



DMF/ A  
report

FREE

Mould

3D Design

Product Inspection  
Standard Setting

**Free Product Inspection Standard Setting:**  
In addition to the usual quantification of product physical properties and appearance standards, we will add REACH, RoHS, FDA, CA-65, or CFC Free to the standards according to customer needs.

**Free Mould Opening:**  
Large order quantity with mould cost free.

**Free 3D Design:**  
Finehope help customer design the desired product or modify the design for free.

**Free DFM/A Report:**  
Finehope will show details and solutions of manufacturability and assemblability through PPT to help customers reduce trouble.

PU 671\*546\*66mm

- 规格: 671\*546\*66mm
- 重量: 100-800kg/m<sup>3</sup>
- 颜色: Pantone 色卡
- 应用: 汽车, 机械, 运动器材, 建筑, 工业, 农业, 园艺, 园艺, 园艺
- 认证: RoHS, REACH, EN71-3, CA65



2003年 ISO 9001 认证

**IATF16949 认证:**  
 2021年 IATF16949 认证, 50项条款, 2007年 Finehope 认证, Caterpillar 认证, SPC, MSA, FMEA, APQP, PPAP 5级, 5项条款, Caterpillar 认证

Our Advantages





3) 00 0 00 0000 0000 00 00 0000 0000.

4) 00 0000 00 0000 00.

**5. PU 0000 0000 000000?**

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## About us











TEAM  
ACTIVITIES

## Our Certification



2019-2020年度  
厦门市成长型中小微企业  
Xiamen Growth-oriented Micro, Small & Medium Enterprises  
厦门市工业和信息化局  
厦门市中小企业发展办公室  
二〇一九年五月

2020-2022年度  
厦门市专精特新中小企业  
Xiamen Specialized, Refining, Differentiate, Innovative SMEs  
厦门市工业和信息化局  
Xiamen Municipal Bureau of Industry and Information Technology  
二〇二〇年八月

厦门市科技小巨人领军企业  
Xiamen Science and Technology Little Giant Leading Enterprise  
Level-15  
Certificate  
企业名称: 飞虎(厦门)新材料科技股份有限公司  
Awarded to: Flying Tiger (Xiamen) New Material Technology Co., Ltd.  
发证时间: 2020年12月11日  
批准机关: 厦门市工业和信息化局  
厦门市科技小巨人领军企业认定委员会

Finehope 2019-2020年度“厦门市成长型中小微企业”获得者。Finehope 专注于研发、生产、销售高性能工程塑料，拥有自主知识产权。Finehope 拥有完善的质量管理体系，产品广泛应用于汽车、电子、机械等领域。

Finehope 2020-2022年度“Xiamen Specialized, Refining, Differentiate, Innovative SMEs”获得者。Finehope 是一家专注于研发、生产、销售高性能工程塑料的高新技术企业。公司拥有完善的质量管理体系，产品广泛应用于汽车、电子、机械等领域。

2019年度 Finehope 厦门市科技小巨人领军企业。Finehope 是一家专注于研发、生产、销售高性能工程塑料的高新技术企业。公司拥有完善的质量管理体系，产品广泛应用于汽车、电子、机械等领域。



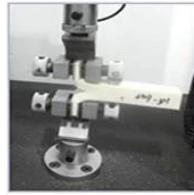
# Quality Assurance



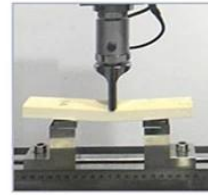
UNIVERSAL TESTING MACHINE(UTM)



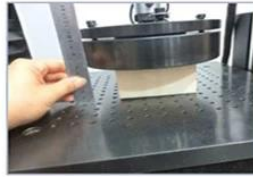
Tensile Test



Tear Resistance Test



Compressive Strength



Indentation Force Deflection

## INSPECTION STANDARD

## MATERIAL PERFORMANCE TEST REPORT

**Finehope**  
**Test Report** No. 00201457201 Date: 20140723 Page 1/4  
 Customer: CUSTOMER SERVICE DEPARTMENT

The following samples were submitted and identified by/on behalf of the client as:

Sample Description: UHMW and MHD (underdevelopment)  
 Material No.: 1  
 Other info.: 1  
 Sample Processing Date: 20140724  
 Working Process: 20140723

**Test Method**

- 001 ASTM D2014-2011 Test of Density, Test Agency
- 002 ASTM D2014-2011 Test of Density, Test Agency
- 003 ASTM D2014-2011 Test of Density, Test Agency
- 004 ASTM D2014-2011 Test of Density, Test Agency
- 005 ASTM D2014-2011 Test of Density, Test Agency
- 006 ASTM D2014-2011 Test of Density, Test Agency
- 007 ASTM D2014-2011 Test of Density, Test Agency
- 008 ASTM D2014-2011 Test of Density, Test Agency
- 009 ASTM D2014-2011 Test of Density, Test Agency
- 010 ASTM D2014-2011 Test of Density, Test Agency
- 011 ASTM D2014-2011 Test of Density, Test Agency
- 012 ASTM D2014-2011 Test of Density, Test Agency
- 013 ASTM D2014-2011 Test of Density, Test Agency
- 014 ASTM D2014-2011 Test of Density, Test Agency
- 015 ASTM D2014-2011 Test of Density, Test Agency
- 016 ASTM D2014-2011 Test of Density, Test Agency
- 017 ASTM D2014-2011 Test of Density, Test Agency
- 018 ASTM D2014-2011 Test of Density, Test Agency
- 019 ASTM D2014-2011 Test of Density, Test Agency
- 020 ASTM D2014-2011 Test of Density, Test Agency

**Finehope**  
**Test Report** No. 00201457201 Date: 20140723 Page 2/4  
 Customer: CUSTOMER SERVICE DEPARTMENT

**Test Result**

No.	Test Item	Unit	Test Standard	Customer Requirement	Customer Sample (unit)	Customer Sample (unit)
1	2	3	4	5	6	7
1	Density	g/cm <sup>3</sup>	ASTM D2014	0.93	0.93	0.93
2	Hardness	HR	ASTM D2014	50	50	50
3	Strength	MPa	ASTM D2014	10	10	10
4	Impact	J/m <sup>2</sup>	ASTM D2014	10	10	10
5	Modulus	GPa	ASTM D2014	1.0	1.0	1.0
6	Creep	%	ASTM D2014	0.5	0.5	0.5
7	Relaxation	%	ASTM D2014	0.5	0.5	0.5

FIG. 1. In order to make the strength of two steel rods can be compared, see the test specimen in the same background color. The red and blue rods in one side is the test specimen strength test comparison.

FIG. 2. For the specific grade value in the above test result, it is the value of specimen with size in one side, and the actual value of the whole sample.

**Finehope**  
**Test Report** No. 00201457201 Date: 20140723 Page 3/4  
 Customer: CUSTOMER SERVICE DEPARTMENT

**Sketch Picture**

1. This picture is only used with the Serial Report from Finehope.

<b>Customer</b>	
<b>Location</b>	New Zealand
<b>Customer Code</b>	G1019
<b>Risk Assessment</b>	
<b>New:</b>	Site <input type="checkbox"/> Technology <input type="checkbox"/> Process <input type="checkbox"/>
<b>Other Risks</b>	<input type="checkbox"/>

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

Core Team Members	Company/Title	Phone/Fax/E-Mail
Tiger Xu	G.M.	
Yubin 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	
			SRs	Majors
Product Design and Develop	21-Jun-21	10		
Product and Process Validat	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 Inits	Finehope Acceptance Complete	Remarks or Assistance Required
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	20-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

