# 无锡马尔利科技有限公司

Wuxi Marley Machinery Technology Co., Ltd.



#### Introduction of LSAWpipe equipment

无锡市马尔利科技有限公司 地址: 无锡市锡山区安镇街道宏业东路402-6号 电子邮件: ELI@MARLEYTECHS. COM 联系电话: +86 13291236678(微信同号) WUXI MARLEY TECHNOLOGY CO., LTD. ADDRESS: ADD: NO. 26 JINGRUI RD. INTENSIVE INDUSTRIALPARK,

XISHAN DISTRICT, WUXICHINA. EMAIL: ELI@MARLEYTECHS. COM

TEL: +86 13291236678 (SAME NUMBER ON WECHAT)



Pipe Tube Machine Machine Precision Tube Machine

Industrial Tube Machine



### CONTENTS

1 Overall Program
Overview

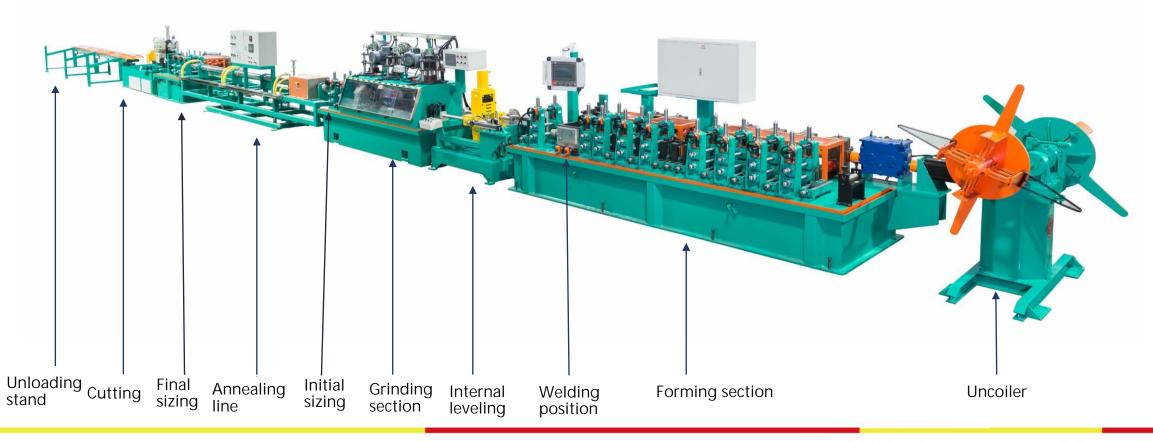
3 Equipment Configuration

2 Production process

4 Enterprise situation



(1) Equipment Reference Chart





#### (2) Unloading stand

- 1. The equipment adopts internal leveling and on-line annealing process, which can meet the production of welded pipes for water pipes, automobiles, petroleum, chemical industry and so on.
- 2. the equipment combines the pipe welding process, automation control technology, advanced testing methods to improve production efficiency and product quality.
- 3. The equipment adopts quick-disassembling structure for horizontal rollers, which greatly improves the speed of moldchange and reduces the waste of time caused by mold change.
- 4. The equipment adopts linkage lifting structure to improve the speed of installation and debugging, while parallel adjustment can reduce the damage of horizontal roller bearings to extend the service life.



#### (3) Product Showcase









#### (4) Product Showcase







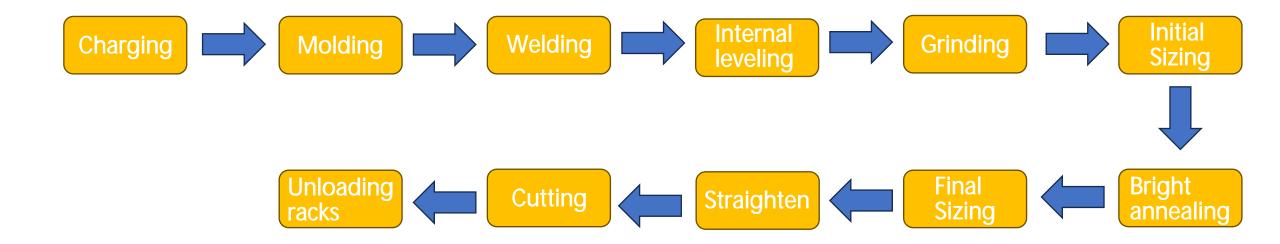




Wuxi Marley Machinery Technology Co., Ltd

### 2. Production process

(1) Process





### 2. Production process

#### (2) Technical Parameters

| Model                | Horizontal axis diameter | Vertical axis<br>diameter | Welded pipe range | Wall thickness | Power   | Grinding<br>head set | Straightening frame |
|----------------------|--------------------------|---------------------------|-------------------|----------------|---------|----------------------|---------------------|
| Precision small ST40 | Ф40mm                    | Ф25mm                     | Ф6тт-Ф38тт        | 0.25-1.5mm     | 5.5KW*2 | 3*3kw                | 2PCS                |
| ST40                 | Ф40mm                    | Ф25mm                     | Ф9.5mm-50.8mm     | 0.25-2.0mm     | 7.5KW*2 | 3*3kw                | 2PCS                |
| ST50                 | Ф50mm                    | Ф30mm                     | Ф25.4mm-Ф76.2mm   | 0.4-2.5mm      | 11KW*2  | 3*3kw                | 2PCS                |
| ST60                 | Ф60mm                    | Ф40mm                     | Ф50.8mm-Ф114mm    | 0.5-3.0mm      | 15KW*2  | 3*3kw                | 2PCS                |
| ST80                 | Ф80mm                    | Ф50mm                     | Ф76mm-Ф168mm      | 1.0-4.0mm      | 22KW*2  | 3*4kw                | 2PCS                |
| ST100                | Ф100mm                   | Ф70mm                     | Ф114mm-Ф219mm     | 1.5-4.5mm      | 30KW*2  | 3*5kw                | 2PCS                |

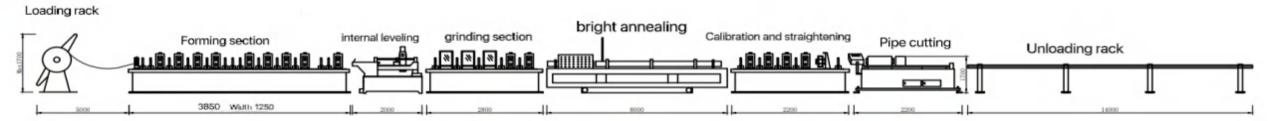


### 2. Production process



### (3) Unit arrangement

Schematic diagram of the plane arrangement of the "body" (the following arrangement is for reference only, the actual please refer to the technical parameters)



# K J V HVHVHVHVVHVHVHVH V' V' HV LZ VDVDVDHVHV Bright annealing HVHVHVH TQ1 TQ2 V

Notes: K: Uncoiler J: Guide frame H: Horizontal roll frame V: Vertical roll frame V ': Welding protection box/welding roll frame D: Weld seam grinding unit TQ: Calibration unit LZ: Internal levelling



(1) Equipment Uncoiler



ST small 40 (ST40) Equipment Uncoiler



ST50 (ST60) Equipment Uncoiler



ST80 (ST100) Equipment Uncoiler



#### (2) Equipment body



The body of the machine is welded with steel plate, the panel is made of the whole zigzag, and the inside of the bed is welded with reinforcing bars into a meter structure and the welding between the table top and side panels, reinforcement boards, and so on is smooth and stable. The wlding surface is flat and stable, and the welding seam is full and continuous. After the bed body welding is completed, the whole aging treatment is carried out to eliminate the residual stress and deformation and then finish machining is carried out to ensure that the precision of the equipment is stable.

The body of the machine is firstly roughened by CNC three-axis gantry milling machining center, and then finely milled to process the positioning steps, positioning keyway 《GBT 1096-2003》, positioning holes, etc. All one-time positioning processing ensures that the parallelism and flatness of the processed surface is  $\leq 0.03$ mm, and the arithmetic average deviation of the surface contour is  $\leq 1.6 \mu m$ , which lays an important foundation for the consistency of the center line of the unit.



### (3) Equipment main motor



Motor reference diagram

The main motor brand of the equipment is Siemens Beder motor or Shandong Furi motor (frequency conversion), the motor is a three-phase asynchronous AC motor, rated voltage 380V, frequency 50HZ (exported to foreign countries can be customized) rated speed 1650r/min. The corresponding power size according to the different models of pipe making machine required torque to choose.

#### (4) Equipment gearbox



1248 gearbox reference diagram

The 1248 gearbox is directly connected to the motor. The gearbox is one of the core components of mechanical transmission and can adjust the torque during the transmission process of the pipe making machine. The 1248 gearbox is divided into 4 gears, namely "1", "2", "4", and "8". The gear number is the transmission ratio corresponding to each gear.



#### (5) Reduction gearbox



Gearbox reference diagram

The reduction gearbox is connected to the gearbox to increase the torque again and then connected to the horizontal axis frame through the drive shaft to provide power for mold forming.



### (6) Feed frame



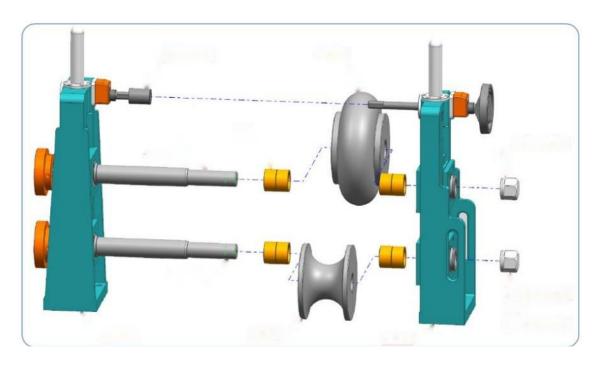
ST40 (ST50) feed frame



ST60 feed frame



#### (7) Equipment Horizontal Axis Racks

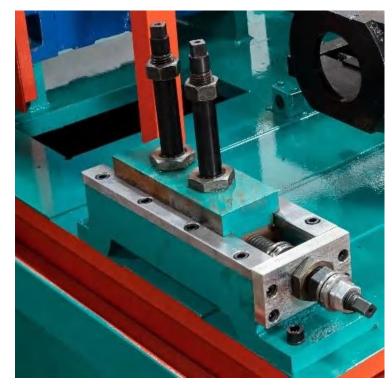


Horizontal axis rack reference diagram

The main function of the Horizontal Axis Rack is to mount the Horizontal Axis Forming Die.



#### (8) Equipment vertical shaft frame



Vertical shaft frame reference drawing

The main function of the vertical shaft frame is to install the vertical shaft forming mold.



### (9) Equipment Welding



Torch Rack Reference Drawing

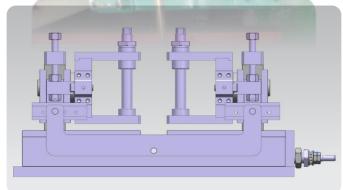


Welding Protection Box Reference Diagram



#### (10) Deskewing device





Deskewing device reference diagram

Anti-torsion mechanism can be adjusted by adjusting the lifting screw to drive the rotation angle of the rotating roller shaft, driving the rotation of the mold to determine the position of the mold, as a way to eliminate the inner leveling through the mandrel tube displacement jitter when the inner leveling. (Note: large pipe does not need to correct the device).



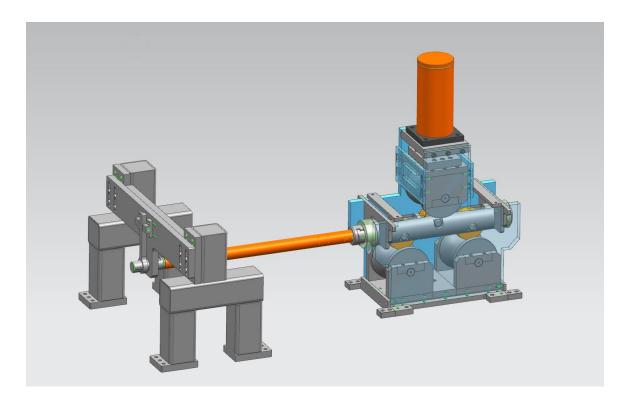
#### (11) Internal leveling



ST small 40(ST40, ST50) Internal leveling



**\$**T60 Internal leveling



ST80 Internal leveling

### (12) Equipment grinding



Equipment grinding part of the reference diagram

The new closed four-guide column automatic grinding, the use of dust-proof and waterproof grinding head motor, in addition to the grinding wheel without other wearing parts, low cost of use, the direct drive of the grinding head motor to avoid the traditional pulley drive do power loss, as well as high failure rate, noise, vibration, stability, etc., thus saving a lot of It also prolongs the service life, saving a lot of time and maintenance cost.

Fully automatic grinding control system automatically compensates the feed according to the loss of the millipede wheel and maintains the quality of the weld grinding without manual intervention. It is also possible to switch to manual mode for debugging the grinding position.



#### (13) On-line annealing



On-line bright annealing equipment for on-line heating of welded tubes to 600 -1050 , followed by rapid cooling under gas protection, which is installed between the initial sizing and calibrating processes.

On-line annealing reference diagram



### (14) Equipment Straightening Rack

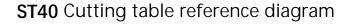


Straightening frame reference diagram

Straightening head (Turkey straightening head), is installed in a predetermined position through the straightening frame and the center of the horizontal plaque and standing plaque alignment, straightening head in the vertical and horizontal direction of adjustment, you can also adjust the worm so that the worm gear rotation angle to straighten the straightening cage around the center of the pipe rotating to the appropriate angle, through the adjustment of the roller distance between the rollers and the product (tube) radial in different directions to apply the appropriate pressure, in order to play the role of straightening the smoothness and straightness of the steel pipe. The straightening rollers can be changed according to the specifications of different tubes.

### (15) Cutting table







**ST80** Cutting table reference diagram



(16) Unloading frame





ST40 (ST50) Unloading frame

ST60(ST80) Unloading frame



### 4. Enterprise situation

### (1) Company Profile



Wuxi Marley Machinery Technology Co., Ltd. specializes in R&D, design, production and sales of metallurgical equipment and cooling and heat exchange equipment. It has been committed to closed cooling towers, stainless steel pipe making machines, high-frequency welding pipe making machines, pipe polishing machines, and pipes. Cutting machines, steel pipe inner wall polishing machines, embossing machines, internal leveling devices , online bright solution annealing equipment, steel slitting machines, steel leveling machines, cold rolling mills, and other production supporting equipment. The production equipment has high cost performance and quality assurance The warranty period is 5 years, and consumable parts are provided free of charge during the warranty period. Welcome to consult and communicate.

# 4. Enterprise situation

#### (2) Equipment shipment







# 4. Enterprise situation

#### (2) Equipment shipment







#### Dalian Customer Case







#### Case of Jiangmen, Guangdong







#### Hebei Customer Cases







#### Shandong Customer Cases







#### Shandong Customer Cases







#### Shandong Customer Cases







#### Chongqing Customer Cases







#### Jiangsu Customer Case







#### Taizhou Customer Case





