

Finehope



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2003 ISO9001

IATF16949

2021 IATF16949
50
2007 Finehope Caterpillar
SPC MSA FMEA APQP PPAP 5
Caterpillar

Our Advandages



2002 Finehope PU
Finehope
500



2021 IATF16949
50
2007 Finehope Caterpillar
SPC MSA FMEA APQP PPAP 5
Caterpillar



□□□□□□

1.

Finehope PU CATFIATTVHSTIGA12

2. Finehope □□□□□□□□□□?

- [illegible]

3.

- 1) **APQP**: **Advanced Product Quality Planning** (APQP)
- 2) **Finehope** **Advanced Product Quality Planning** (APQP)
- 3) **Advanced Product Quality Planning** (APQP)
- 4) **Advanced Product Quality Planning** (APQP)
- 5) **Advanced Product Quality Planning** (APQP)

4. Finehope

- 1)
- 2)

3)

4)

5. PU



About us







Our Certification



2019年

Finehope[2019]年
2019年

2020年

Finehope[2020]年
2020年

2019年

2019年



2018年

Finehope (2018年)
2018年

2018年

Finehope (2018年)
2018年

2018年

2018年





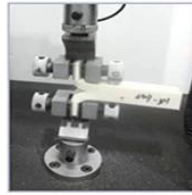
Quality Assurance



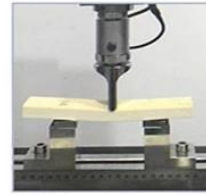
UNIVERSAL TESTING MACHINE(UTM)



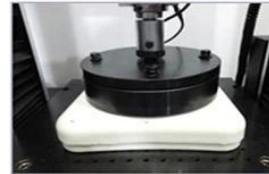
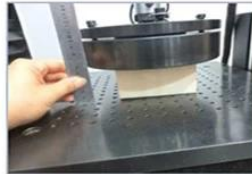
Tensile Test



Tear Resistance Test

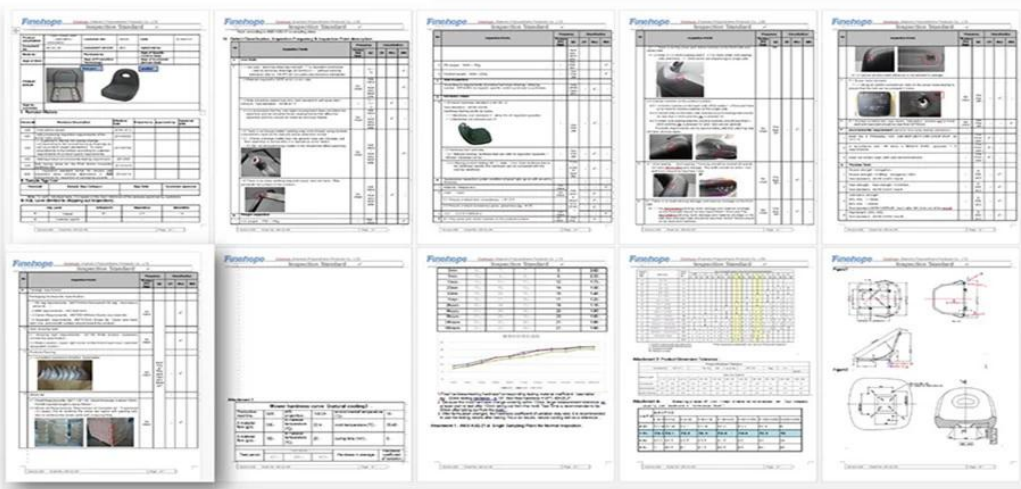


Compressive Strength



Indentation Force Deflection

INSPECTION STANDARD



MATERIAL PERFORMANCE TEST REPORT



Customer			
Location	New Zealand		
Customer Code	G1019		
Risk Assessment			
New:	Site ☐	Technology ☐	Process ☐
Other Risks	☐		

Project			
Finehope Contact	Wendy Yang		
Part No.			
Part Name	G1019Y04		
Change Level/Date			
User Plant(s)	Finehope		

Core Team Members	Company/Title	Phone/Fax/E-Mail
Tiger Xu	G.M.	
Yibin Lim	Vice G.M.	
Cindy Wu	Sales Manager	cindy@finehope.com
Liangquan Wan	Project Manager	
Wendy Yang	Sales	wendy@finehope.com

Build Level	Material Required Date	Quantity	No. Concurrent	
			SRCs	Majors
Product Design and Development	21-Jun-21	10		
Product and Process Validation	25-Jun-21	15		

