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清洗机培训确认单

Training Confirmation Listing of Automatic Vertical Washing and Drying Machine

第一部分：验收与安装

Section 1: Checking and Installation

调试步骤 Debugging Steps	培训内容 Training content	所达标准 Required Standards	操作员签字 Signature of operator	主管签字 Signature of supervisor
第一步 Step 1	在现场开箱验收，检查设备有无丢失、破损、水淋，因运输造成的损坏。 Open the package and check the equipment for loss, damage, water pouring on the spot,if it due to transport.	检查登记确认无误，查收说明书、合格证、附件，有问题立即报告销售负责人。 Check Brochures, Certificates, Attachments,other problems immediately contact the sales person in charge.		

<p>第二步 Step 2</p>	<p>设备安装场地确认： Confirm the equipment installation site:</p> <p>1、确认厂地、电源、气源、水源、地面是否具备安装条件。 1. Confirm factory, power, gas source, water and the ground are equipped with the installation conditions.</p> <p>2、保证设备顺利到达安装位置，现场清洁。 2. Ensure the equipment to arrival at the installation site, keep the working place clean.</p>	<p>现场评估安装条件，不能保证设备要求的向客户提出改进。 Checking if the installation conditions are perfect, or to make improvements to the customer.</p>		
<p>第三步 Step 3</p>	<p>各部分组装，用铝型材作直尺，使背靠轮在一个水平面上； Using aluminium ruler to keep the back wheels in a horizontal plane when assembly every part.</p>			
<p>第四步 Step 4</p>	<p>设备排线：距后墙或参照物 3.5 米画细实线，按设备外形图将各段排线，照顾首尾部留有操作维修空间。 Equipment cable: Draw solid line 3.5 meters from the back wall or other reference , in accordance with the outline of the equipment will be the order of the cable, take care of the first and last to maintain the operation and maintenance space.</p>	<p>注意检修，安全空间>1m Notice: Keep >1m safe space for maintenance.</p>		

第五步 Step 5	设备机械安装： Equipment mechanical installation:	整机传动辊共线度误差不大于 3mm，各段不大于 1mm。相邻两段用 2 块 1500×1500mm 玻璃对严，检查无眼观不平和间隙。Machine drive roller collinearity error is not more than 3mm, each paragraph is not more than 1mm. Adjacent 2 paragraphs are used 2 1500 × 1500mm glasses to make sure without unevenness and gap.		
	1、检查所有紧固螺栓、螺母等有无松动，进行紧固。 1. Check all the fastening bolts, nuts and so on to make sure without loose.			
	2、安装因运输等原因拆下的零件。 2. Install the removed parts due to transportation or other reasons.			

<p>3、各段进出部位紧靠背靠轮（板）放同样厚度的玻璃，用吊线锤，吊到细实线上，全线调直；全线调整水平：用工业水平仪，以玻璃传动辊上母线测量，全线高度一致；用6°角度尺调整，传送背靠轮面倾角为6° ± 15'，全线为同一倾斜面。按以上步骤反复多次调整后，紧固调整螺栓。</p> <p>3. Each section of the access point close to the back of the wheel (plate) put the same thickness of glass, with hanging hammer, hanging to the thin line, straightening; full line adjustment level: industrial level instrument to glass drive roller busbar measurement, Highly consistent; with 6 ° angle ruler to adjust the transmission back to the wheel surface inclination of 6 ° ± 15 ', the same line for the same slope. Repeat the above steps repeatedly adjust the tune, the whole good, tighten the adjusting bolt.</p>	<p>各接头联接紧固。Every joint must be fastened.</p>		
<p>4、风路系统安装：按风路系统图接好风管。</p> <p>4. Air system installation: Connected air duct according to the air system diagram.</p>	<p>各接头联接紧固。Every joint must be fastened.</p>		

