

控制计划 Control Plan																	
☒ 样件 Prototype		☐ 预生产 Pre-Launch			☐ 批量生产 Production			关键联系电话 Key Contact			日期(起草) Date (Orig)			供应商/工厂批准/日期 Supplier/Factory Approval/Date			
控制计划编号/版本号 Control Plan No./Rev No		CP20097832-1 A00						021-67763541 13564787030 (周先生)			2024.05.29			2024.05.29			
零件号码/最新更改水平 Part Number/Latest Revision Level								核心小组 Core Team General Manager Chew Ee Hang Engineering Manager Lu Chuanhai QA Chu Libo Designer Sheng HaiFeng Mao FeiFei				客户工程批准/日期 Customer Engineering Approval/Date					
20097832 REV B												NA					
零件名称/描述 Part Name/Description : ASSY LEFT DOOR												客户质量批准/日期 Customer Quality Approval/Date					
供应商标/工厂 Supplier/Plant Hansin Precision Engineering Shanghai												其他批准(如需要) Approval by Others (if required)					
供应商标号 Supplier Code: NA								NA									
过程名称 Process Name		设备/工序 Equipment/Process	控制项目 Control Items	特性 Characteristics			特殊特性等级* Special Characteristics Class*	方法 Methods						负责部门 Responsible Department	反应计划 Response Plan		
操作描述 Operation Description				产品 Product	过程 Process	SPC		产品/过程的规范/公差 Product/ Process Specification / Tolerance	评价 / 测量技术 Evaluation & Measurement Technique	样本 Sample		控制方法 Control Methods					
		容量 Size	频率 Frequency														
10	接收订单 Receive Purchase Order		订单内产品数量及型号 Purchase Order Quantity and Type	√			A	见订单一览表 Refer To Order Checklist	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	行政部 Administration Department	通知客户 Inform Customer			
20	下达生产指令 Issue Work Order		产品生产数量及型号 Production Quantity and Type	√			A	见工作指令号 Refer To Work Order Number	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	行政部 Administration Department	通知客户 Inform Customer			
30	配件采购 Purchase Raw Accessories	1. 20097834 2. SUS304 Ø8X1000mm 3. 20090366 4. 20083825 5. 20114741 6. LOCTILE 495 胶水 7. 底漆：E61AP5027-020P1， 固化剂V66VP5001-002P8， 稀释剂R07KP1039-016P7 面漆：F63SP3805-18KG 固化剂V66VE0001-004P8 稀释剂R07KP1004-016P7	配件规格型号 Specification & Type of and Accessories	√			A	见采购单与客户产品BOM表 Refer To BOM List	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	采购部 Purchasing Department	拒收或退换货 Reject or Return			
40	接受配件 Receive components		配件规格型号 Specification & Type of Accessories	√			A	见采购单与送货单 Refer To PO and DO	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	采购部 Purchasing Department	拒收或退换货 Reject or Return			
50	IQC 进料检验	1. 20097834 2. SUS304 Ø8X1000mm 3. 20090366 4. 20083825 5. 20114741 6. LOCTILE 495 胶水	供应商名称 Supplier Name	√			A	见“合格供应商名录” “Check "Qualified Supplier List"	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	IQC	拒收或退换货 Reject or Return			
			产品规格、型号 Part Specification, Type	√			A	见采购订单/送货单/BOM 表 Check Purchase Order / Delivery Order / BOM List	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	IQC	拒收或退换货 Reject or Return			
			材质证明,尺寸报告 Material Certification, Dimension report	√			A	IQC进料检验报告 IQC Report	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	IQC	拒收或退换货 Reject or Return			
		底漆：E61AP5027-020P1 固化剂V66VP5001-002P8 稀释剂R07KP1039-016P7 面漆：F63SP3805-18KG 固化剂V66VE0001-004P8 稀释剂R07KP1004-016P7	颜色，光泽	√			A	1. 核对供应商提供的物性表，RoHS及测试油漆 附带批次颜色差，光泽等。 2. ΔE≤2.0 Gloss: 25±5@60°.	1. 色差仪 2. 光泽仪 1. Photo Spectrometer (KONICA MINOLTA) 2. Gloss Meter	每型号 Each Type	每批次 Each Batch	1次	IQC/喷漆技术员	拒收或退换货 Reject or Return			
		磅秤 Weighing Scale	数量/重量 Quantity / Weight	√			B	见原材料采购单/送货单 Check Raw Material Purchase Order/Delivery Order	目视/称重检测 Dimension Measurement	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	仓管 Warehouse Management	退货 Return Goods			
		白炽灯 Incandescent lamp	外观 Appearance	√			A	见相应图纸/检验规范 Check Drawings / Inspection Specification	目视检验 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	IPQC	返工/报废 Rework / Scrap			
60	原材料及配件入库 Storage of Raw Materials and Accessories			√			B	数量准确，无包装破损，标识正确 Correct Quantity, Packaging Intact and Correct Labels	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	IQC	返工或退货 Rework or Return Goods			
70	领料 Requisite Material	1. 20097834 2. SUS304 Ø8X1000mm	批号，材料名称，数量 Lot Number, Name of Material and Quantity	√			B	领料记录表 Material Requisition Record Sheet	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	先进先出管理、领料单、工单 FIFO, Material Requisition Form, Work Order Form	生产/仓管 Production / Warehouse Management	拒收并通知相关部门 Reject and Inform Relevant Department			
80	车床加工 Turning Process	外观 Appearance	√			A	外观，缺料，损伤检验 Appearance Shortage of Material, Damage, Other Defects check	目视检验, Visual Check	100%	每批次 Each Batch	见相应图纸/检验规范 Check Drawings / Inspection Specifications	QC	返工/报废 Rework / Scrap				
		20099322	尺寸 Dimension	√		A	(2) Ø5 m6+0.012/+0.004	Control dimension/M	MIL-STD-105E (S- 1)	每批次 Each Batch	检验 Inspection	IQC	拒收或退换货 Reject or Return				
							(3)  0.05 A	Control dimension/CMM									
							(4) 1.2±0.05	Control dimension/DC									
							(5)  0.06 A	Control dimension/CMM									
							(10) Ø4 m6+0.012/+0.004	Control dimension/M									
							(13)  0.05 A	Control dimension/CMM									
							(14) 1.2±0.05	Control dimension/DC									
		20099323	尺寸 Dimension	√	A	(4) Ø5 m6+0.012/+0.004	Control dimension/M	MIL-STD-105E (S- 1)	每批次 Each Batch	检验 Inspection	IQC	拒收或退换货 Reject or Return					
						(5)  0.05 A	Control dimension/CMM										
						(8) Ø4 m6+0.012/+0.004	Control dimension/M										
						(11)  0.05 A	Control dimension/CMM										
(12) 1.2±0.05	Control dimension/DC																
90	抛光部门加工	20099322	外观 Appearance	√			A	去除毛刺及利角	目视检验, Visual Check	100%	每批次 Each Batch	见相应图纸/检验规范 Check Drawings / Inspection Specifications	QC	返工/报废 Rework / Scrap			
100	电解抛光+钝化 ELECTROPOLISHING + PASSIVATION	1. 20099322 2. 20099323	外观 Appearance	√			A	1. 表面处理控制良好 Well controlled of surface treatment 2. 运输过程无碰伤不良。 No Damage during transportation.	目视检验, Visual Check	100%	每批次 Each Batch	见相应图纸/检验规范 Check Drawings / Inspection Specifications	QC	返工/报废 Rework / Scrap			
110	CNC加工 CNC machining	20097834	外观 Appearance	√		A	外观，缺料，损伤检验 Appearance Shortage of Material, Damage, Other Defects check	目视检验, Visual Check	100%	每批次 Each Batch	见相应图纸/检验规范 Check Drawings / Inspection Specifications	QC	返工/报废 Rework / Scrap				
		尺寸 Dimension	√	A	(19)  0.15 A	Control dimension/CMM	首件检验1pc / 制程检验1pc/ 末件检验1pc / Inspection of 1st Article 1pc/	开始时 4小时/次 结束时 Start by checking 4 hours / 1 time End by checking	见相应图纸 Check Drawings	IPQC	返工/报废 Rework / Scrap						
(42) 2X 9±0.1	Control dimension/SS																
(49) 2X 306±0.1	Control dimension/SS																
(50) 2X 14.36±0.1	Control dimension/SS																
(57) 2X 50±0.05	Control dimension/SS																

