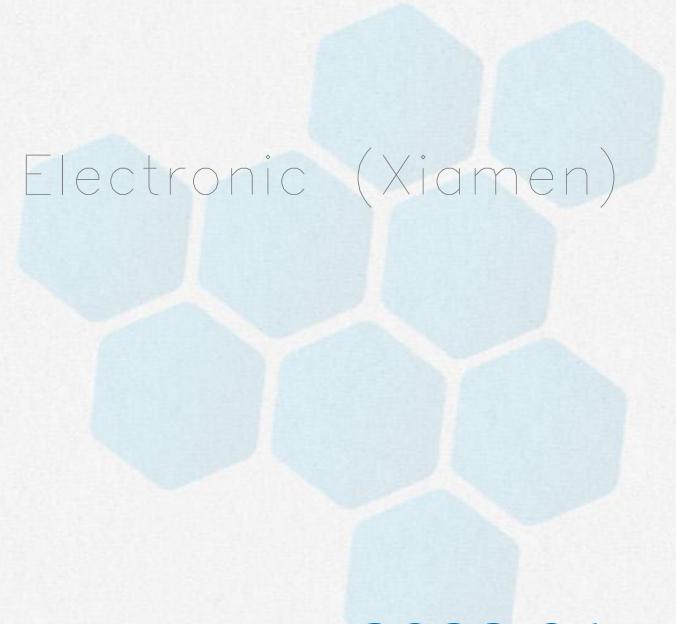


Company Introduction

|Creative| Accountable| Motivated | Open-minded | CAMO Electronic (Xiamen)
Co., Ltd.



2022.01



VISION

——公司愿景——

成为各行业优质客户信赖的线束提供商，员工引以为豪的幸福企业！

To be a reliable wire harnesses & cable assemblies supplier to the world-class clients from all industries, and a company with happiness that all employees are proud of !

◆ 公司简介/Brief Introduction

公司成立于1998年，专业从事各类线束及电缆组件的开发设计、生产和销售。

Macro-s was established in 1998, specializing in R&D, processing and marketing of harnesses and cable assemblies from all industries.

现有员工500余人，二十多条生产线，年生产线束4000万条。

There are more than 500 workers and 20 assembly lines in Macro-s, and 40 million harnesses manufactured per year.

