East Tech Industrial Equipment Co., Ltd

附件一、2005 烤箱技术规格要求及参数/Appendix I Technical Agreement

项目 Item	名称 Name	内容 Content	备注 Rem.
产品名称 Product Name		NMT-2005 烤箱 Oven	
型号 Type		/	
烘干炉主要参数 Main Parameter	内胆尺寸 Chamber dimension	W1500*D1500*H1500mm	
	外形尺寸（约） Outer dimension	W1940*D2350*H1830mm	
	温度范围 Temperature range	常温～+250℃可调 Adjustable from r.t ~ +250℃	
	仪表显示精度 Accuracy	≤±0.1℃	
	温度波动度 Temperature fluctuation	≤±2℃(空载) ≤±2℃ (free load)	
	温升速度 Temperature rising speed	≤8℃/min	
	外壳温度 Outer shell temperature	温升不超过环境+5℃，门周边除外 Not exceeding ambient +5℃, except around the door	
	热风循环 Air Recirculation	水平循环大量强制运风 Horizontal circulation of large amounts of forced wind	
	电源 Power source	三相 5 线制，400V，50HZ 3phase 5wires: 400V, 50Hz	
	总功率约 Total power	约 45KW Around 45KW	
烘干炉箱体结构 Structure	外壳材料 Material of outer shell	采用 1.5mm 厚 Q235 冷轧钢板（强度、塑性和焊接综合性能最好）折弯焊接制作 Made of 1.5mm thick Q235 cold-rolled steel plate (best overall strength, plasticity and welding properties), bent and welded	
	表面处理 Surface treatment	1. 表面打磨、抛光、磷化（可以增加金属的耐蚀性，油漆的附着力）处理 2. 高温喷塑（大波纹型），可防止生锈，耐腐蚀。 3. 颜色待客户确认。 1. Surface grinding, polishing, and phosphating (which can increase the corrosion resistance of metal and the adhesion of paint) 2. High temperature plastic spraying (large corrugated type) can prevent rust and corrosion resistance. 3. Colors are Waiting for customer confirmation.	
	内胆材料 Chamber material	1. 采用 1.5mm SUS304 不锈钢板制作，保持内胆清洁无尘、防生锈、耐腐蚀，易清洗。 2. 满焊 1. Made of 1.5mm SUS304 stainless steel plate, it keeps the inner tank clean, dust-free, rust-proof, corrosion-resistant, and easy to clean. 2. Full welded.	

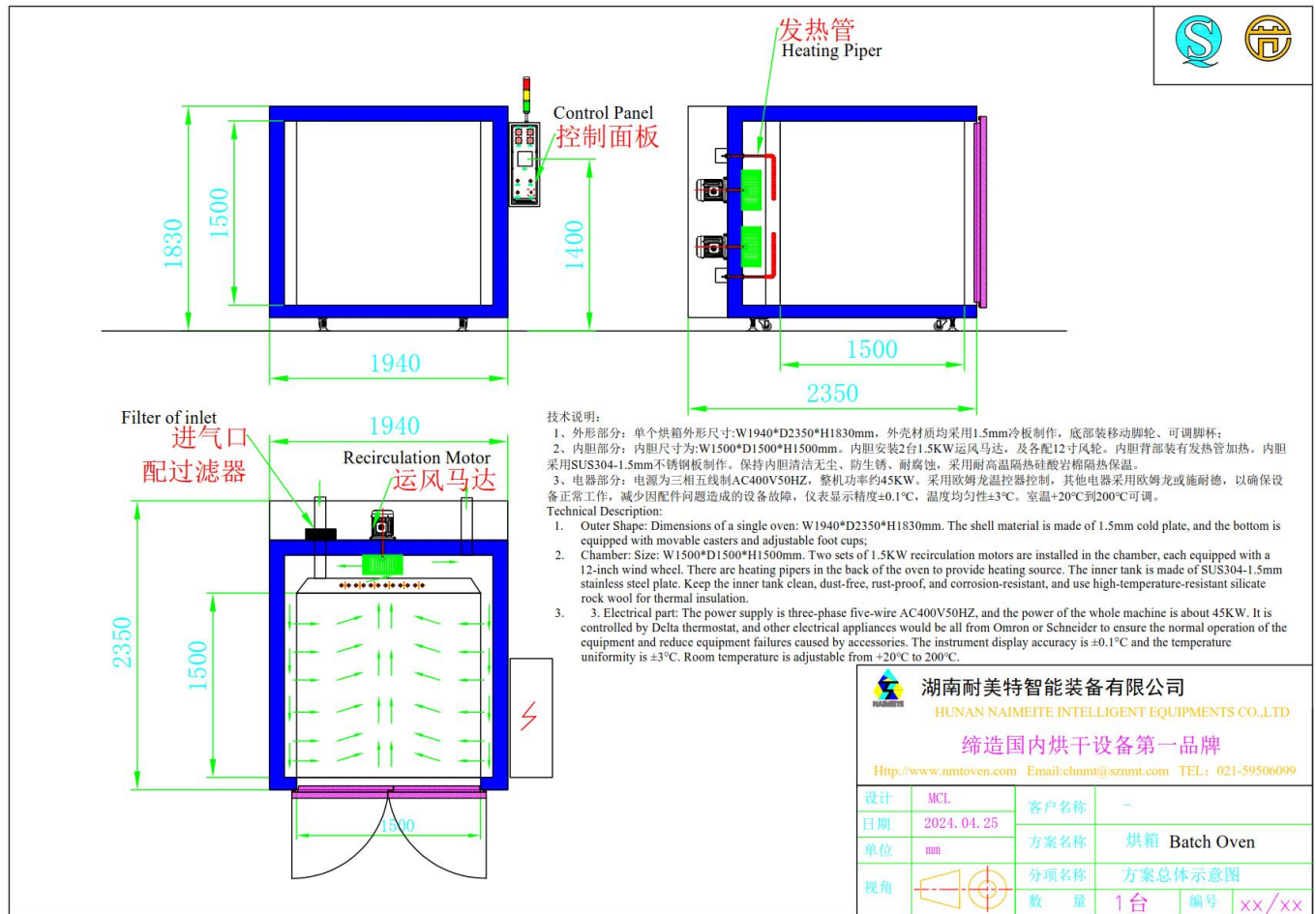|			
	箱体骨架 Oven Body	采用 50*50*3mm 角铁制作 保持箱体内外各个面的承载强度，并保留热胀冷缩系数，可防止箱体变形。 Made of 50*50*3mm angle iron Maintain the load-bearing strength of all sides inside and outside the box, and retain the thermal expansion and contraction coefficient to prevent box deformation.	
	保温材料 Insulation material	采用 100K 加密型硅酸铝棉+气凝胶 具有不可燃烧，隔热性强等特点，厚度为 110mm Adopted 100K thickened aluminum silicate rock wool It has the characteristics of non-combustible and strong heat insulation, thickness is 110mm	
	密封材料 Sealing Material	密封条采用高温硅胶胶条，门与内胆采用双层密封形式，加强密封效果，使门四周接缝处密缝，不漏热气。 The sealing strip is made of high-temperature Silicone, and the door and inner tank adopt a double-layer sealing form to enhance the sealing effect and ensure that the seams around the door are tightly sealed and no hot air leaks.	
	门 Doors	1. 双开门，两侧安装镀铬三角型合页各 3 件，可防止门下垂， 2. 门锁配自制方钢门锁，预紧力强，操作方便 3. 门内胆采用浮动式，采用弹簧预紧 1. two-side opening door，Install 3 pieces of chrome-plated triangular hinges to prevent the door from sagging. 2. The door lock is equipped with a self-made square steel door lock, which has strong pre-tightening force and is easy to operate. 3. The door inner liner is floating and spring preloaded.	
	脚轮脚杯 Foundation & wheel	1. 设备底部装有匹配的脚轮脚杯，方便设备的移动及固定 1. In the bottom of the equipment, the foundations & wheels are installed for oven easily moving and fixing.	
	换气装置 Air Exchange	箱体背面设有进气口、排气口配调节阀 可调节空气流量，使炉内温度更加均匀 Air inlet and outlet with adjusting valves on both sides To adjust the air volume for a better temperature distribution	
控制系统 Control System	运风马达 Motor Fans	1.5KW 西门子或 SEW 运风马达 2 台，配有西门子变频器，速度可调 2 sets of 1.5 Siemens &SEW Fan motors, with frequency converter for speed adjustment	
	风轮 Fan Wheel	12 寸多翼式不锈钢风轮 Fan wheel with 12inch blades	
	加热管 Heating Pipe	采用不锈钢 U 型发热管，带散热片，可使发热管温度均匀散发 It adopts stainless steel U-shaped heating tube with heat sink, which can make the temperature of the heating tube evenly distributed.	

	空气加热方式 Hot Air Generated	由烤箱进气口进风至加热管风槽内，空气经加热后在烤箱内部做循环运风，废气从排气口排出 Fresh air is introduced from the air inlet of the oven into chamber where the heating pipes are. After the air is heated, it is circulated inside the oven, and exhausted from the exhaust port.	
	控制系统 Control system	采用 Delta 温控器, PV 与 SV 双 LED 显示功能 Siemens Smart 200 PLC and 7' HMI 自带 P.I.D 自整定模块演算输出，控制精准 Adopt Delta thermostat, PV and SV dual LED display function Siemens Smart 200 PLC and 7' HMI Comes with P.I.D self-tuning module calculation output, precise control	
	加热管控制 Heating Control	采用无触点 SCR 固态继电器控制每组发热管 SCR control each group of heating tubes	
	温度传感器 Themo. Sensor	K 型热电偶，Type K thermocouple for temperature inspection	
	其它 Others	控制电器均采用施耐德和欧姆龙品牌 Control electrical appliances are from Schneider and Omron brands	
功能 Functions	自动恒温 Automatic constant temperature	1. 温控器可根据用户设定的温度值 2. 采用 PID 自动计算输出功率的大小，越接近温度设定值时，输出功率越小，以达到恒温控制的目的，并可节能省电 1. The thermostat can adjust the temperature according to the temperature value set by the user. 2. PID is used to automatically calculate the output power. The closer it is to the temperature set value, the smaller the output power is to achieve the purpose of constant temperature control and save energy.	
	定时功能 Timer	定时分为 2 档（手动/自动）：选择手动时为立即开始计时；选择自动时为温度必须达到设定温度值时才开始计时；时间到达到后有声光报警并自动停机 Timing is divided into 2 levels (manual/automatic): when manual is selected, timing starts immediately; When automatic is selected, the timer starts when the temperature reaches the set temperature value; When the time is up, there will be an audible and visual alarm and the machine will stop automatically.	
	超温报警 Over temperature Alarm	当实际检测温度超过超温保护温控器设定值时，自动切断加热电源，起到双重保护功能 When the actual detected temperature exceeds the set value of the over-temperature protection thermostat, the heating power will be automatically cut off to provide a double protection function.	
	声光报警 Audible alarm	配带蜂鸣器的报警灯 Alarm light with buzzer.。	
	接地保护 Grounding	结构件安全接地保护。 Structural parts safety grounding protection.	

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		电源缺相、相序保护 Power phase loss and phase sequence protection	配有相序保护器 Equipped with phase sequence protector	
环境条件 Environment		环境温度 Ambient temperature	-5℃-40℃	
		相对湿度 Relative humidity	≤85%RH	
		电源 Power	AC400V±10%，50Hz	
培训 Training			免费远程技术培训 Free remote technical training and support	

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附件二 图纸 Appendix - Drawing

固化炉/Oven

技术说明:
1、外形部分:单个烘箱外形尺寸:W1940*D2350*H1830mm,外壳材质均采用1.5mm冷板制作,底部装移动脚轮、可调脚杯;
2、内胆部分:内胆尺寸为:W1500*D1500*H1500mm。内胆安装2台1.5KW运风马达,及各配12寸风轮。内胆背部装有发热管加热。内胆采用SUS304-1.5mm不锈钢板制作。保持内胆清洁无尘、防生锈、耐腐蚀,采用耐高温隔热硅酸岩棉隔热保温。
3、电器部分:电源为三相五线制AC400V50HZ,整机功率约45KW。采用欧姆龙温控器控制,其他电器采用欧姆龙或施耐德,以确保设备正常工作,减少因配件问题造成的设备故障,仪表显示精度±0.1℃,温度均匀性±3℃。室温+20℃到200℃可调。

Technical Description:
1. Outer Shape: Dimensions of a single oven: W1940*D2350*H1830mm. The shell material is made of 1.5mm cold plate, and the bottom is equipped with movable casters and adjustable foot cups;
2. Chamber: Size: W1500*D1500*H1500mm. Two sets of 1.5KW recirculation motors are installed in the chamber, each equipped with a 12-inch wind wheel. There are heating pipers in the back of the oven to provide heating source. The inner tank is made of SUS304-1.5mm stainless steel plate. Keep the inner tank clean, dust-free, rust-proof, and corrosion-resistant, and use high-temperature-resistant silicate rock wool for thermal insulation.
3. 3. Electrical part: The power supply is three-phase five-wire AC400V50HZ, and the power of the whole machine is about 45KW. It is controlled by Delta thermostat, and other electrical appliances would be all from Omron or Schneider to ensure the normal operation of the equipment and reduce equipment failures caused by accessories. The instrument display accuracy is ±0.1℃ and the temperature uniformity is ±3℃. Room temperature is adjustable from +20℃ to 200℃.

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设计	MCL	客户名称	—
日期	2024.04.25	方案名称	烘箱 Batch Oven
单位	mm		
视角		分项名称	方案总体示意图
		数 量	1台 编号 xx/xx