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Hansin Precision Engineering Shanghai								NA									
过程名称 Process Name		设备/工序 Equipment/Process	控制项目 Control Items	特性 Characteristics			特殊特性等级* Special Characteristics Class*	方法 Methods						负责部门 Responsible Department	反应计划 Response Plan		
操作描述 Operation Description				产品 Product	过程 Process	SPC		产品/过程的规范/公差 Product/ Process Specification / Tolerance	评价 / 测量技术 Evaluation & Measurement Technique	样本 Sample		控制方法 Control Methods					
									容量 Size	频率 Frequency							
								(63) 2X 9.19±0.2	Control dimension/CMM	In-process Production Inspection 5pcs /Final Article Inspection 1 PC	every 4 hours tomorrow by 1 time for the last shot						
							(64) 50±0.05	Control dimension/CMM									
							(65) 9±0.15	Control dimension/CMM									
							(67) 2XØ 4 H7 (+0.012/-0)	Control dimension/PG									
120	抛光部门加工	打磨机, #240砂纸		√			A	内表面及外表面进行打磨机, 去除表面碰伤痕及划痕等, 擦伤, 磕碰等不良	目视检查 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	生产 Production	返工/报废 Rework / Scrap			
		包装 Packaging	包装方式 Packaging Methods	√			B	见喷漆前包装作业指导书 Refer Work Instruction for Packaging before Painting	目视检验 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	生产 Production	返工/报废 Rework / Scrap			
130	外协本色铬酸盐处理 Outsource for surface treatment	20097834	外观 Appearance	√			A	1.本色铬酸盐处理良好 1. Well controlled of surface treatment 2.运输过程无碰伤不良。 2. No Damage during transportation.	目视检验 Visual Check	100%	每批次 Each Batch	见相应图 Check Drawings	QC	返工/报废 Rework / Scrap			
140	喷漆 Painting		作业前准备好防护用品	√			B	1.防护口罩 2.防静电帽 3.橡胶手套 4.防静电服 5.防静电鞋套	目视检验 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	生产 Production	返工/报废 Rework / Scrap			
			作业人员穿戴要求	√			B	1.拉链拉紧, 2.领口扣紧, 3.袖口扎紧。 4.穿戴用品干净整洁, 无灰尘, 脏污等。	目视检验 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	生产 Production	返工/报废 Rework / Scrap			
			油漆调配及喷漆要求	√			A	1. 防护用品穿戴完整后方可进入油漆房开始调配油漆。 底漆: E61AP5027-020P1, 固化剂V66VP5001-002P8, 稀释剂R07KP1039-016P7, 配比: 10比1比1 面漆: F63SP3805-18KG, 固化剂V66VE0001-004P8, 稀释剂R07KP1004-016P7 配比:6比1比4-5 2. 喷漆气压1-2KG/cm ² , 喷枪口径Ø0.8-1.5mm ,喷漆距离15-25 cm	目视检验/电子称 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	生产 Production	返工/报废 Rework / Scrap			
			素材检查,遮蔽处理	√			A	1. 有部分区域不需要喷漆, 需要喷漆前做遮蔽处理, 详见喷漆区域图。 2. 对素材进行外观检验, 合格产品去除表面灰尘 3. 外观等级要求参照内部喷漆区域图, 及illumina 外观标准要求。详见: Redline 200050774_02_Windu_Instrument_Cosmetic_Specification	目视检验/客户外观标准/喷漆区域图 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	生产 Production	返工/报废 Rework / Scrap			
			喷漆作业	√			A	1. 喷正面及侧面底漆, 烘烤50°C±5 °C, 1小时以上 2. 检查外观, 补泥, 抛光打磨。 3.喷正面第一遍银色面漆, 50°C±5 °C烘烤半小时以上。 4. 检查外观/补原子灰, 抛光打磨, 喷第二遍面漆。烘烤50°C±5 °C, 1小时以上, 静置1小时以上。 5. 检验外观, 色差和光泽。如有不良, 再次重复返修喷面漆。 6. 每批产品喷漆时, 一起喷一片色板, 完成后做好光泽, 色差及性能检测, 贴标签存档。	目视检验/喷漆流程图/喷漆作业指导书。 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	生产 Production	返工/报废 Rework / Scrap			
		1.Photo Spectrometer (KONICA MINOLTA) 2.Gloss Meter	喷漆颜色 Colour of Spray Paint	√			A	发光银 LUMINOUS SILVER, POLANE 8300 ΔE≤2.0 Gloss: 25±5@60°	目视+ 样件色板 Visual + Color Chip Sample	100%	每批次 Each Batch	全检 Full Inspection	IQC	返工/报废 Rework / Scrap			