APQP Deliverable	Finehope APQP Reference Only	G Y R	Project Need Date	Supplier Timing Date	Actual Closure Date	Supplier Lead Resp Initials	Finehope Acceptance Complete	Remarks or Assistance Required
AIAG APQP Phase 2 - Product Design and Development								
1. Project Timeline (Synchronized w/Production Time Plan)	2030	G	20-Jun-21	21-Jun-21	21-Jun-21	22-Jun-21	23-Jun-21	
2. Customer Inputs / Requirements	2030	G	23-Jun-21	24-Jun-21	24-Jun-21	25-Jun-21	26-Jun-21	
3. Warranty & Quality Mitigation Plan	2030	G	24-Jun-21	25-Jun-21	25-Jun-21	26-Jun-21	27-Jun-21	
4. Customer Specific Requirements	2030	G	25-Jun-21	26-Jun-21	26-Jun-21	27-Jun-21	28-Jun-21	
5. Design FMEA	2080	G	26-Jun-21	27-Jun-21	27-Jun-21	28-Jun-21	29-Jun-21	
6. Preliminary Bill of Materials (BOM)	2030	G	27-Jun-21	28-Jun-21	28-Jun-21	29-Jun-21	30-Jun-21	
7. Prototype Control Plans	2110	G	28-Jun-21	29-Jun-21	29-Jun-21	30-Jun-21	1-Jul-21	
8. Prototype Builds	2110	G	29-Jun-21	30-Jun-21	30-Jun-21	1-Jul-21	2-Jul-21	
9. Design Verification Plan & Report (DVP&R)	2120	G	30-Jun-21	1-Jul-21	1-Jul-21	2-Jul-21	3-Jul-21	
10. Design / Process Review	2130	G	1-Jul-21	2-Jul-21	2-Jul-21	3-Jul-21	4-Jul-21	
11. Team Feasibility Commitment	2130	G	2-Jul-21	3-Jul-21	3-Jul-21	4-Jul-21	5-Jul-21	
12. APQP Status Sub-Supplier	2130	G	3-Jul-21	4-Jul-21	4-Jul-21	5-Jul-21	6-Jul-21	
13. Production Drawing & Specifications	2220	G	4-Jul-21	5-Jul-21	5-Jul-21	6-Jul-21	7-Jul-21	
14. Subcontractor Purchase Orders (Customer Tooling)	2220	G	5-Jul-21	6-Jul-21	6-Jul-21	7-Jul-21	8-Jul-21	
15. Facilities, Equipment, Tools and Gages	2260	G	6-Jul-21	7-Jul-21	7-Jul-21	8-Jul-21	9-Jul-21	
AIAG APQP Phase 3 - Process Design and Development								
16. Product/Process and Quality System Review	3030	G	9-Jul-21	10-Jul-21	10-Jul-21	10-Jul-21	11-Jul-21	
17. Manufacturing Process Flow Chart	3040	G	11-Jul-21	12-Jul-21	12-Jul-21	12-Jul-21	13-Jul-21	
18. Process FMEA	3100	G	13-Jul-21	14-Jul-21	14-Jul-21	14-Jul-21	15-Jul-21	
19. Pre-Launch Control Plan	3110	G	15-Jul-21	16-Jul-21	16-Jul-21	16-Jul-21	17-Jul-21	
20. Process Work Instructions	3120	G	17-Jul-21	18-Jul-21	18-Jul-21	18-Jul-21	19-Jul-21	
21. Measurement Systems Evaluation	3130	G	19-Jul-21	20-Jul-21	20-Jul-21	20-Jul-21	21-Jul-21	
22. Packaging Specifications & Approvals	3160	G	21-Jul-21	22-Jul-21	22-Jul-21	22-Jul-21	23-Jul-21	
23. Manufacturing Team Training	3170	G	23-Jul-21	24-Jul-21	24-Jul-21	24-Jul-21	25-Jul-21	
AIAG APQP Phase 4 - Product and Process Validation								
24. Subcontractor PPAP Approval	4005	G	9-Jul-21	10-Jul-21	10-Jul-21	10-Jul-21	11-Jul-21	
25. Production Control Plan	4008	G	11-Jul-21	12-Jul-21	12-Jul-21	12-Jul-21	13-Jul-21	
26. Production Readiness Review (PRR)	4009	G	13-Jul-21	14-Jul-21	14-Jul-21	14-Jul-21	15-Jul-21	
27. Production Trial Run (PTR)	4010	G	15-Jul-21	16-Jul-21	16-Jul-21	16-Jul-21	17-Jul-21	
28. Process Capability Studies	4030	G	17-Jul-21	18-Jul-21	18-Jul-21	18-Jul-21	19-Jul-21	
29. Production Validation Plan & Report (PV&R)	4090	G	19-Jul-21	20-Jul-21	20-Jul-21	20-Jul-21	21-Jul-21	
30. Production Part Approval (PPAP)	4110	G	21-Jul-21	22-Jul-21	22-Jul-21	22-Jul-21	23-Jul-21	
AIAG APQP Phase 5 - Feedback, Assessment and Corrective Action								
31. Initial Production Shipment	5005	G	28-Jul-21	30-Jul-21	30-Jul-21	30-Jul-21	31-Jul-21	
32. Production Ramp-up Plan	5005	G	31-Jul-21	2-Aug-21	2-Aug-21	2-Aug-21	3-Aug-21	
33. Full Production Date	5005	G	5-Aug-21	7-Aug-21	7-Aug-21	7-Aug-21	8-Aug-21	
34. Conduct Lessons Learned	5005	G	8-Aug-21	10-Aug-21	10-Aug-21	10-Aug-21	11-Aug-21	