	<p>5、气路系统安装：连接厂方气源，按气路系统原理图连接好管路。</p> <p>5. Gas system installation: Connect with the factory gas source and connected gas duct according to the gas system diagram.</p>	<p>厂方气源压力不低于 0.7MPa，且流量足够的干燥气源。检查管路无泄漏，管路整齐排列适当，紧固可靠，开关正确。</p> <p>There is enough dry gas source, the air pressure at the factory is not less than 0.7MPa. Check the pipeline without leakage, the pipeline neatly arranged properly without loose. The switch is correct.</p>		
	<p>6、水路系统安装：清洗水箱，按水路系统原理图连接水路。</p> <p>6. Water system installation : Clean the water tank, connected the water duct according to water system diagram.</p>			
	<p>7、检查、擦拭设备，细心逐一到位。</p> <p>7. Check and clean the machine carefully.</p>	<p>设备机械安装正确，检查无误，擦拭干净。The equipment is installed correctly and cleanly.</p>		
第六步 Step 6	<p>电器件安装：</p> <p>Electrical components installation:</p>	<p>按公司设计要求，摆放电控柜，固定电控箱。According to the company's design requirements, put the control cabinet and fixed electric control box.</p>		
	<p>1、摆放电控柜，安装电控箱。</p> <p>1. Put the control cabinet and fixed electric control box.</p>			

	<p>2、安装调整因运输等原因拆下的人机界面、光电开关、行程开关等控制元器件。</p> <p>2. Install the touch screen, photoelectric switch, travel switch and other control components.</p>			
	<p>3、按电气原理图,将各段联接电缆按线号、标识等连接好,并连接各段接地线。检查所有的线号、标识等与说明书一致,分别放置在线缆槽内。 According to electrical schematic diagram, Connect each section of connecting cable by line number, logo, etc., and connect each section of grounding line. Check all the line number, logo, etc. in line with the instructions, placed them separately in the cable tray.</p>			
	<p>4、检查所有的紧固螺钉,保证控制线不松动。</p> <p>4. Check all the fastening screws to ensure that the control line is not loose.</p>	<p>按电气设计要求,正确规范接线,安全可靠。According to the electrical design requirements, connect wires safely.</p>		
第七步 Step 7	<p>运转前准备: Preparation for operation</p>	<p>环境温度 15~35° C, 无明显粉尘。</p> <p>Ambient temperature 15 ~ 35 ° C, no significant dust.</p>		
	<p>1、检查所有传动辊轮、传送电机、链轮、链条、传动齿轮啮合是否正常,传动运转部件不得有卡死现象。</p> <p>1. Check all the transmission roller, transmission motor, sprocket, chain, transmission gear meshing is normal, the transmission components must not</p>			

<p>have stuck.</p>			
<p>2、检查清洗干燥段的毛刷转动是否灵活，传动轴转动是否正常。下托轮是否在一条线上，前挤紧装置是否滑动自如，风刀角度是否正确。 2. Check the brushes on the washing and drying part turn flexibility, normal drive shaft. Under the wheel is in a line, the front squeeze device is free to slide and air knife angle is correct.</p>	<p>毛刷转动灵活无卡滞，前挤紧轮滑动自如。The brush is flexible without jamming, and the front squeeze wheel slides freely.</p>		
<p>3、水箱加水到规定要求，检查水箱及管路是否有漏水现象。 3. Add water to the tank by requirements, check the water tank and piping for any leaking phenomenon.</p>	<p>水箱及循环管路无漏水现象。Check the water tank and piping for any leaking phenomenon.</p>		
<p>4、接通气源，气压要求不低于 0.7MP，且流量足够的干燥气源。检查气路是否有漏气现象，压力表是否显示正常。手动各电磁阀，看各个气缸管路连接、动作是否正确。 4. Connected to the gas source, pressure requires not less than 0.7MP, and there is enough dry gas source. Check if there is air leakage in gas circuit, whether the pressure gauge shows normal. Manual control the solenoid valve to see each cylinder pipeline connections and action are correct or not.</p>			

第八步 Step 8	试通电检查: Power test:			
	<p>1、检查设备接地绝缘电阻$\geq 1M\Omega$，各段分别接地。 1. Check the equipment ground insulation resistance $\geq 1M\Omega$, each section respectively reach grounded.</p>	<p>绝缘电阻$\geq 1M\Omega$，个相线及零线位置是否正确，3相 380V、50Hz，总功率约 40Kw，（不同规格稍微有偏差）并有接地装置，电压稳定。（出口设备按特殊要求）。Insulation resistance $\geq 1M\Omega$, phase and zero line position is correct, 3-phase 380V, 50Hz, the total power is about 40Kw, (different specifications slightly deviate) and there must be a grounding device, keeping voltage stability. (Export equipment according to special requirements).</p>		
	<p>2、检查厂方电源是否符合说明书中的电源要求，准确无误后方可接电。 2. Check the factory power if it is the same by instruction. Make sure there is no any problem.</p>	<p>传送电机转向、毛刷转向、玻璃定位、铝框定位、下定位、前定位正确。吸盘 4 个分区工作正常，玻璃检测开关工作可靠。Make sure transmission motor steering, brush steering, glass positioning, aluminum frame positioning, under positioning and front positioning are correct. Four suction cups work well, Glass detection switch work reliably.</p>		

	<p>3、操作面板上各控制旋钮均打到手动位置, 检查各传送电机运转是否平稳, 转向是否正确; 毛刷电机转向是否正确, 水泵喷淋正常。 Each control knob on the operation panel hits the manual position. Check if each convey motor work smoothly and whether the steering is correct; whether the brush motor is turned to the right position and the pump is properly sprayed.</p>	<p>链轮与链条安装后, 应保证链条处于状态。链条不应拉得过紧, 亦不过松, 保证各轮轴转动自由, 不应有发卡、咬链或异常声音出现。After installed sprocket and chain, the chain should be in a normal state. The chain should not be pulled too tight, nor too loose, to ensure that each all wheel axles move freely. There should be no stuck, bite chain or abnormal sound.</p>		
	<p>4、手动程序检查各动作均正确无误后, 转到自动程序上运行, 空运行 15~20 分钟。用小玻璃运行, 不跑偏、不掉下传送辊。若有问题微调各部分, 4. Check every function is right by manual programme, then turn to automatic programme and working in 15 to 20 minutes. Using small glass to test machine, make sure there is no problems, or adjust every part.</p>	<p>玻璃运行平稳, 不跳动, 不落下。Transfer glass smoothly without any jump and falling.</p>		
<p>第九步 Step 9</p>	<p>设备交验前自检: Machine test</p>	<p>眼距离玻璃 0.5m 在检查灯下检查无污迹、轮印(下边轮印小于 12mm) Check the glass under the lights be away from 0.5m by eyes. Make sure there is no dirt, wheel prints (the wheel prints is less than 12mm). 清洗速度先低后高, 速度在 3~7 米/分。 Cleaning speed should first low after high, the speed of 3 to 7 m / min.</p>		

	<p>1、准备 4 块 800×600×5mm 玻璃，经过磨边后，进行清洗，速度调至 5 米 / 分，经清洗后在检查段的灯光下检查玻璃表面干燥洁净无痕迹</p> <p>1. Prepare four 800*600*5mm glasses, after polishing edges, use the speed of 5m/min to wash them, then check the glass face is dry or not on the checking section by lights. No trace of cleanliness</p>			
<p>第十步 Step 10</p>	<p>交验项目： Checking terms:</p>			
	<p>1、清洗玻璃功能（厂方提供水源 PH=6~8，电导率≤150 μs/cm），玻璃尺寸 450×350×3mm、1500×1000×5mm、3000×2000×8mm、800×600×12mm 各一批次。</p> <p>1, Glass cleaning function (the factory provides water source PH = 6 ~ 8, conductivity ≤ 150 μs / cm), glass size 450 × 350 × 3mm, 1500 × 1000 × 5mm, 3000 × 2000 × 8mm, 800 × 600 × 12mm A batch.</p>			
	<p>2、玻璃运行平稳，清洗速度 3~10 米/分。</p> <p>2. Glass runs smoothly, washing speed is 3-10m/min.</p>			
	<p>3、设备外观干净、整齐、美观。</p> <p>3. The machine keep clean and nice.</p>			

第二部分：操作与使用

Section 2: Operation and Usage

培训内容 Training content:	操作员工签字 Operation staff signature	主管签字 Executive signature
一： 开机检查 Boot check		
正确开机： 检查机器各开关处于关闭状态再打开电源开关。勿带负载开机。 Correct Opening: Before open the power,pls check all the switch are closed.		
打开气源： 检查各个调压阀是否气压正常。油雾器是否有润滑油。 Open the gas power: Check the pressure regulator is normal pressure. Oil mist has enough lubricants.		
检查水箱水位是否合适。必须是清洁的纯净水。 Check if the water tank has enough clean water.		
开启机器后空运行检查各传送部位、水泵、风机是否正常 Open the machine after the air to check the transmission site, water pump, fan is normal.		
二： 自动生产 Automatically work		

<p>生产中空玻璃，先依次将两块玻璃放在上料段，踩脚踏或推玻璃通过入料段光电，让玻璃进清洗段，根据当时的气温调节面板上的无级调速旋钮，调节清洗风干速度。</p> <p>When produce insulating glass, firstly, put two glass on the loading section, step on the switch or push the glass through the feed section photoelectric, so that glass into the cleaning section, according to the temperature control panel at the time of the variable speed knob, adjust the cleaning Drying speed.</p>		
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第三部分：常见故障及排除

Section 3: Common Malfunction and Solution

常见问题 Common malfunction	故障分析 Malfunction analysis	解决办法: Solution	操作员 工签字 Signature of operator	主管签字 Signature of supervisor
清洗不干净 Not clean completely	1. 毛刷，风机过滤棉，风路系统污染， 车间粉尘太多 1. Brush, fan filter cotton, air system pollution, too much dust in workshop.	1. 清洗毛刷，更换过滤棉，清洗风路系统， 做粉尘处理装置 1. Clean the brush, replace the filter cotton, clean the wind road system, and do the dust treatment device.		

	2. 水质问题 2. Water quality	2. 使用合格的水（水源 PH=6~8，电导率 $\leq 40 \mu s/cm$ ） 2. Use qualified water (water source PH=6~8, electrical conductivity is less than $40 \mu s/cm$)		
	3. 喷水嘴堵塞 3. The water spray nozzle is blocked.	3. 清理喷水嘴 3. Clean the spray nozzle .		
	4. 毛刷磨损严重 4. The brush is worn badly.	4. 调整毛刷间隙或更换毛刷 4. Adjust the brush clearance or replace the brush.		
	5. 刮水胶皮污染 5. Water-scraping rubber skin pollution.	5. 更换刮水胶皮 5. Replace the scratch rubber.		
吹不干 Cannot dry completely	1. 风刀位置不对 1. The position of wind knife is wrong.	1. 调整风刀 1. Adjust the position of wind knife.		
	2. 刮水胶皮刮水不干净 2. Scraping water is not clean.	2. 更换刮水胶皮 2. Replace the scratch rubber.		
	3. 风加热不加热 3. Air heating cannot be heated.	3. 更换加热器 3. Replace the heater		
	4. 传送速度过快 The transmission is too fast.	4. 降低传送速度 4. Lower transmission speed.		
清洗内碎玻璃 Glass broken in washing machine	1 玻璃挤紧系统不灵活 1 Glass squeeze system is not flexible.	1. 调整挤紧系统 1. Adjust the squeeze system.		

	2. 托轮磨损 2. Roller wear	2. 更换托轮 2. Replace the supporting wheel		
	3. 清洗部分的中心线与风干不垂直 3. The center line of the cleaning part is not perpendicular to the air knife.	3. 调整两部分挤进部件使之一条线 3. Adjust the two parts to make it at one line.		
	4. 水温与玻璃温度相差大 The water temperature is too different from the glass temperature.	4. 冬天工作时注意室内外玻璃与水加热温差 4. Pay attention to indoor and outdoor glass and water heating temperature difference when working in winter.		
传送过程中掉玻璃 Drop glass when the transfer wheel is running	1. 传送轮角度不对 1. The transmission wheel angle is incorrect.	1. 调整传送轮角度 1. Adjust the angle of transmission wheel.		
	2. 传送轮不平或者磨损严重 2. The transmission wheel is uneven or badly worn.	2. 调整水平或者更换新的传送轮 2. Adjust the level or replace the new transmission wheel.		
	3. 背靠轮不平整或者角度不对 3. The back wheel is not flat or the angle is not correct.	3. 调整背靠轮 3. Adjust the back wheel.		