		1.美工刀 2.百格板 3.浓度70%酒精 4. 客户批准标准色板 5. 3M 250胶带 6.棉布或棉签 7. 摩擦实验机器。	油漆性能测试	√			A	1. 百格测试允许脱落面积不超过 10%。测试方法详见客户外观标准 15019430_E 第11.4.2项 2.耐醇性: 70%乙醇, 500g力/cm ² 擦拭最少50次来回 3.涂层硬度≥F (测试方法: ASTM D3363) 4.磨损实验: >50 rubs per minute with load of 1.65kg using cotton cheesecloth	目视检验/产品批次色板 Visual Check	每批 Each Box	每批次 Each Batch	1PC	IQC	返工/报废 Rework / Scrap			
			外观检查 Appearance Inspection	√			B	见喷漆外观检验作业指导书	目视检验 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	IQC	返工/报废 Rework / Scrap			
150	喷漆后检验 Inspection After Spray Painting		外观 Appearance	√			A	喷漆检验作业指导书 Painting Inspection Work Instruction	目视检验 Visual Check	100%	每批次 Each Batch	全检 Full Inspection	FQC	返工 Rework			
		1.Photo Spectrometer: KONICA MINOLTA 2.Gloss Meter: 3nh (NHG268)	喷漆颜色 Colour of Spray Paint	√			A	1. LUMINOUS SILVER, POLANE 8300 2. 照明需求(光源800-1200LUX) 3. 色差<2, 光泽: 25±5 gloss unit @60° 1. LUMINOUS SILVER, polane 8300 2. Lighting Requirements(800-1200LUX), 3. Delta E <2 Gloss:25±5 gloss unit @60°	目视+ 样件色板/色差仪+光泽仪 Visual +Standard Color Coupon /color meter/Gloss Meter	MIL-STD-105E (S-1)	每批次 Each Batch	检验 Inspection	QC	返工/报废 Rework / Scrap			
160	放置于待装配货架 Placed on the shelf to be assembled		产品位置,外观 Parts Position, Appearance	√			B	产品在货架上摆放整齐, 避免磕碰。 The products are neatly placed on the shelves to avoid collisions.	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	全检 Full Inspection	QC	返工 Rework			
170	领料 Requisite Material	1. 20099322 2. 20099323 3. 20090366 4. 20083825 5. 20114741 6. LOCTILE 495 胶水	批号, 材料名称, 数量 Lot Number, Name of Material and Quantity	√			B	领料记录表 Material Requisition Record Sheet	目视检验 Visual Check	每型号 Each Type	每批次 Each Batch	先进先出管理、领料单、工单票 FIFO, Material Requisition Form, Work Order Form	生产/仓管 Production / Warehouse Management	拒收并通知相关部门 Reject and Inform Relevant Department			
180	组装 Assembly	20097832	外观 Appearance	√			B	产品组装完好, 无错位, 间隙, 脱落等不良 Part Assembly Intact, No Misalignment, Gap, Dropping and Other Defects	目视检验 Visual Check	每批 Each batch	全检 Full Inspection	组装作业指导书 Assembly Work Instruction	组装员工 The assembly workers	不合格品控制程序 Non-conforming Part Control Procedure			
190	包装入库 Packaging warehousing		产品位置,外观 Parts Position, Appearance	√			B	1. 外观, 包装 Appearance and Packaging 2. 视频拍摄检查 Video Recording Check 3. 视频检查前, 包装人员拿起产品, 对所有的面进行仔细检查。Before the video inspection, the packer picks up the part and carefully inspects all the sides. (零件必须以任何角度进行检查, 不会指定角度。No angle will be specified and parts are subject to check at any angles.)	包装规格/ 目视检验/视频拍摄检查 Packing Specifications / Visual Check/ Video Recording Check	100%	每批次 Each Batch	入库单 Storage List	OQC	1. 返工 Rework 2.退回车间, 重新标识 Return to label again			
200	产品储存 Storage of Parts			√			B	产品库位、数量、编号标识清晰 Clear Identification of Parts Storage Location, Quantity and Parts Number	目视 Visual Check	100%	每批 Each Box	每批 Each Shipment	仓管 Warehouse Management	重新标识 Label Again			

