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折弯机培训确认单

Training Confirmation Listing of Automatic Aluminum Spacer Bending Machine

安装调试及故障排除与保养 Installation、Debugging & Troubleshooting、Maintenance

培训内容 Training content: 安装与调试 Installation&Debugging	操作员签字 Signature of operator	主管签字 Signature of supervisor
<p>料架与机头的安装 Installation of the rack and the head: 先将机头水平摆放,然后将料架移动到机头部分的左端,距离 40—50mm。左右两段对应的料槽内各放一段 1300-1500mm 的直的铝条,调整料架部分使之对接整齐 First discharge the nose part into position and adjust the level. Then move the rack to the left end of the nose section, at a distance of 40-50 mm. A pair of straight aluminum strips of 1300-1500 mm are placed in the corresponding troughs of the left and right sections to make the butt joints neatly aligned 将机器摆放到位调整水平 Put the machine in place to adjust the level 将料架移动到机头部分的左端,距离 40—50mm Move the rack to the left end of the head section at a distance of 40-50mm 左右两段对应的料槽内各放一段 1300-1500mm 的直的铝条调整料架部分使之对接整齐 A pair of straight aluminum strips of 1300-1500 mm are placed in the corresponding troughs of the left and right sections to</p>		

<p>make the butt joints neatly aligned</p>		
<p>料架铝条放料，插件如何插接 Material rack aluminum strip discharge, plug-in how to plug: 料架可以同时放置四种规格的铝条，从外到内分别是 6A,9A,12A,12A 以上。最里面一组料槽为共用料槽 The rack can be placed with four specifications of aluminum strips at the same time, which are 6A, 9A, 12A, 12A or more from the outside. The innermost group of chutes is a common chute. 插头要插到中间位置，插头要与铝条平行或稍低，不能上翘，否则影响接料 The plug should be inserted in the middle position, the plug should be level with the aluminum strip or slightly sag, not upturned, otherwise it will affect the material</p>		
<p>料架如何更换料槽 How to replace the trough: 将触摸屏调整到矩形工作模式，按动右箭头标示将机器里面的铝条传送出来，右手按动机头部分左端的“换料”按钮，料架固定气缸松开后左手拉动料架移动到对应的料槽位置，右手松开按钮。手动将铝条送到传送皮带位置 Adjust the touch screen to the rectangular working mode, press the right arrow to mark the aluminum strip inside the machine, and press the “refueling” button at the left end of the motive head part with the right hand. After the rack is fixed, the left arm is moved to the corresponding rack. Position the chute and release the button with your right hand. Manually send the aluminum strip to the conveyor belt position 送料架感应器的作用 Usage of the feed frame sensor: 感应料槽里面是否有铝条，当没有铝条时且铝条离开了接料的左侧感应开关，勾料铝轮从料架上勾料 Whether there is aluminum strip in the induction trough, when there is no aluminum strip and the aluminum strip leaves the left side sensor switch of the receiving material, the aluminum strip is hooked from the rack.</p>		
<p>接料感应器的作用与调节 The role and adjustment of the receiving sensor: 接料位置有两个感应器，当铝条末端离开左边一个感应器时减速，离开右侧感应器时停止，感应距离可以通过调节固定螺丝位置和调节感觉距离的调节螺丝 There are two sensors in the receiving position, which will decelerate when the end of the aluminum strip leaves the left sensor, and stop when leaving the right sensor. The sensing distance can be adjusted by adjusting the position of the fixing screw and adjusting the sensing distance</p>		

<p>U 型感应器的作用 The role of U-type sensor: 只有当 U 型感应器有信号时机器才会工作，传送皮带才会压紧，当机器状态正常但不工作时检查这个感应器是否有信号 The machine will only work when the U-shaped sensor has a signal, the conveyor belt will be pressed, and the sensor will be signaled when the machine is in a normal state but is not working</p>		
<p>同步带更换和调节松紧的方式 Timing belt replacement and adjustment of the elastic way: 皮带分为上下两部分，上部分为从动部分，下部分为电机带动的主动部分，下部调节时需要将电机的四个固定螺丝松开，将上面的两个，顶丝顶紧即可，上部分调节需要将右侧的同步带轮两次固定螺丝松开，调节右侧的涨紧螺丝 The belt is divided into upper and lower parts, the upper part is the driven part, and the lower part is the active part driven by the motor. When the lower part is adjusted, the four fixing screws of the motor need to be loosened, and the top two and the top wire can be tightened. The upper part of the adjustment needs to loosen the right side of the timing pulley twice to fix the tensioning screw on the right side.</p>		
<p>8.同步带轮的安装与调节 Timing pulley installation and adjustment</p>		
<p>9.同步带主板上下两部分的安装方式 Synchronous installation of the upper and lower parts of the motherboard</p>		
<p>锯片的更换方式 How to replace the saw blade: 用内六角固定锯切左侧螺丝孔,用扳手拧锯片右侧的螺丝,安装时注意锁紧.螺丝是反丝的，装新锯片时注意锯齿方向 Use a hexagon socket to cut the left screw hole and use a wrench to screw the screw on the right side of the saw blade. When installing, pay attention to the locking screw is the reverse wire. Pay attention to the saw tooth direction when installing the new saw blade.</p>		
<p>11.刀头的更换 Replacement of the cutter head:</p>		
<p>12.刀头位置和深浅的调节 Tool head position and depth adjustment:将左图中的两个螺丝松开将刀头座向上移动，刀头压下是变浅，向下移动时，刀头压下变深，调节完毕将螺丝锁紧 Loosen the two screws in the left figure and move the cutter head upwards. The cutter head is pressed down. When the downward movement, the cutter head is pressed down and the screw is locked. tight.</p>		
<p>13.夹管压力的调节与作用 Adjustment and function of pinch pressure</p>		

<p>14.夹管块的更换方式 How to replace the clamp block</p>		
<p>设备开关机及各个按钮的作用 The function of the device switches on and off and the buttons: 急停开关 : 控制设备的通电和断电.当出现突发的错误情况时, 按下急停开关, 打开时顺时针旋转 Emergency stop switch: Control device power-on and power-off When a sudden error occurs, press the emergency stop switch to turn clockwise when it is turned on. 启动:控制设备开机 打开急停开关停顿 20 秒钟按一次启动按钮启动设备 Start: Control device is turned on. Open the emergency stop switch and pause for 20 seconds. Press the start button to start the device 暂停: 是设备暂时停止工作 Pause: The device is temporarily stopped working 复位: 当设备暂停工作时按下一次复位按钮设备继续工作 Reset: Press the reset button once the device is paused to continue working 报警: 当设备出现错误时机器会发出蜂鸣声 Alarm: The machine beeps when there is an error in the device</p>		
<p>触摸屏各个功能按钮的作用 The function of each function button of the touch screen: 详见说明书 See the instructions for details</p>		
<p>尺寸的输入方式 Size input method: 详见说明书 See the instructions for details</p>		
<p>每个功能表内, 各个按钮的用途 The purpose of each button in each function table: 详见说明书 See the instructions for details</p>		
<p>触摸屏内部参数的调整和用途 Adjustment and use of internal parameters of the touch screen: 详见说明书 See the instructions for details</p>		
<p>每个电器元件的名称及作用 The name and function of each electrical component: 直流 24V 开关电源: 将交流 220V 电源转换成直流 24V 电源 DC 24V switching power supply: convert AC 220V power into DC 24V power. 电源开关:机器总电源开关。 Power switch: The main power switch of the machine. 交流接触器: 用于接通、分断线路、或频繁的控制电动机等设备运行。 AC contactor: used to turn on, disconnect the line, or frequently control the operation of the motor and other</p>		