Design Failure Mode and Effects Analysis

(Design FMEA)

FMEA No.:
DFMEA-001

Page: page 1, totally 3 pages

Made: Xiaodong Qiu

FMEA Date: Nov.10th.2015

Product Name: Injection moulding

Procedure responsible dept: Production Dept

Model year/vehicle types: CRV

Soybean Milk Maker

Important date: Nov.10th.2015

People participated: Develop dept:GaoLin Wei

Sales:Haiyan Wu

PC:Jiannan Yan

Technology Dept:Jianyu Zhou

Purchaser:Yuanyuan Gou

Production dept:Shuwen Dong

QC:Bingxiang Zheng

procedure function requirements	Potential failure mode	Potential effects analysis	severity (S)	grade	potential causes/mechanism of failure	frequency (O)	Current prevention process control	Current detection process control	detection (D)	RPN	recommended measures	Responsibility and target completion date	Action Taken	severity (S)	frequency (O)	difficult to check (D)	RPN
scaphus	size changes of handle	handle cover fall off	6	A	PP size change	6	By adjusting the product of the injection molding process, and measure or test the clasp of product size	measure and test product size	3	108	Add the number of button bit in handle design, in order to keep the connection strength	Xiaodong Qiu 2015/08/25	By adjusting the product of the injection molding process, and measure or test product size	6	1	1	6
scaphus	warping of scaphus handle	Poor appearance break	4	C	high handle wall	6	Add the stiffener to handle wall to prevent deformation	measure and test product size	2	48	If this problem appears, make improvement by adding the stiffener	Xiaodong Qiu 2015/09/30	Add the stiffener to handle wall to prevent deformation	4	2	1	8
scaphus	Deformation of cup-mouth	Micro switch without power	8	A	PP material deformation, Resulting in a perpendicular direction to connect the cup and handle inward deformation, So that both sides of the bit, the micro switch column opposite sink, and	3	Adjust the injection molding process, to prevent extrusion	measure and test cup-mouth size	3	72	in the cup packing control the direction of the lateral dimension of no force, stipulate the way of packing	Xiaodong Qiu 2015/09/10	stipulate the cup packing control the direction of the lateral dimension of no force, stipulate the way of packing	8	1	3	24

H-R-P-001-1

Process Failure Mode and Effects Analysis

(PFMEA)