Product Name: Injection moulding

Procedure responsible dept: Production Dept

Model year/vehicle types: CRV

Soybean Milk Maker

Important date: Nov.10th.2015

FMEA 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/mechanisms of failure	frequency (O)	Current prevention process control	Current detection process control	detection (D)	RPN	recommended measures	Responsibility and target completion date	action results				
													severity (S)	frequency (O)	difficult to check (D)	RPN	
scyphus	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
scyphus	warping of scyphus 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
scyphus	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 球, 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 use egg cell methods to put the packing which do not squeeze each other	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

Maint:Wenhong-Huang

FMEA Date (Original):2015.03.25

Item:Welding Improvement

Process Responsibilities: Production welding group

Model year/project

Key Dates

Item 项目	Potential failure mode 潜在失效模式	Potential consequences of failure modes 失效后果/潜在失效模式	Severity 严重度	Grade 等级	Potential causes of failure 失效的潜在原因	Occurrence degree 发生度	Current process control and prevention 现行过程控制/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 负责人及目标完成日期	Measure results/测量结果			
													Measures and effective date 措施及有效日期	Severity 严重度	Incidence rate 发生率	Detection degree 可检测度
Request 项目	Clamping is not in place 夹具不在位	Welding error, leak, welding deviation, affect the assembly or use function 焊接错误、漏焊、焊接偏差、影响装配或使用功能	6	B	● Staff negligence 人员疏忽 ● Failure for bad 夹具不到位	4	● Make the operation standard book 制定作业标准书 ● Make maintenance standards, regular maintenance 制定保养标准、定期保养、维护 ● Regular maintenance 定期保养	● Visual inspection 目视检测 ● Finished 100% full inspection 完成100%全检	6	144	● Pre-service training of staff 岗前培训 ● Regular maintenance 定期保养 ● Regular maintenance 定期保养		6	3	4	72
Clamping (clamping required is in place, no missing or wrong loaded) 夹具不在位(夹具不在位, 无漏装或装错)	Clamping is not in place 夹具不在位	Welding error, leak, welding deviation, affect the assembly or use function 焊接错误、漏焊、焊接偏差、影响装配或使用功能	8	A	● Staff negligence 人员疏忽 ● Failure for bad 夹具不到位 ● Failure inaccurate 夹具定位不准确	4	● Make the operation standard book 制定作业标准书 ● Make maintenance standards, regular maintenance 制定保养标准、定期保养、维护 ● Regular checking of fixture 夹具定期检查	Visual inspection 目视检测	6	192	● Pre-service training of staff 岗前培训 ● Regular maintenance 定期保养 ● Make inspection checklist for fixture 制定夹具检查清单		8	3	4	96
Attachments missing 附件缺失	Affect product strength or influence the assembly 影响产品强度或影响装配		8	A	Staff negligence 人员疏忽	3	Make the operation standard book 制定作业标准书	Visual inspection 目视检测	4	96	Final inspection personnel do 100% full inspection for each bead with man 终检人员100%全检, 双人		8	2	2	32
Attachment error 附件错误	Influence assembly 影响装配		7	A	No mistake proofing fixture 无防错夹具	3	Make the operation standard book 制定作业标准书	Visual inspection 目视检测	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、速度设置不合理	4	● Welding process guidance making 制定焊接工艺指导书 ● Condition confirmation check 作业条件确认 ● Confirm the failure test on a regular basis 定期确认失效测试	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. 工序设置完成后确认加工条件, 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.



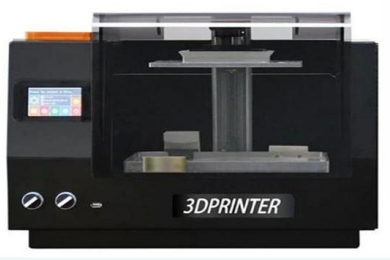
## Mould Release Agent Painting Robot



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 )