<p>equipment.</p> <p>伺服电机控制器：通过电信号精确控制伺服电机。</p> <p>Servo motor controller: Precise control of the servo motor by electrical signals.</p> <p>PLC:程序控制器用于储存控制设备的程序。</p> <p>PLC: A program controller is used to store programs that control devices.</p> <p>继电器：通过 PLC 的信号控制通断</p> <p>Relay: control through the PLC signal on and off</p>		
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<p>培训内容 Training content: 故障的排除与保养 Troubleshooting、Maintenance</p>	<p>操作员签字 Operator's signature</p>	<p>主管签字 Signature of supervisor</p>
<p>铝轮位置的调节 Adjustment of aluminum wheel position: 松开气缸锁紧螺母可以调节铝轮上下位置，松开气缸活塞杆螺母可以调节铝轮前后距离，使铝条处在铝轮沟槽的中间位置 Loosen the cylinder lock nut to adjust the up and down position of the aluminum wheel. Loosen the cylinder rod nut to adjust the front and rear distance of the aluminum wheel. The aluminum strip is in the middle of the groove of the aluminum wheel</p>		
<p>铝轮不勾料和卡料的调节 What to do if the aluminum doesn't hood or stuck the material :</p> <p>不勾料 Not hooked</p> <p>料架感应器闪烁 The rack sensor flashes</p> <p>控制勾料气缸的电磁阀损坏或者卡住，造成不能换向，检查电磁阀线圈没有电 The solenoid valve of the control cylinder is damaged or stuck without reversing, and the solenoid valve coil is checked for no electricity.</p> <p>卡料 Material stuck</p> <p>铝条弯曲或者位置不合适 The aluminum strip is bent or not in position</p>		

<p>压板缝隙太小铝条没有滑下来 The platen gap is too small, the aluminum strip does not slide down 铝轮位置不合适 The aluminum wheel position is not suitable</p>		
<p>6A 铝条翻料的调节 Adjustment of 6A aluminum strip: 由于 6A 铝条宽和高比较接近, 在勾料时容易翻转, 单独加装了一个金属压板, 使用 6A 铝条时一定要注意 次压板是否在合适的位置, 金属块的下端刚刚接近铝条的上表面, 上端缝隙稍微 大点方便铝条滑动 Because the width and height of the 6A aluminum strip are relatively close, it is easy to flip during the material feeding, and a metal pressure plate is separately installed. When using the 6A aluminum strip, it must be noted whether the secondary pressure plate is in the proper position, and the lower end of the metal block is just close to the aluminum strip. Surface, the upper end of the gap is slightly larger to facilitate the sliding of the aluminum strip</p>		
<p>料架的保养 Maintenance of the rack: 每周擦拭导轨并涂抹润滑油 Wipe the rails and apply lubricant every week</p>		
<p>送料夹紧板不顺畅和夹不紧铝的调节 The feeding clamp plate is not smooth and the adjustment of the aluminum strip is not tight: 检查是否生锈或者导杆是否不平行 Check for rust or if the guides are not parallel 气缸是否伸缩正常 Whether the cylinder is stretched normally</p>		
<p>送料架不能平行传送铝条的调节 Adjustment of the feeding rack without parallel transmission of aluminum strips: 送料左右不平行时可以通过这几个部位的调节螺丝在校正平行 When the feeding is not parallel, the adjustment screws in these parts can be corrected in parallel</p>		
<p>送料架没有动作的调节 The adjustment of the feeding frame without movement: 送料感应器没有信号 Feed sensor has no signal 送料气缸、电磁阀没有动作 Feed cylinder, solenoid valve does not move</p>		

<p>送料部件的保养 Maintenance of the feeding parts: 导轨等传动件经常擦拭，每周擦拭一次涂抹润滑油 The transmission parts such as guide rails are often wiped, and the lubricant is applied once a week.</p>		
<p>接料定位气缸行程不到位的调节 Adjustment of the positioning of the cylinder is not in place: 检查气缸伸缩速度 check the cylinder expansion speed 检查气缸连接部件是否有松动现象 Check if the cylinder connecting parts are loose. 检查机械结构有没有卡住的情况 Check if the mechanical structure is stuck</p>		
<p>铝条缩紧时两根铝条不在同一高度的调节 Adjusting the height of two aluminum strips when the aluminum strip is tightened: 检查铝条是否弯曲 Check if the aluminum strip is bent 检查铝条传送支撑部件及接料部分是否在同一高度 Check if the aluminum strip conveying support member and the receiving part are at the same height. 检查是否是接料间隙太小，接料时重叠造成的不平 check whether the gap is too small, the unevenness caused by overlapping when receiving materials</p>		
<p>接料后两段铝条有缝隙的调节 Adjustment of the gap between the two aluminum strips after receiving the material: 调整触摸屏里的接管减速距离参数 将参数调小 Adjust the take-off deceleration distance parameter in the touch screen to reduce the parameter</p>		
<p>接料部件保养 Receiving parts maintenance: 导轨等传动件经常擦拭，每周擦拭一次涂抹润滑油 The transmission parts such as guide rails are often wiped, and the lubricant is applied once a week.</p>		
<p>同步带跑偏的调节 Timing adjustment of the belt deviation: 检查是哪个传送轮跑偏，用手转动这个皮带轮，看看是否有晃动的现象，检查轴承座的固定螺丝是否</p>		

<p>松动, 如果不是就将传送机构拆开, 检查此传送短轴是否磨损 Check which transfer wheel is deflected, turn the pulley by hand to see if there is any shaking, check if the fixing screw of the bearing seat is loose, if not, disassemble the conveying mechanism, check if the conveying short shaft is worn.</p>		
<p>同步带不直线传送铝条的调节 Timing belt adjustment without linear transmission of aluminum strips: 传送带上支撑板为气缸控制, 通过调节此螺丝杆的长短或者气缸的气源压力可以调节上压板的压紧力度 The support plate on the conveyor belt is controlled by the cylinder. By adjusting the length of the screw rod or the air supply pressure of the cylinder, the pressing force of the upper pressure plate can be adjusted 下压紧板的高度要与整个传送横梁的所有支撑轮保持一致, 过高或者过低都有可能是铝条弯曲, 可以通过这两个螺丝杆来调节下夹紧板的高度 The height of the lower pressing plate should be consistent with all the supporting wheels of the entire conveying beam. If the height is too high or too low, the aluminum bar may be bent, and the height of the lower clamping plate can be adjusted by the two screw rods.</p>		
<p>同步带齿轮的保养 Synchronous belt gear maintenance: 每周检查齿轮, 清理杂物, 看是否需要涂抹润滑油 Check the gears every week to see if the debris needs to be applied.</p>		
<p>锯切电机部分工作的原理 The principle of sawing the part of the motor: 此图为下出锯锯切方式, 锯片通过皮带带动, 速比为 1:2, 当需要切断铝条时, 电机启动通过气缸将锯切部分向上推动 可以通过气缸的调速接头调节升降速度 This figure shows the saw sawing method. The saw blade is driven by the belt and the speed ratio is 1:2. When the aluminum strip needs to be cut, the motor starts to push the sawing part upward through the cylinder. The lifting speed can be adjusted through the speed regulating joint of the cylinder.</p>		
<p>锯切铝条时锯切电机卡死的处理 Handling of sawing motor jam when sawing aluminum strip: 检查锯片电机是否磨损 Check if the saw blade motor is worn. 通过调节电机移动气缸的调试接头, 调节切割电机上下移动气缸的速度, 将电机上下移动速度调慢 不能太快。给电机预留启动时间 Adjust the speed of the cutting motor to move the cylinder up and down by adjusting the debugging joint of the motor moving cylinder. The speed of moving the motor up and down can not be too fast. The start time is reserved for the motor</p>		

<p>折角不美观和铝条断裂时，对于刀头的调节 The angle of the corner is not beautiful and the aluminum strip breaks the adjustment of the cutter head:</p> <p>断裂时调整刀头压下的深浅; 检查刀头顶端是否太宽, 可以用砂纸或者砂轮机打磨 Adjust the depth of the cutter head when breaking; check if the tip of the cutter head is too wide and can be sanded with sandpaper or grinder.</p> <p>外侧不光滑有凹坑, 调节检查夹管是否不平整或者有松动现象 The outer side is not smooth and has pits. Adjust whether the pinch tube is not flat or loose</p>		
<p>折角超宽对夹管的调节 Folding angle super wide adjustment of the pinch tube:</p> <p>铝框折弯后的角部超宽宽度应该小于 0.2mm The width of the corner of the aluminum frame after bending should be less than 0.2mm</p> <p>如果超宽大于此数值影响打丁基胶 If the super-wideness is greater than this value, it will affect the butyl rubber</p> <p>检查夹管是否松动, 可以适当调整夹管压力 Check the pinch tube for looseness and adjust the pinch pressure appropriately</p>		
<p>折角出现双凹坑的调节 The adjustment of the double pits occurs at the corners:</p> <p>出现双折不美观时调节折弯刀头的角度, 确保在折弯时刀头顶端在折弯半径的圆心 Adjust the angle of the bending head when there is a double fold, to ensure that the tip of the cutter head is at the center of the bending radius when bending</p> <p>铝条对接好以后, 折弯时插角拉开的调节 After the aluminum strips are docked, the adjustment of the insertion angle when bending is performed:</p> <p>检查件是否太松不合适 Check if the piece is too loose</p> <p>夹管两边不平行, 左边松右边紧, 在折弯时铝条打滑, 调整上下夹管使之上下左右平行 The two sides of the pinch tube are not parallel, the left side is loose and the right side is tight. When the bending is performed, the aluminum strip slips, and the upper and lower clamp tubes are adjusted to make the upper and lower sides parallel.</p>		
<p>铝框尺寸不相符的调节 Aluminum frame size does not match the adjustment:</p>		

<p>检查统计尺寸不相符是否有规律，如果是每个都是相同的误差调整触摸屏的参数 check whether the statistical size does not match whether there is a regularity, if each is the same error adjustment touch screen parameters</p> <p>如果是没有规律检查同步带是否松动了，将同步带涨紧即可 If there is no regular check to see if the timing belt is loose, the timing belt can be tightened.</p>		
<p>触摸屏黑屏的处理 Touch screen black screen processing: 检查触摸屏是否有 24V 电源，保险是否烧坏 Check if the touch screen has 24V power supply and whether the insurance is burnt out 如果正常联系厂家维修 If the normal contact factory repair 触摸屏不启动的处理 The touch screen does not start processing: 检查触摸屏与 PLC 通讯是否正常，如果正常联系厂家维修 Check if the communication between the touch screen and the PLC is normal, if the factory contact is repaired normally</p>		
<p>触摸屏不灵敏的处理 Touch screen is not sensitive to processing: 联系厂家 或者返厂维修 Contact the factory or return to the factory for repair</p>		
<p>25. 电器元件的故障处理 Failure of electrical components</p>		
<p>26. 气缸电磁阀的故障处理 Cylinder solenoid valve troubleshooting: 气缸不伸缩：检查两个进气孔是否串气，如果串气可以更换活塞密封圈。检查伸缩杆是否卡住 如果卡住可以将气缸拆开检查并清理污渍 The cylinder is not telescopic. Check if the two air inlets are in series. If the air is replaced, replace the piston seal. Check if the telescopic rod is stuck. If it is stuck, the cylinder can be disassembled to check and clean the stain 电磁阀：不换向 检查电源是否正常 线圈是否烧坏 检查阀芯是否卡住 可以将阀芯拆开清理阀芯的污渍 Solenoid valve Does not change direction Check if the power supply is normal Whether the coil is burnt out Check if the spool is stuck. The spool can be disassembled to clean the stain of the valve plug</p>		
<p>设备启动以后无动作的处理 No action after device startup: 开机后不用点击“运行”按钮，如果需要加入数据，加入完毕后复位 Do not click the “Run” button after booting. If you need to add data, reset it after joining.</p>		

<p>检查 U 型光电开关是否正常，没有信号机器不会工作 Check if the U-shaped photoelectric switch is normal. No signal will not work.</p> <p>检查折弯部分的光电开关是否有信号 Check if the photoelectric switch of the bent part has a signal</p> <p>检查脚踏开关踩踏时信号是否正常，踩踏没有信号时机器不会工作 Check if the signal is normal when the foot switch is stepping on. When the pedal is not signaled, the machine will not work</p>		
<p>气缸电磁阀的保养 Maintenance of cylinder solenoid valve:</p> <p>在进气的三联体的油雾器经常检查是否有润滑油， 每天断气放水 The oil mister of the triplet in the intake air is often checked for oil, and the gas is released every day.</p> <p>电磁阀与气缸有卡滞现象时可以拆开清理污渍 When the solenoid valve and the cylinder are stuck, the stain can be removed.</p>		