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操作描述 Operation Description				产品 Product	过程 Process	SPC		产品/过程的规范/公差 Product/ Process Specification / Tolerance	评价 / 测量技术 Evaluation & Measurement Technique	样本Sample		控制方法 Control Methods				
										容量 Size	频率 Frequency					
210	出货 Outgoing	外观 Appearance	名称, 品号, 数量, 版本号, 生产日期等标识正确 Ensure the Accurary and Consistency of Part Name, Part number , Quantity and Revised Production Date	√			C	检验计划 Inspection plan	目视 Visual Check	一次 1 Time	每批 Each batch	每批 Each Shipment	OQC	不合格品控制程序 Non-conforming product control procedure		
220	发运 shipment		出货数量, 规格正确, 防护得当 Number of Shipments, Correct Specifications and Proper Protection	√			C	核对发货单 Check invoice	目视 Visual Check	每批 Each Box	每批 Each Box	每批 Each Shipment	仓管 Warehouse Management	不合格品控制程序 Non-conforming product control procedure		

特殊特性分类 Remarks for Special Features categories:

A: 对于最终产品很重要 , 是重要的过程控制等级 It is an important level of process control for the final part

B: 影响最终产品的特性 , 在生产过程中容易控制 Easy to control the production process that can affect the characteristics of the final part

C: 对最终产品的特性稍有影响 , 在生产过程中很容易控制 Slight impact on the characteristics of the final part and easier to control during the production