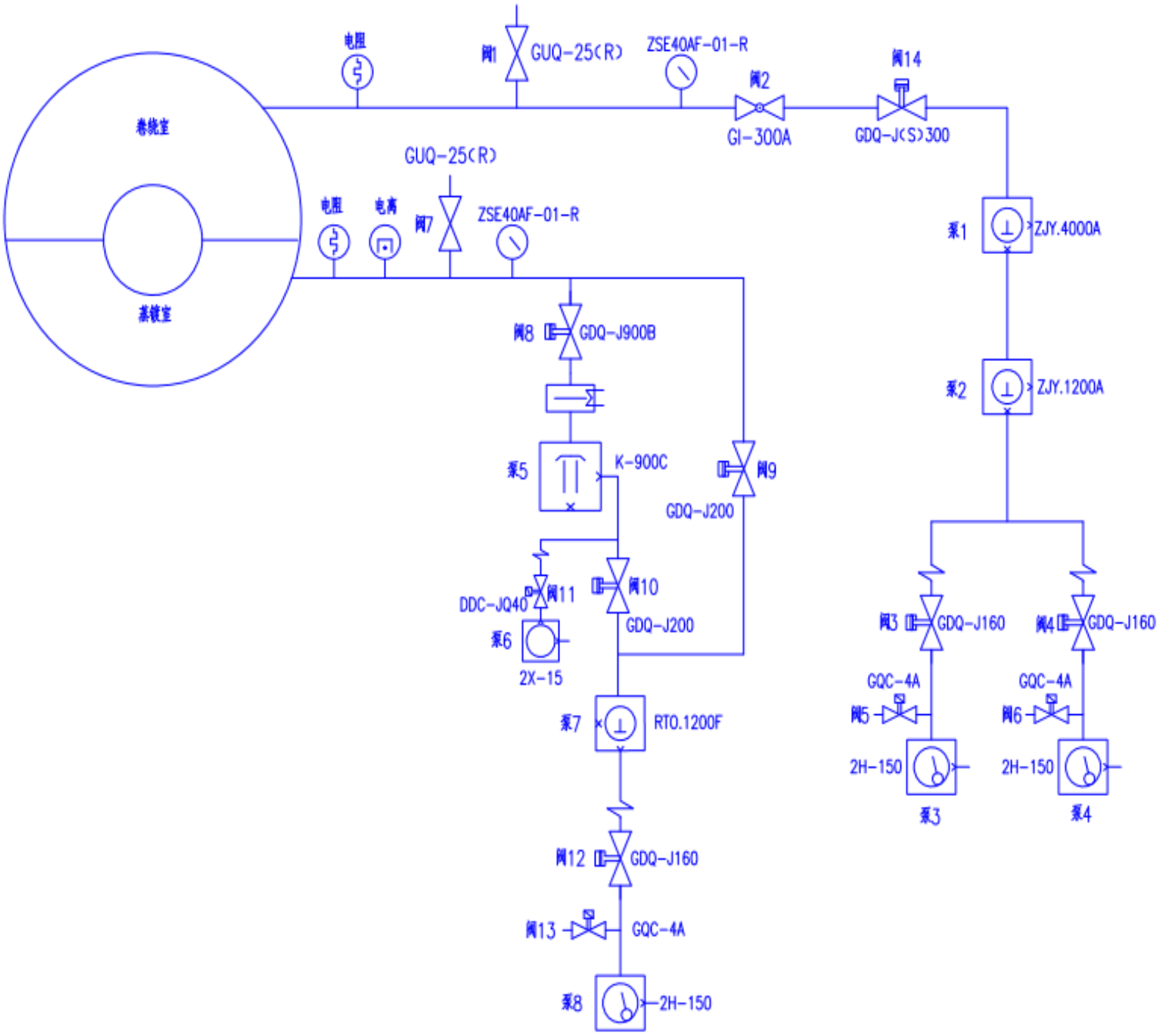
substrate requirement: (The required substrate should be imported or Chinese famous manufacturers, suitable for vacuum coating products), PET thickness: 4.5~6μm , PP thickness: 4.5~6μm , substrate width≤1350mm , roll diameter ≤Φ850mm. coating quality : Alignment: ≤±2mm

Coating adhesion:

Bonded with 3M brand tape without falling off. The surface quality of the film layer: the aluminum layer is bright and uniform, without scratches, wrinkles, or obvious dark and bright stripes.


小心碰到


小心碰到


卷绕室
蒸镀室
电阻
阀1
GUQ-25(R)
ZSE40AF-01-R
阀2
GI-300A
阀14
GDQ-J(S)300
泵1
ZJY.4000A
泵2
ZJY.1200A
GUQ-25(R)
电阻
电离
阀7
ZSE40AF-01-R
阀8
GDQ-J900B
泵5
K-900C
阀9
GDQ-J200
DDC-JQ40
阀11
阀10
GDQ-J200
泵6
2X-15
泵7
RTO.1200F
阀12
GDQ-J160
阀13
GQC-4A
泵8
2H-150
阀3
GDQ-J160
阀4
GDQ-J160
GQC-4A
阀5
GQC-4A
阀6
2H-150
泵3
2H-150
泵4

浙江富埒进出口贸易有限公司
ZHEJIANG FULIE IMPORT&EXPORT TRADING CO.,LTD

B DISTRICT,ROOM 1401,BLOCK A,WENZHOU BUILDING,189 XINGYE ROAD, WUYUAN STREET, HAIYAN COUNTY,JIAXING,ZHEJIANG

INVOICE

To Messrs:

Azaran douman sahand
National cod:10200374147
Address:Iran-tabriz-jade azarshahr -shahrake rajayi jonoobi-30metri dovom-novin plast
Telfax:00 98 4134210815
Telfax:+98 413 4211194
Mobile:00989144144011

Date: **2023 Nov 01**
Invoice No: **FULIE20231101**

Transport Detail:	CFR : BANDAR ABBAS		Terms of Payment:	T/T	
Marks & Number:	Description of Goods & Quantity			Unit price	Total Amount
N/M		N.W (KGS)	G.W (KGS)	RMB	
	LDMY-1.35 circular high vacuum roll to roll coating line	45000	45050	1,400,000	1,400,000
	HS CODE: 84798990				
	Freight price				70,000
	TOTAL:			RMB	1,470,000

1: name of the company ：ZHEJIANG FULIE IMPORT&EXPORT TRADING CO.,LTD

2: company address：B DISTRICT,ROOM 1401,BLOCK A,WENZHOU BUILDING,189 XINGYE ROAD, WUYUAN STREET,HAIYAN COUNTY,JIAXING,ZHEJIANG

3: Beneficiary A/C NO：33090150201000004675

4: NAME OF THE BANK: Zhejiang Tailong Commercial Bank

5: BANK ADD: No.188, Nanguan Road, Luqiao Taizhou Zhejiang China 318050

6: Remak：Pls Do Fit Both SWIFT BIC(CITIUS33 AND ZJTLCNBH)When Remittance