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Φ1000PLC Cantilever Stranding Machine

1. Equipment use:

WH-XD1000PLC cantilever high-speed single-twisted cable forming machine is mainly used for high-precision core wire twisting and taping. Applicable to: high-frequency wires, data wires, power wires, communication wires, coaxial cable covered core wire twisting and center tape (or side tape) completed at one time.

2. Equipment composition:

- (1) Inlet eye mold + meter counting rack 1 set (standard configuration)
- (2) PLC electrical control box: 1 set (standard configuration)
- (3) Center wrapping machine: 1 set (standard configuration)
- (4) Φ1000 cantilever single winch host: 1 set (standard configuration)
- (5) Two-axis active pay-off stand: 1 set (optional)
- (6) Delivery tools and toolbox: 1 set (gift)

3. Main features:

3.1 Application: Used for the assembly of multi-strand core wires such as control wires, communication wires, high-frequency wires, power wires, shielded wires, and thin copper wires into cables.

3.2 Style: The main machine adopts cantilever structure, no traction design. Rotary rotation, small inertia, high speed, stable operation. 3.3 Production capacity: This machine is fast, and the production efficiency is twice that of the vertical type; the equipment performance, configuration design are scientific, and the stranding quality is high. 3.4 Tension: ball screw + power moving cable arrangement; active take-up precision tracking tension is small, and the tension is stable from empty to full. 3.5 Twist pitch: Computer pitch, width, start, run, stop, etc. are all set by touch screen + PLC. The pitch is stable and stepless adjustable, the twisted cables are neatly arranged, the performance of the whole machine is stable, and the operation is simple.

3.6 configuration:

(1) Body structure: It is welded by reinforced low-carbon steel. After grinding, drilling, annealing and aging treatment to eliminate internal stress, it is processed and formed by a precision boring machine. (2) Body accessories: The cantilever is made of new imported aluminum alloy material, the combined type is light in size, does not deform, and has a high speed. The wire-passing path is equipped with steering guide wheels to avoid eccentricity and reduce cable bending. Other accessories are processed by precision forging positioning quenching and tempering, and have been calibrated for accuracy. (3) Power accessories: all adopt well-known and stable brands at home and abroad, with

stable performance.

- ① Motor: Dongguan/Global
- ② Gear Motor: Taiwan/Shengbang
- ③ Bearing: Japan/NSK
- ④ Magnetic powder clutch: /STEKI
- ⑤ Brake: Both the take-up and the main machine adopt pneumatic booster

hydraulic disc brakes

⑥ Differential gear: Planetary structure made of imported aluminum alloy, the take-up speed can accurately track the speed change of the host

⑦ Wire guide wheel: Imported aluminum alloy, CNC machining, surface spraying porcelain treatment, to avoid tolerance caused by temperature difference

⑧ Loading and unloading reel: manual hydraulic lifting system, lifting efficiency and reducing failure.

3.7 Protection:

(1) The main engine is embedded with a fully enclosed screen shield and built-in sound insulation cotton to reduce noise.

(2) A powerful exhaust fan is installed inside to effectively reduce the temperature.

(3) Equipped with lifting limit protection, thread clamping device, and delay clamping protection after shutdown.

3.8 style:

(1) Direction: put left → close right

(2) Power supply: 380V/50HZ

(3) Color: royal blue (or customized according to requirements)

4. Description of equipment components:

(1). Incoming line eye mold + meter counting rack:

The box-type parallel structure is equipped with a meter counting device, and a wire clamping device is installed at the wire inlet end. After the equipment is shut down, the wires will be clamped after a delay, so that the wires after being cabled will not retreat.

(2). PLC electrical control box:

① Control part: Inovance PLC + brand electric It adopts programmable PLC controller + frequency conversion speed control + human-machine interface automatic control, and the main operating parameters are automatically tracked and displayed. Set the number of meters, choose automatic stop when the meter reaches the limit, and stop protection when the wire breaks. ② Electric brand: ① Inverter/PLC/touch screen: Shenzhen/Inovance ② Main motor: Dongguan/Global ③ Intermediate relay: Japan/Omron ④ Contactor: Taiwan/Shihlin ⑤ Switch/button/indicator light: Taiwan/Tiande ⑥ Meter meter: Taiwan/Yangming

(3). Center wrapping machine:

- ① Applicable materials: cotton paper, Mylar, aluminum foil, mica tape
- ② Direction: left, right, "S" or "Z" can be switched
- ③ Maximum speed: 2500 rpm
- ④ Turntable: aluminum alloy $\varnothing 250\text{mm} \times \text{width } 10\text{mm} \sim 30\text{mm} \times \text{inner hole } 50\text{mm}$
- ⑤ Center height: 1000mm
- ⑥ Tension: Magnetic powder tension control, adjustable tension
- ⑦ Tape replacement: equipped with a storage rod, no need to break the wire when changing the tape
- ⑧ Brake: 1.5KG single plate brake
- ⑨ Operation mode: motor + synchronous belt drive, frequency conversion speed regulation and host linkage, stable performance and easy operation

(4)、 Main parameters of $\Phi 1000$ cantilever single stranding machine:

- ① Applicable core wire: $\Phi 0.5 \sim 5.0\text{mm}$
- ② Main motor: 18KW motor + frequency control
- ③ Stranding outer diameter: $\Phi 3 \sim 25\text{mm}$
- ④ Take-up motor: 5.5KW motor + differential
- ⑤ Twisting distance: $30 \sim 400\text{mm}$
- ⑥ Arrangement motor: 2.2KW deceleration motor
- ⑦ Maximum speed: 600PRM/min
- ⑧ Spool lifting: manual or electro-hydraulic lifting
- ⑨ Take-up reel diameter: $\Phi 1000\text{mm}$
- ⑩ Pay-off reel diameter: $\Phi 400 \sim 630\text{mm}$
- (11) Direction: left and right "S" and "Z" adjustable
- (12) Approximate equipment weight: 5000KG

(5). Two-axis main pay-off frame: optional (RMB25000/set)



(6). a set of toolbox:

Contains 1 adjustable wrench, 1 set of hexagon wrench, 1 screwdriver, 1 needle-nose pliers, 1 grease gun.

(7). Reference pictures:

