Fully automatic metal band sawing machine man-machine interface

Operating Instructions

Version of the program: C.06
The machine interface from German design. Produced By Chinese high-tech enterprises Company——Beijing Kulun Tongtai Automation Software Technology Co LTD. Equipped with embedded WIN CE operating system, and The industrialized high standard hardware design. It is the world's most advanced human-computer dialogue platform. Running beautiful shape, friendly interface, simple operation, high-speed response. With the programmable logic controller (PLC), grating linear displacement sensors (encoders), To provide you with the most advanced automatic metal band sawing machine automation control system.

☆ Before using our machine, please read this instruction, In order to more clearly grasp the machine characteristics and operating essentials, and use the product correctly and safely.
Do not touch operation with gloves! Gloves have a large contact area, the wrong touch operation so that the machine Malfunction may result in personal injury or property loss.

Do not take a the screwdriver hard object touch operation! A hard object exposure may lead to premature failure of the touch panel, and easy to produce erroneous operation of the machine malfunction may result in personal injury or property loss.

Do not cut or other liquids spilled on the touch panel, touch screen internal short circuit can cause damage if a little liquid please take dry sweeping movements cloth.

Do not make sawdust splashed down on the touch panel, will cause scratching the touch panel, and if the subject to the splashdown material please clean up.

Do not position the machine in the sun for a long time can be irradiated, intense exposure may lead to rapid aging, touch panel damage.

Do not use wrenches, screwdrivers, pliers and other tools placed on the machine operator panel, touch panel may cause bruising.
Foreword

This description is only instructions interactive interface. Read this manual should be built on the machine works, have some understanding of the basis for the structure and cutting process, So read carefully before this whole random "machine instructions", Combined with the relevant sections to understand the instructions. any inadequacies in the present note, vexed, if puzzled, please contact the manufacturer related services personnel consulting.

The lower left corner of the screen, "Home" button to switch back and forth for each function screen.

Total stop: its role is to prohibit all the actions of the oil pump motor output and eliminate all of the current work status.

The lower part of the screen area is mainly used for dynamic parameter display.

Saw wire-speed: The machine is equipped with saws rotation sensing device, device status of the host operating system's high-speed detection signal, By the operator of the programmable controller, real-time dynamic display saw with line
speed: m / min; To enable the operator to determine whether the saw band speed to meet the production requirements of the cutting process. Note: This feature is essential Saw wheel diameter "parameter to set status monitoring interface normal use.

Rack position: The machine is equipped with a grating linear displacement sensor material platform moves back and forth here can be real-time dynamic display the current position of the loading bay. This feature allows the operator to always observe the size of the rack position conducive machine feeding locate the fault quickly ruled out.

★The lower area of the screen for each interface common functional areas described above applies to each function interface, and the future will not repeat them.

Communication connections: communication connection is normal for a man-machine interface with a programmable logic controller (PLC), the red light blinks normal, otherwise not normal, you should check with the PLC communication cable.

Clock Display: display the date and time information, such as the actual local clock deviation, touch the clock display area, the pop-up as shown on the right window, enter the correct information and press the "Clock modify OK" button to complete the correction.

The screen complete control of the the device oil pump motor start and stop.

The middle of the screen on the oil pump motor start stop button. Because the
The main screen completes the workpiece data set in the automatic mode. Adjustment and monitoring, as well as the start and stop operation of the automated process.

Enable automatic cutting function must first set good to be machined workpiece dimensions (Unit: mm), and the number and strobe. Workpiece data (size, number of pieces) can be set separately to five groups, always cutting by "first group" to the fifth group of the order of. A group of data is skipped, the group currently being processed in the automated process there will be a red box displays, indicating activation.

Input values: touch data input area, the man-machine interface will automatically pop up a numeric input keyboard (right diagram) can enter the required data. Note the numerical input range, beyond the range of human-machine will not be accepted.

The saw kerf compensation: This is used to correct the saw band with thick or other mechanical small deviations are caused by the size error. Size too small to enter a larger value, the size is too large to enter a smaller value; specific
values to be adjusted according to the situation (generally 1.2-2.0).

**Data processing Size:** Enter the size of the workpiece to be machined (Unit: 0.1 mm).

**Processing number:** enter the workpiece to be machined, the number of data (unit: piece), automatic cutting process to set the value associated with the completion of the cutting of the workpiece constantly decreasing.

**Accumulated Number:** This dynamic display of corresponding size workpiece current cumulative number of processing, Note that when this group a finished processing activated again still will continue to accrue can be used in the production of statistics. For more information on the group's cumulative number of cleared press the "clear", system pop-up interface (right diagram), press the "confirm" cleared, press "Close" to return.

**Data Strobe:** Strobe button in front of the data set is very critical role, when the size of the processing of more than one group, the number of machined parts, such as data input must press the front button to strobe effect (shown by × becomes √), such as pressing the button again (by √ becomes x) cancel the election General Clauses.

**Machinery back to the origin:** mechanical homing "button is pressed, the
Machine will process action——

Machine automatically each function member to move the initial preparation position, i.e. machine origin; prepare for automatic sawing. Mechanical homing, this button will automatically appear as "mechanical back the original medium. Automatically start: Press the "Start" button to start the process of automatic cutting machine will be good according to the set parameters automatically complete the accurate positioning to multiple loop process control by cutting from the feeding specific workflow please refer to the next page icon automatically.

Automated work flow chart
It should be noted that should start automatically before following aspects: (1) the machine has been running a "mechanical homing operation, (2) have a good machine to run automatically set the operating parameters screen options basic parameters, (3) is set the number data good machining dimensions and machining of the workpiece to be machined and strobe. The lack of any one machine will not work properly scheduled processes.

Automatically pause: press the "auto pause" the machine will pause (as workpiece positioned to achieve in the current workpiece after sawing continue processing pause) To cancel pause again start automatically.

※ To enable manual must first press the "Manual confirmation button (automatically display" manually
enabled "), or other button will be invalid.

The screen is to be completed by the operation of all the independent action of the machine, generally for material feed head sawing operation.

Saw wheel operation for the motor drive, and other actions are hydraulically driven. Note that some action and action between the interlock, interlock, limit protection, listed as follows:

1, only the current the clamp tight solenoid valve, saw wheel motor to run self-locking, otherwise run jog.

2, saw wheel motor, clamp tight "after clamping tight", "workers into", "up" with self-locking function, other points are moving.

3, before the clamp tight "Caliper loosen after clamp tight" after clamp release the "workers into the" fast down "and" up "and" feeding "and" Return Material "are interlocked.

4, when the workers into the (cutting material), before clamp release "can not be executed.

5 after vise clamping fast feeding "," quick return materials, "slow return materials" can not be executed.

6, when the saw frame feed to the lowest position, the lower limit switch action, saw frame automatically be converted to rise.

7, when saw shelves rose to the upper limit switch position, the limit switch action saw frame stop.

The position is cleared: In manual mode, the system allows the machine operator to manually
cleared the current rack position, press the "position is cleared. System pop-up interface, (right diagram), press the "confirm" is cleared, press "Close" to return. This feature can be used in the operation manual work mode with simple materials sawing positioning.

☆ ☆ Must set all the parameters of the screen before the automatic cutting.

The vise clamping time before and after the vise clamping time (automatically): Set in the mechanical the homing and automatic work mode (unit: seconds).

Vise release time (automatically) before and after vise release time value (unit: seconds): Set in the mechanical homing and automatic work mode.

Should be noted that the vise clamp time set value than the vise to release the set time value to be large, allowed small.

Fuel tanks feeding stroke: the long dimension of the workpiece, the system will automatically material feeding several times to reach the size of the set. In this setting, a single feed stroke generally set to the effective stroke of cylinder (Unit: mm).

Positioning buffer stroke: the machine has a buffer device to obtain a more accurate sizing. RMA positioned is divided into two sections - rapid return
material positioning, slow RMA positioning, so stroke required in positioning the end of the period of operation of the buffer means, in this setting the distance of the buffer means actions.

Saw wheel diameter saw with wire-speed "data set: so functional screen can be displayed properly, it is necessary to set up correctly here saw wheel diameter parameters can be used normally.

Fault zone detection function: This function is optional, "×" when turned off, "√" when the feature is turned on; generally recommend opening function. The system has broken with a detection device, the system will be based on a set interval time value judgment, saw Belt Movement When stuffy car, the cassette or off with the system to shut down, eliminating more damage.

No material detection function: This function is optional, display × when the function is turned off, "√" when the feature is turned on. The system has no material detection device (presence or absence of this device manufacturers customized according to user requirements), and when the material shelf materials processing is completed, the system will RMA process sensor state judge expected to be current sawing material removal is completed, the system will stop the follow-up of automatic processes.

Automatic shutdown feature: This feature is optional, "×" when turned off, "√" when the feature is turned on. Close the hydraulic system, the total stop of the machine when the operator leaves the machine or for a long time does not make any unnecessary loss of the hydraulic system, power-saving and automatic timing system will reach the set time value.
The screen completes the brightest switch signal status, the action output status indication and the monitoring of process parameters.

Facilitate production operators real-time monitoring of the state of the machine, but also conducive to quickly determine the production debugging and machine failure, check.

Switch detection signal: the machine limit switches and detection switch status indication (green) lights when the switch action.

Motor control: motor working status indication (red) lights when the motor work.

Solenoid valve control: solenoid valve status indication, solenoid valve action when lit (red).

The current state of the system: the current system is in standby or in manual mode, auto mode, homing mode, the operator at a glance.

Cumulative time of the system: from the power-on boot after continuous working time machine.

Processing groups: automatic cutting processes, ongoing workpiece are several groups of data.
The remaining part of the current group: shown in the automatic cutting process, the ongoing processing data group also remaining number of workpiece to be machined.

Under the group processing group: automatic cutting process, the upcoming next workpiece are several groups of data.

The group set number: displays the the workpiece number of automatic cutting process, the next set of upcoming data processing group setting.

Completed prompt.

This screen will not appear in the normal working hours, all the data set group workpiece is completed when the data set, This screen pops up to prompt the operator to enter new processing size and number of processing and touch the screen anywhere to close the screen.

Fault alarm screen

When the the saw wheel thermal overload relay action, stop the machine all the work and this screen pops up, Warning screen will automatically turn off the screen troubleshooting tips.

When the oil pump thermal overload relay
action will stop the machine all the work, turn off the oil pump and this screen pops up, troubleshooting screen prompts warning screen will automatically turn off.

Function is activated when the detection of the fault zone, stop the machine all the work, and this screen pops up. The troubleshooting screen prompts. Touch the screen anywhere to turn off the screen.

When the material shelf materials processing is completed, the system will pop up this screen, and the current in the workpiece sawing after stop automatic workflow. Touch the screen anywhere to turn off the screen.

Three machine has no operating stop function, the hydraulic system and the whole system pops up this screen instructions to stop working. Touch the screen anywhere to turn off the screen.
<table>
<thead>
<tr>
<th>No.</th>
<th>Failure phenomenon</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Touch the oil pump start and stop function button, the machine does not respond</td>
<td>◆ touch screen on the back of the communication cable loose, re-plug and hand tighten.</td>
</tr>
<tr>
<td></td>
<td>(&quot;communications link&quot; light is not flashing)</td>
<td>◆ electric box programmable controller (PLC) POWER RUN indicator is not lit, please refer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to the PLC manual troubleshooting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>◆ Failure touchscreen body, Depot Repair</td>
</tr>
<tr>
<td>2</td>
<td>Boot screen appears normal, can not switch to the other interface</td>
<td>◆ touch panel damage, Depot Repair.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>◆ Touch panel failure, Depot Repair.</td>
</tr>
<tr>
<td>3</td>
<td>After power-black, no display</td>
<td>◆ touch screen on the back of the power plug is loose, re-plug in and press tight.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>◆ electric box programmable controller (PLC) POWER indicator does not light, please refer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to the PLC manual troubleshooting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>◆ Faulty touch screen body, Depot Repair</td>
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</tbody>
</table>

As in accordance with the above description of the problem still persists, please call our Technical Support Hotline :40016-10010, or call the phone vendors other service personnel.

Please read the instructions in the "Notes" section and effective implementation

Please note that daily cleaning and maintenance of the touch screen, can greatly
reduce the probability of failure of the touch screen!