

三、 machine details and usage:

main machine:

1、 machine structure:

1-1、 Material: Q235

1-2、 Structure: welded by steel, annealed, processing by precision CNC machine

2、 inlet:

2-1、 inlet position: on the left of machine。

3、 axis:

3-1、 material: 40Cr

3-2、 precision tempered , ensuring removing the inner force, enhance the hardness of parts。

4、 transmission parts: adopting NSK bearings, transmission parts with timing belts, other parts with flat belts。

5、 drawing drum:

5-1、 Adopt ceramic plasma drum, 8 layers 4 pcs, last drawing drum 1 pcs, drums in horizontal , easy inserting wires。

5-2、 drawing drum fixed by conical screw, easy loading and unloading;

6、 die base:

6-1、 from 2 to 16th is cast parts, easy inserting wires

6-2、 drawing die base can be adjustable。

7、 lubricant:

7-1、 The drawing capstan and die are full immersion in drawing oil, in order to increase the cooling effect(the drawing oil tank and transmission case isolation, don't string oil)

3. annealing parts technical parameter

3.1、 usage

This part working with double wire drawing part, continuous annealing $\phi 0.25\sim 0.70\text{mm}$,

3.2、 main structure

Vertical type, welded by steel plate, annealed。

3.3、annealing parts adopting steal protection, annealing chanel and cooling chamber

Filling with steam or cooling water, preventing copper wire become black。

3.4、annealing driving: connecting to main machine by flat belt。

3.5、main technical parameter

NO	name	unit	data
1	Annealing wire	mm	Φ0.25-Φ0.70mm
2	Annealing speed	M/min	1600
3	Annealing current	A	350 DC
4	Annealing voltage	V	65 DC
5	Annealing wheel diameter	mm	Φ200
6	Annealing type		Touching circuit annealing, 2 or 3 sections annealing according wire size
7	Cooling water need	m ³ /h	25
8	Steam needed		≥0.4Mpa 15kg/h
9	Compress air need	m ³ /h	≥20
10	Compressed air pressure	MPa	0.4-0.6

3.6、A polishing die is installed on the annealing side, independent motor drive, speed automatically track the speed of the main engine.

4、 tension and take-up:

4.1 tension part

The tension controller is composed of a guide wheel set, a swing bar, a signal feedback device and a sensor. The device provides a deviation signal electrical control system, automatically adjusts the speed of the take-up motor after the operation of the electrical system PID, and achieves the synchronous function with the host speed.

4.1.1、 type: balance arm

4.1.2、 guiding wheel: ceramic aluminum wheel。

4.1.3、 tension monitoring: precision indicating。

4.1.4、 wire breaking monitoring: approaching switches。

4.2、take-up:

Adopting single shaft and screw fixed type(top cone type), with spools loading and unloading parts。

4.2.1、main technical parameter:

Take-up range: $\Phi 0.25-\Phi 0.70\text{mm}$ (based on main drawing wires)

Max take-up speed: 1800 m/min according to main drawing speed

take-up motor : 4KW (AC)

spools size: $\phi 300*\phi 217*290\text{mm}$

$\phi 400*\phi 215(\phi 270)*305\text{mm}$

(or according to client sizes)

4.2.2、full seal covers, with checking windows, to watching working condition。

4.4.3、with tools to load and unloading spools。

5.control: 3 phase 5 wires; 415V, 50Hz

adopting PLC+HMI control (can display working condition and errors), main drawing machine and take-up machine adopting inverter control, annealing parts adopting digital controller, annealing voltage according to drawing speed, with wire length setting、wire breaking and error occurring machines stopping functions。

6、customers requirement

1. customer providing air pipe water supply and pipes and other connecting wire cables。

2. total installation power 45KW

3.compressed air $P\geq 0.4\text{Mpa}$

4. Testing machines dies: customer providing

7 others;

1、machine color; according to client demand

2、machine operation: right hand machine (facing to machine, left inlet, right take-up)

DT18 main parts brands

NO	name	brand	original	remarks
1	Main bearing	NSK or NTN and SKF		
2	INVERTER	INNOVANCE		
3	MAIN MOTOR	WN MOTOR	AnHui	
4	PLC	INNOVANCE	SHENZHEN	
5	HMI	DELTA	Taiwan	
6	ANNEALING CONTROL	ETD	America	
7	AIR SWITCH	SHILIN	TAIWAN	
8	BUTTONS AND RELAYS	SCHNEIDER	FRANCE	
9	APPROACHING SWITCH	TEND	TAIWAN	