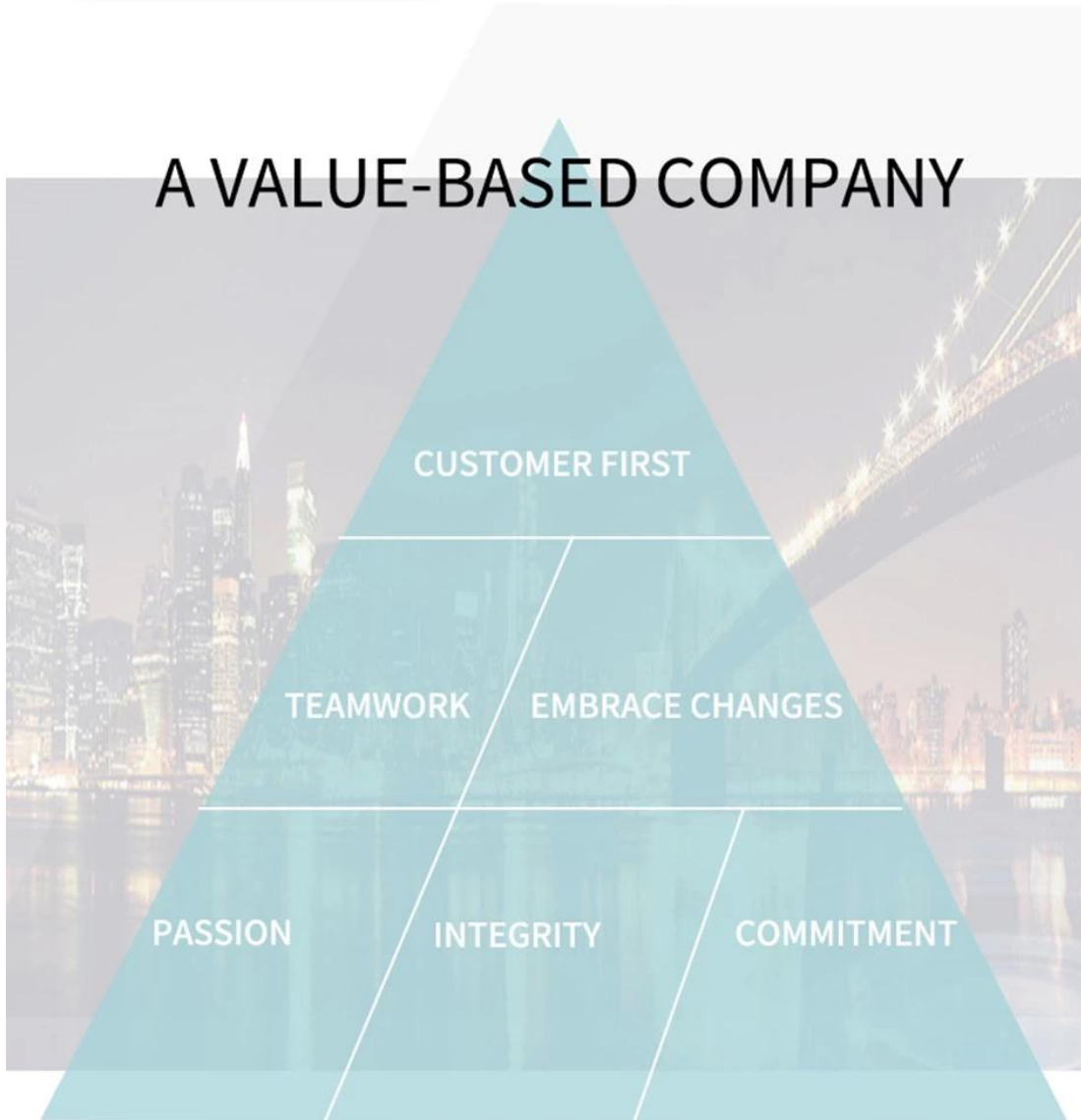
Labor standard · health and safety · Environmental protection · Business ethics practice

- **Public-spirited**



Voluntary tree planting after Super Typhoon Meranti in 2016

## A VALUE-BASED COMPANY



CUSTOMER FIRST

TEAMWORK

EMBRACE CHANGES

PASSION

INTEGRITY

COMMITMENT