潜在失效模式和后果分析

FMEA No.FMEA20150325-01

Page 3

Maker:Wenhong-Huang

FMEA Date (Original):2015.03.25

Item:Welding Improvement

Process Responsibilities: Production welding group

Model year/project

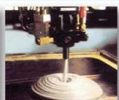
Key Dates

失效模式分析																	
Item 序号	Potential failure mode 潜在失效模式	Potential consequences of failure modes 失效模式造成的后果	Severity 严重度	Grade 等级	Potential causes of failure 失效模式的主要原因	Occurrence degree 发生程度	Current process control and prevention 现行过程控制与预防	Current process control detection 现行过程控制检测	Detection rate 检测率	RPN	Suggest measures 建议措施	Responsibility and target completion date 责任人和目标完成日期	Measure results 措施结果	Severity 严重度	Incidence rate 发生率	Detection degree 检测度	RPN
Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题	Request 问题
Clamping (clamping required is in place, no making or welding loaded) 紧固（紧固到位，无漏装、漏紧）	Clamping is not in place 紧固不到位	Welding error, leak welding, affect the assembly or use function 焊接错误、漏焊、焊接缺陷、影响装配使用功能	8	B	● Staff negligence 作业人员疏忽 ● Future for bad 未来发生不良	4	● Make the operation standard book 制定作业指导书 ● Make maintenance standards, regular maintenance 制定保养标准、定期维护、维护	● Visual inspection 目视检查 ● Finished 100% full inspection 完成100%全检	6	144	● Pre-service training of staff 岗前培训 ● Regular maintenance 定期定期维护		6	3	4	72	
	Clamping is not in place 紧固不到位	Welding error, leak welding, affect the assembly or use function 焊接错误、漏焊、焊接缺陷、影响装配使用功能	8	A	● Staff negligence 人员作业失误 ● Future for bad 未来发生不良 ● Future inaccurate 未来发生不准确	4	● Make the operation standard book 制定作业指导书 ● Make maintenance standards, regular maintenance 制定保养标准、定期维护、维护 ● Regular checking of future 定期检查未来	Visual inspection 目视检查	6	192	● Pre-service training of staff 人员岗前培训 ● Regular maintenance 定期维护 ● Make inspection checklist for future 制定检查未来清单		8	3	4	96	
	Attachmate missing 附件漏装	Affect product strength or influence the assembly 影响产品强度或影响装配	8	A	Staff negligence 作业人员疏忽	3	Make the operation standard book 制定作业指导书	Visual inspection 目视检查	4	96	Final inspection personnel do 100% full inspection for each bead with mark 终检人员100%全检，每道焊缝打点		8	2	2	32	
	Attachmate error 附件错装	Influence assembly 影响装配	7	A	No mistake proofing future 未来无防错	3	Make the operation standard book 制定作业指导书	Visual inspection 目视检查	6	126	● Increase the mistake proofing devices 增加防错装置 ● Inspection for final inspection tools 终检工具检查		7	2	4	56	
False welding 假焊	Lack of strength, affect the use of function 强度不足，影响使用功能	9	A	Current, voltage, welding angle, speed setting is not reasonable 电流、电压、焊接角度、速度设定不合理	4	● Welding process guidance making 制定焊接工艺指导书 ● Condition confirmation check 条件确认检查 ● Confirm the failure test on a regular basis 定期确认失效试验	Destructive testing 破坏性试验	8	288	After the procedure is set up to confirm the processing conditions, the execution and marking of the failure test is performed 程序设定加工完毕确认		9	3	4	108		

Production Device

KRAUSS MAFFEI

Finehope has successively introduced many of the world's most advanced German KraussMaffei high-pressure injection machines since 2010.



Reaction Injection Molding (RIM)
High Pressure Machine
KRAUSS MAFFEI
Made in Germany!



Self-invented fully automatic production line

Finehope has independently developed a number of fully automatic P-U injection production lines since 2010. These production lines reduce production costs and meet customer delivery requirements.



Welding Robots



Since 2016, Finehope has continued to purchase welding robots and automatic fixture turntables for welding metal parts. The independent processing of accessories saves the waiting time and procurement cost of outsourcing processing.

CNC Machine

Finehope has continued to purchase CNC equipment since 2016. CNC (Computer Numerically Controlled) machining is a manufacturing process in which pre-programmed computer software dictates the movement of factory tools and machinery. Using this type of machine versus manual machining can result in improved accuracy, increased production speeds, enhanced safety, increased efficiency and most importantly, help customers save costs and improve product quality.



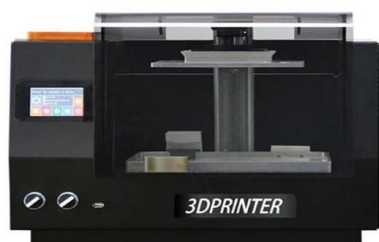
Mould Release Agent Painting Robot



Since 2019, Finehope has purchased robots for spraying water-based release agents to improve the working environment, improve spraying quality and material utilization, and reduce labor costs.

3D printer

Finehope started to purchase 3D printers in 2015. 3D printing can realize rapid proofing of new product prototypes and templates for resin molds, and can also be used for faster and cheaper small batch production.





Social Responsibility

- **Audited by Sedex**

(Supplier business ethics information
exchange)

Labor standard · health and safety · Environmental
protection · Business ethics practice

- **Public-spirited**



Voluntary tree planting after Super Typhoon Meranti in 2016

A VALUE-BASED COMPANY

CUSTOMER FIRST

TEAMWORK

EMBRACE CHANGES

PASSION

INTEGRITY

COMMITMENT