2021年成立武汉分公司，将于2022年正式投产。

Wuhan Macros was founded in 2021, and will be processed to deliver in 2022

厦门工厂



1

武汉工厂

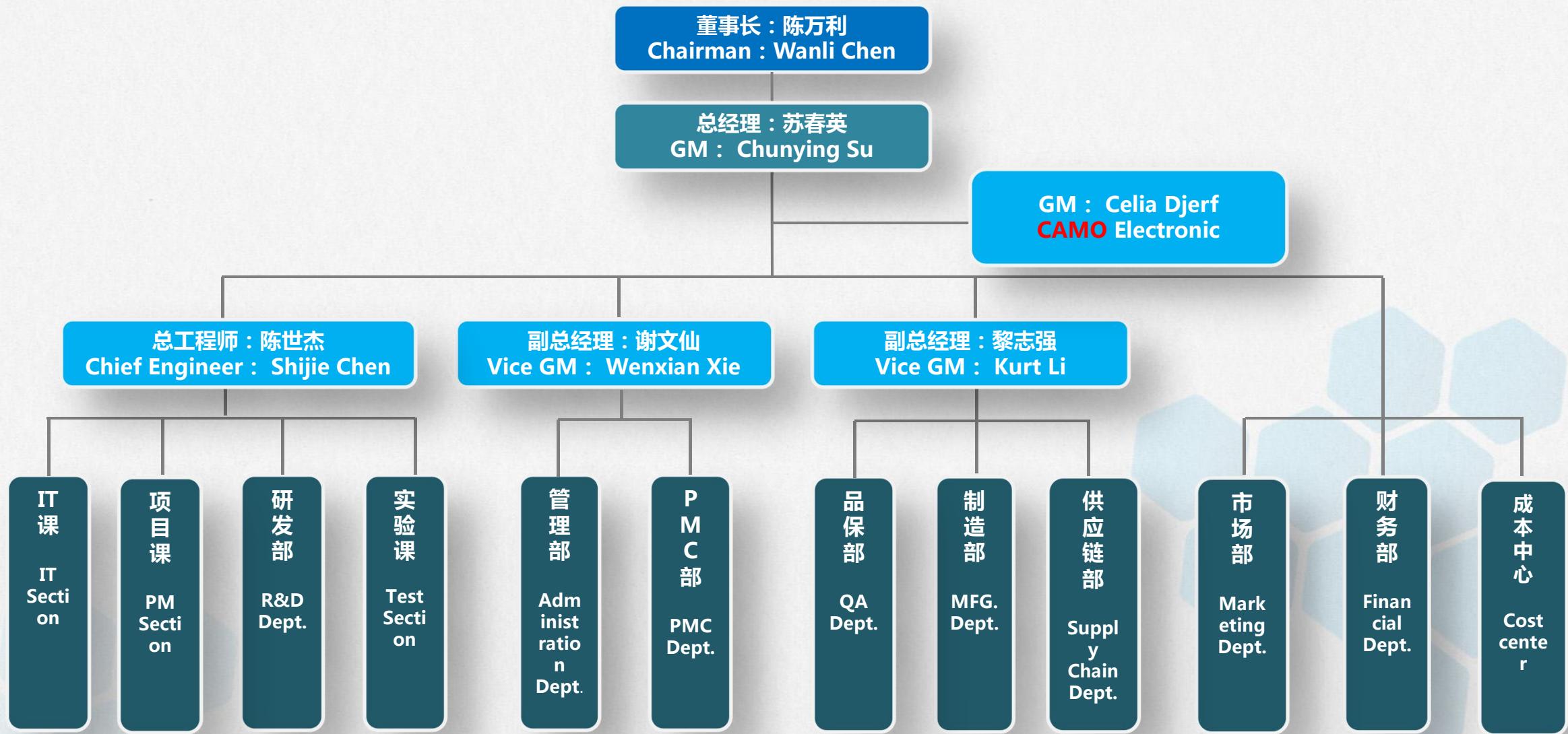


3



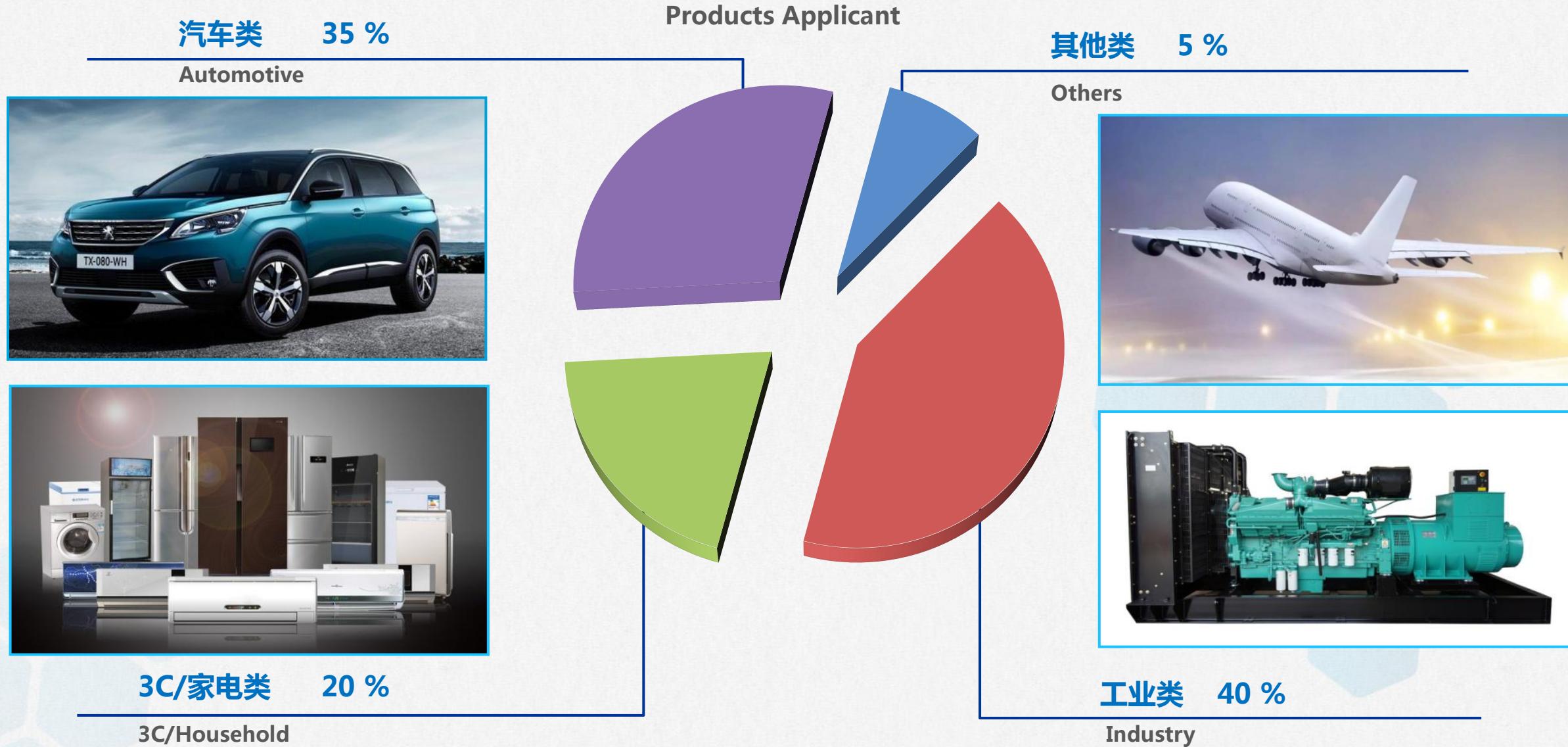
2

◆ 组织结构/Organization Chart



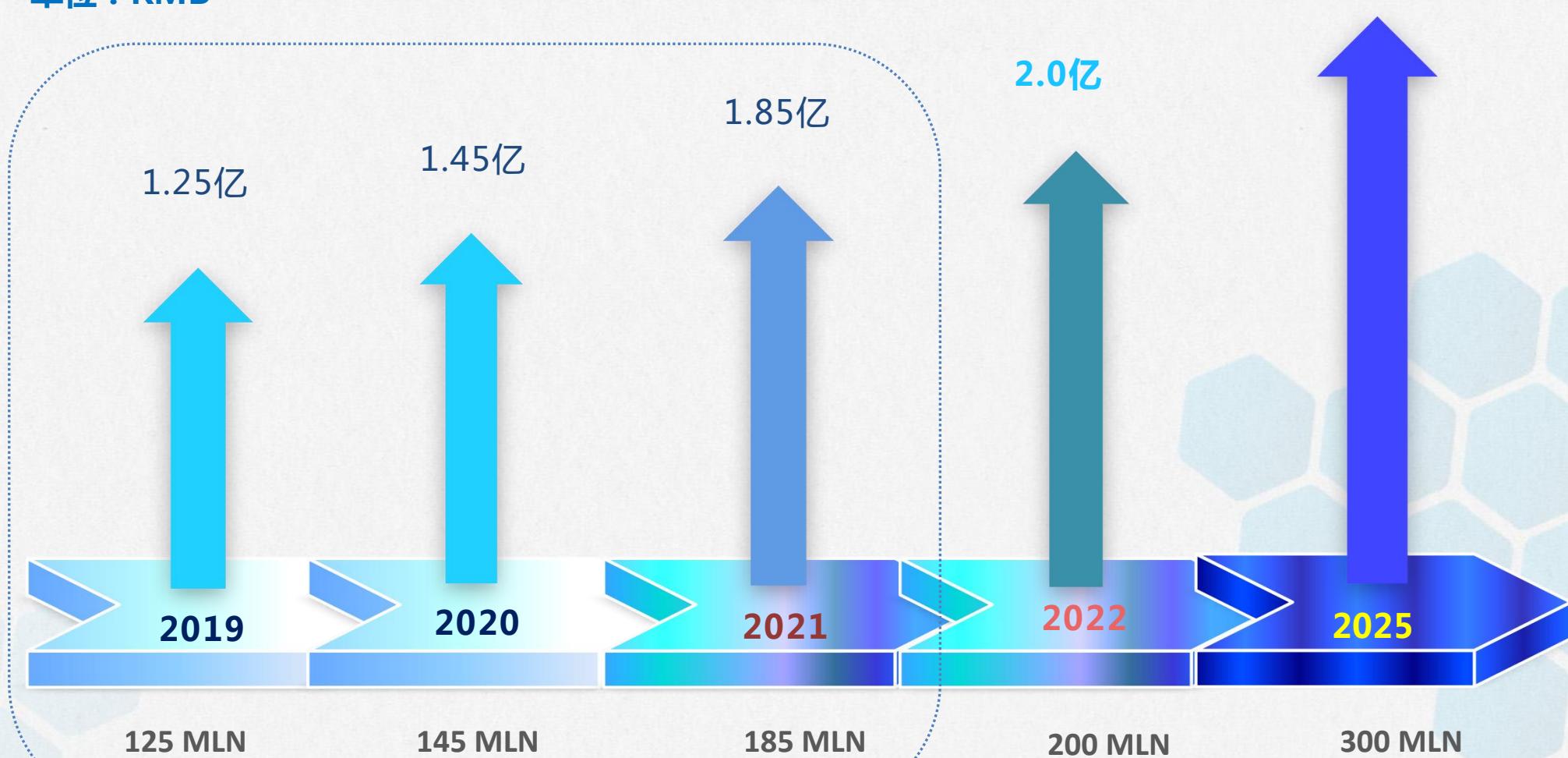
◆ 销售数据/Sales Data

2021销售产品应用行业占比



◆ 销售数据/ Sales Data

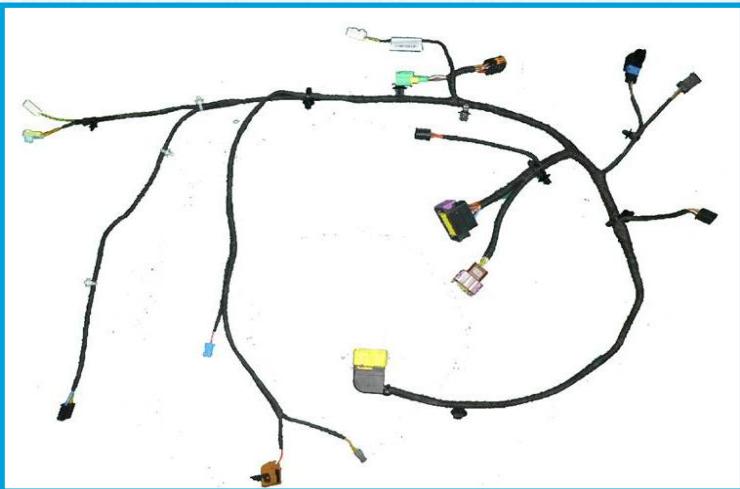
单位 : RMB



◆ 产品展示/Products Exhibition

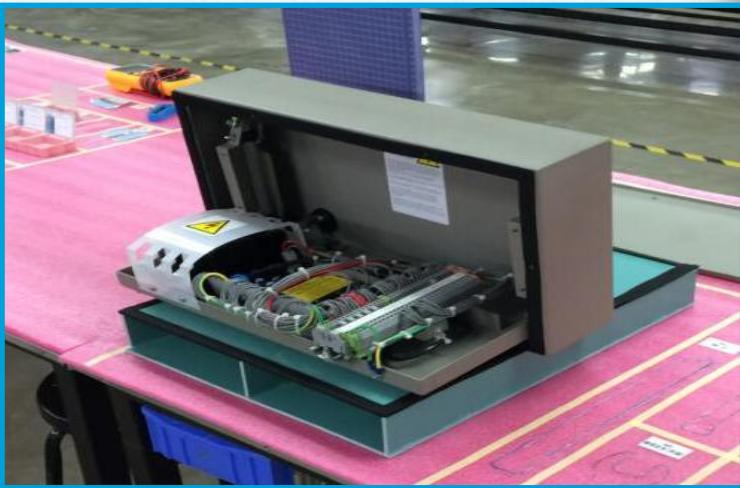
Vehicle
Seat
Cable

汽车座椅线束



Switch
Cabinet
Harness

电力开关盒



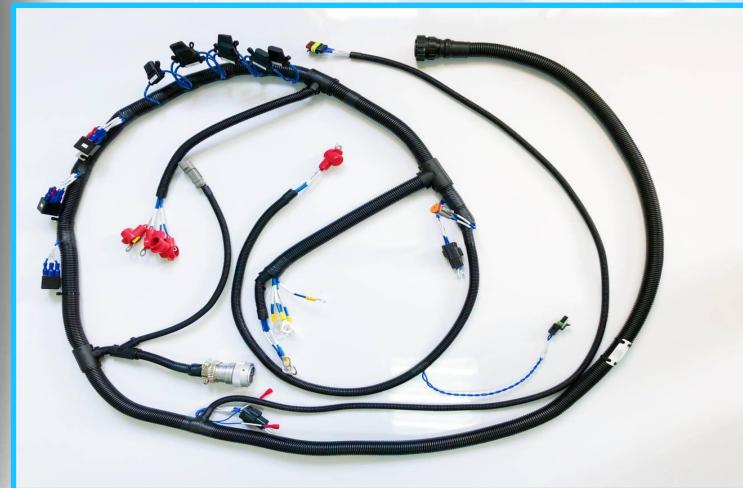
工程机械线束

Engineering
Machinery
Harness



发电机线束

Generator
Power
Cable



◆ 应用领域/Products Exhibition

我们专注于线束解决方案！

We are specialized in providing
professional solutions of harnesses!



汽车 Automotive



发电机组 Generator Set



医疗仪器 Medical Apparatus



飞机 Aircraft



家电类产品 Household Applicants



工具机械设备类产品 Tools & Machinery Equipment



数控设备 CNC Equipment



大型中央空调 Central Air-conditioning



◆ 产品应用/Product Application

应用领域：传统乘用汽车

Application : Traditional vehicle

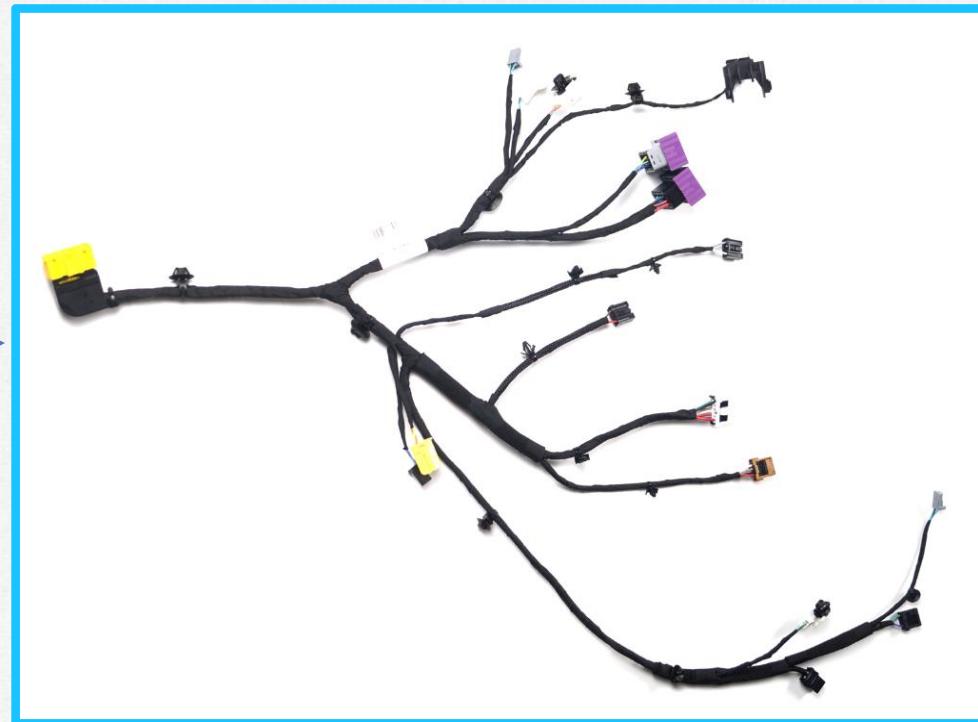
应用位置：传统汽车的座椅、安全气囊、内饰、变速箱、后视镜、后备箱...

Applying Position : Vehicle seat, airbag, interior decoration, gearbox, rearview mirror, trunk...



汽车座椅线束

Automotive Seat
Harness



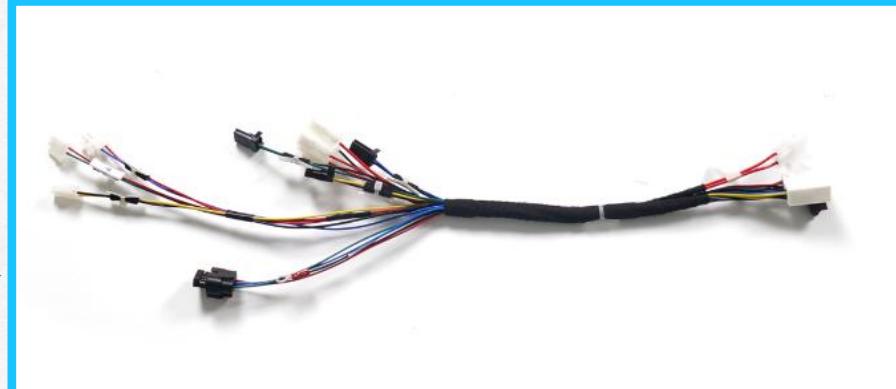
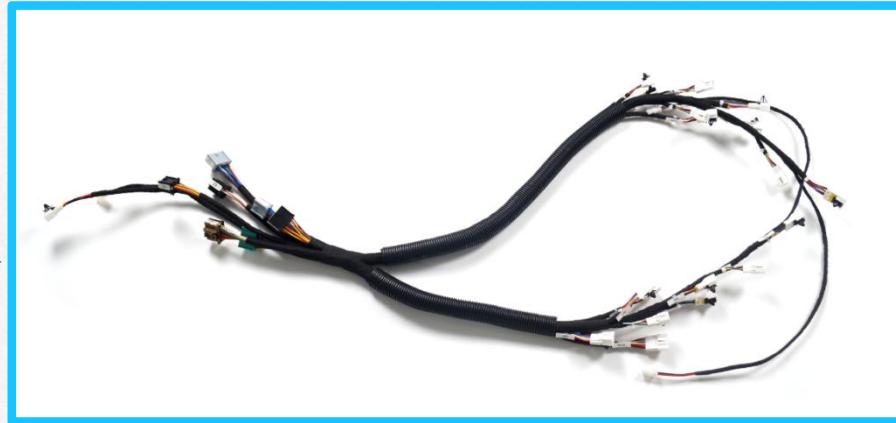
◆ 产品应用/Product Application

应用领域：新能源汽车

Application : New energy vehicle

应用位置：新能源汽车电池包及BMS控制系统线束，商用车的尾气排放系统线束...

Applying Position : New energy vehicles power battery harness and BMS control system harness, exhausts emission system harness of commercial vehicle...



◆ 产品应用/Product Application

应用领域：发动机和发电机组

Application : Generator and generator set

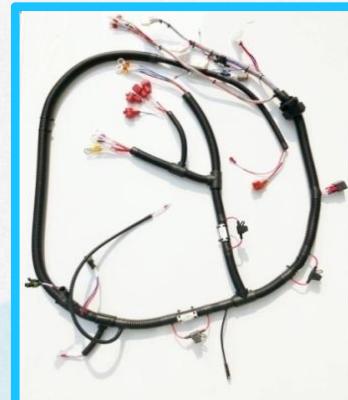
应用位置：主线束、中央控制线束、电机线束，控制盒等部件...

Applying Position : Main wire harness, central control harness, electric motor harness, control box...



发动机线束

Generator harness



电控盒

Electric control box



◆ 产品应用/Product Application

应用领域：机床设备

Application : Mechanical equipment

应用位置：主线束、控制线束、信号连接线束等所有部位线束...

Applying Position : All harness including main harness, control harness, signal connection harness...



CNC设备线束

CNC Equipment Harness



◆ 产品应用/Product Application

应用领域：医疗上面应用的化学分析仪器

Application : Chemical analysis instruments applied on medical equipment

应用位置：主控制线束、信号传输等线束等所有部位线束...

Applying Position : All harnesses including main control harness, signal transmission cable...



医疗仪器线束
Medical instrument harness



◆ 产品应用/Product Application

应用领域：工程机械和特种设备

Application : Engineering machinery and special equipment

应用位置：主线束、中央控制线束、底盘线束等所有部位线束.....

Applying Position : All harness including main harness, central control harness, chassis harness...



◆ 产品应用/Product Application



◆ 品牌客户/Key Clients

主要客户

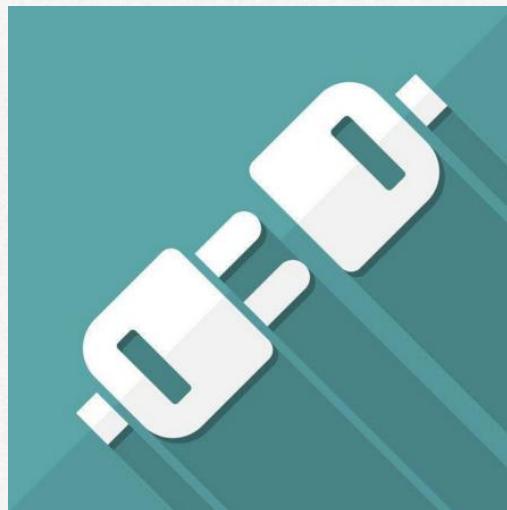
Major Clients



◆ 供应链/Supply Chain

连接器主要供应商

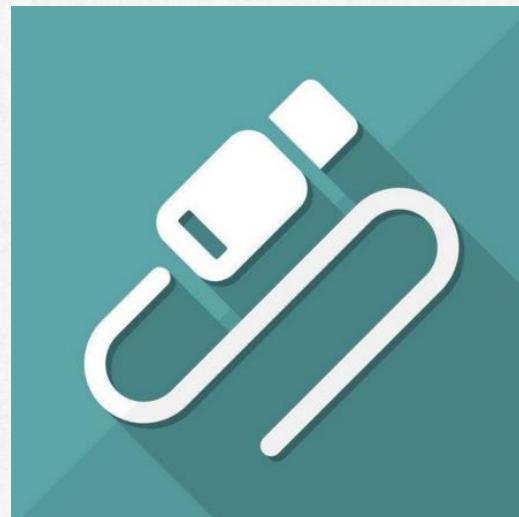
Major supplier of connector



◆ 供应链/Supply Chain

线材主要供应商

Major supplier of wiring



◆ 设计能力/Design Capability

产品工程/ Product engineering :

产品研发/ Product development;
产品设计/ Product design;

样品工程/Samples engineering:

样品的评估和制作/ Samples assessment and making

产品工程 Product Engineering



制造工程 Manufacture engineering



测试工程 Test engineering

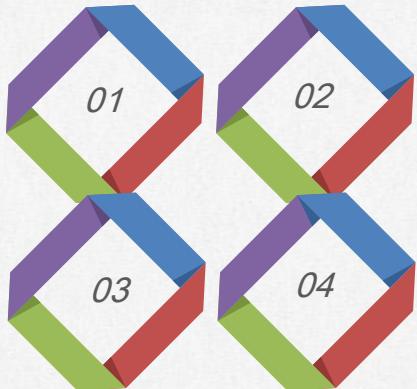


制造工程/manufacture engineering:

制造系统设计/Produce system design;
新产品流程规划/ New product process planning;
新设备的评估和使用/ new equipment evaluation;

测试工程/Test engineering

零部件的测试和验证/Componts test ing and evaluaation
线束产品的测试/Harnesses testing



◆ 设计能力/Design Capability

研发设计能力

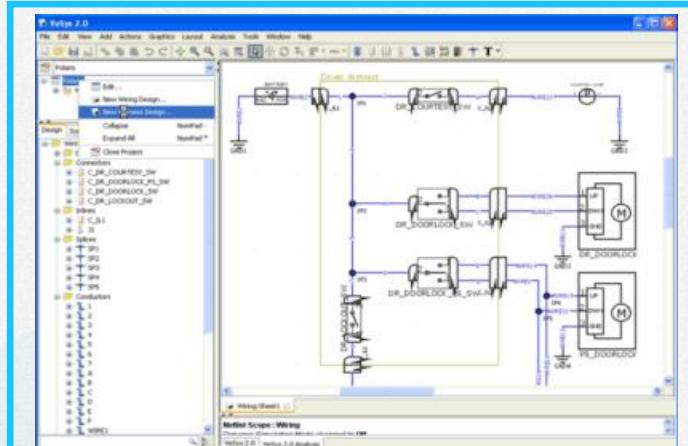
R&D capability

线束的研发能力：具备线束的正向开发能力，根据客户输入的电气原理图、3D数模及性能环境等开发要求，进行3D布线、零件选型及线束设计。

Qualify for designing of harness: Ability to forward designing for harness, according the input of electrical principle drawing , 3D drawing , and the performance , the environment of application etc; output 3D drawing of harness , the component selecting ,harness drawing.

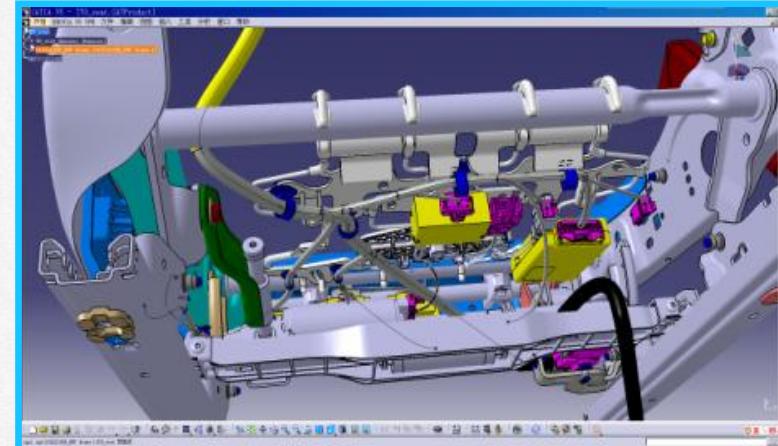
电路设计

Circuit Design



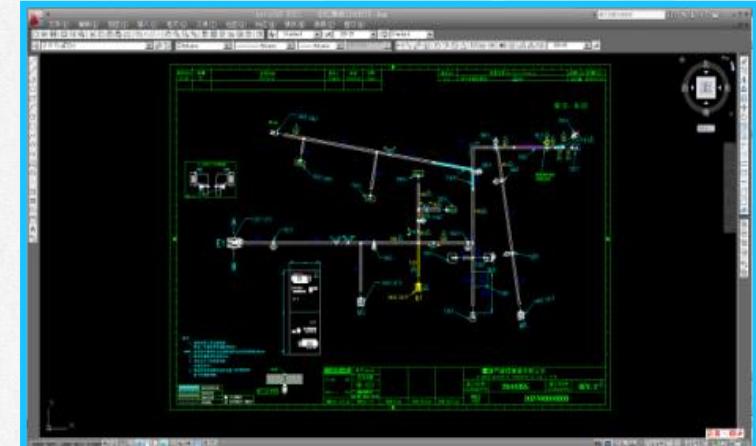
3D建模

3D Modeling



工程设计

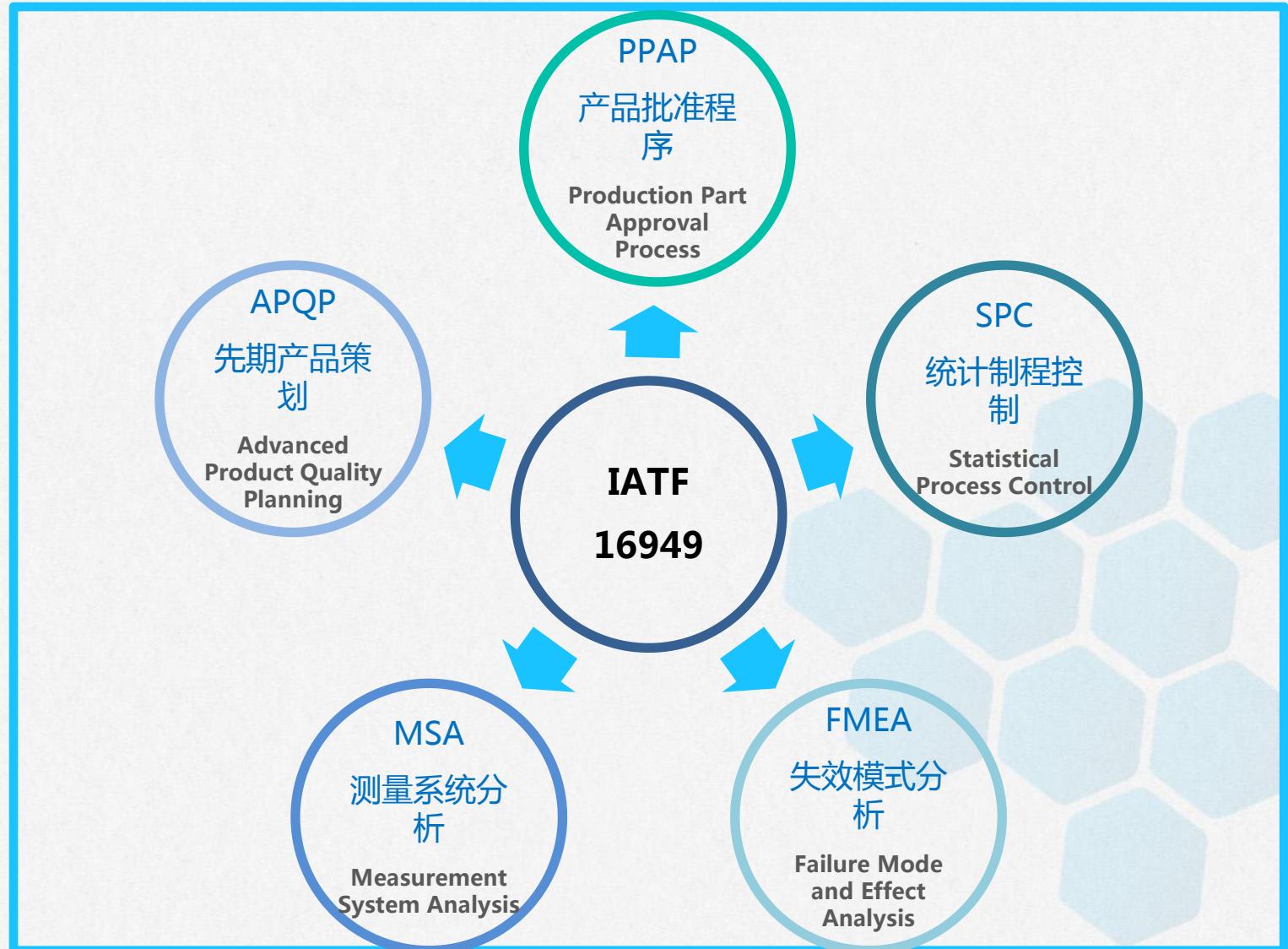
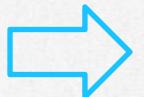
Engineering Drawing



◆ 研发体系/R&D System

研发流程 R&D Procedure

产品开发严格遵循
IATF16949的要求进行
Strictly Enforce IATF16949



◆ 试验能力/Test Capacity

实验室

Lab

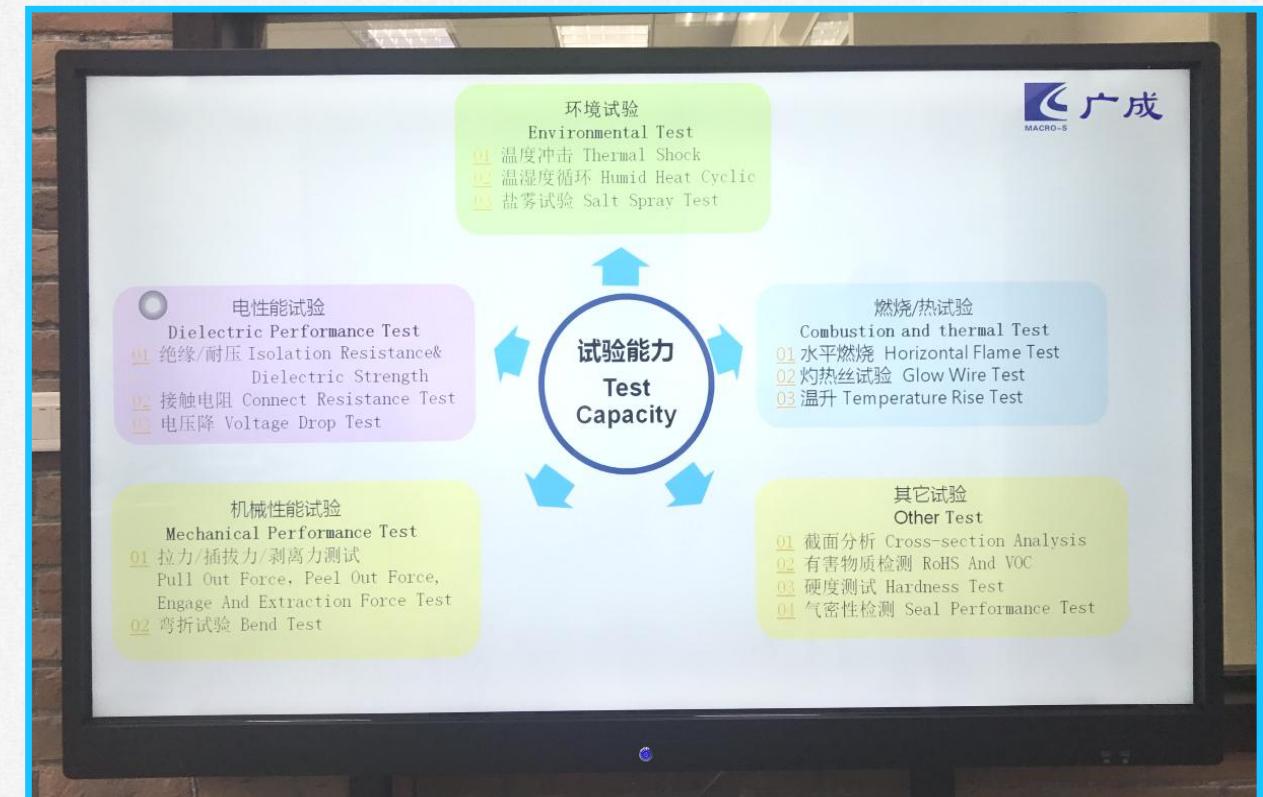
实验能力矩阵 (涵盖国家/行业/企业标准)

Experimental Capacity Matrix
(covers standards of nation/industry/Manufacturer)



实验能力介绍

Experimental Capacity Introduction



◆ 试验能力/Test Capacity

实验室
Lab

燃烧类检测设备 Flaming Inspection Equipment



燃烧试验箱
主要应用于汽车内饰材料的
水平燃烧

Burning test equipment
Use for Horizontal Burning in
Automotive interior

灼热丝
主要应用于测试固体可燃
材料的起燃温度(GWIT)
和可燃性指数(GWFI)

Glow wire
Use for testing GWIT and
GWFI

◆ 试验能力/Test Capacity

实验室

Lab

环境类检测设备

Environmental Inspection Equipment



盐雾试验箱

主要应用于盐水喷雾试验

Salt Spray test Equipment

use for salt spray trial



◆ 试验能力/Test Capacity

实验室

Lab

环境类试验设备

Environmental Inspection Equipment

超军标级温度冲击试验箱

温度范围 : -65°C ~ 200°C ;
复归时间 : 15s ;

Surpassing MIL-STD temperature
Impact test equipment

Range of Temperature :
-65°C ~ 200°C ;
Recurrence Time : 15s ;



快速升降温交变湿热试验箱

温度范围 : -65°C ~ 150°C ;
湿度范围 : 20% ~ 98% ;
升降温 : 线性 4°C/min ;



Fast rising-falling temperature
alternating humid and heat
experiment

Range of Temperature :
-65°C ~ 150°C ;
Range of Humid : 20% ~ 98% ;
Speed of temperature rising and
falling : linearity 4°C/min

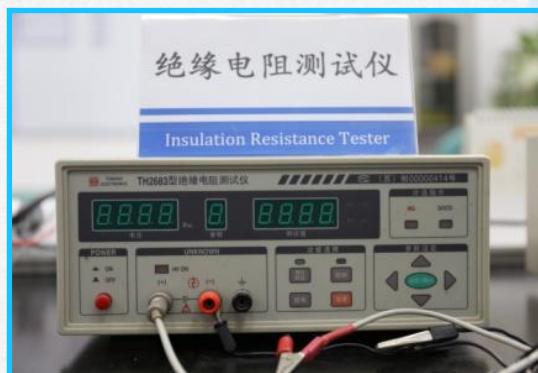
◆ 试验能力/Test Capacity

实验室

Lab

电气类检测设备

Electrical Inspection Equipment



耐压测试仪

主要应用于检测金属与绝缘防护材料之间的耐电压性能

Voltage Resistance Tester

Mainly apply to test the voltage performance between metal and insulated material

绝缘电阻测试仪

主要应用于检测金属与绝缘防护材料之间的绝缘性能

Insulation Resistance Tester

Mainly apply to test the insulation performance between metal and insulated material

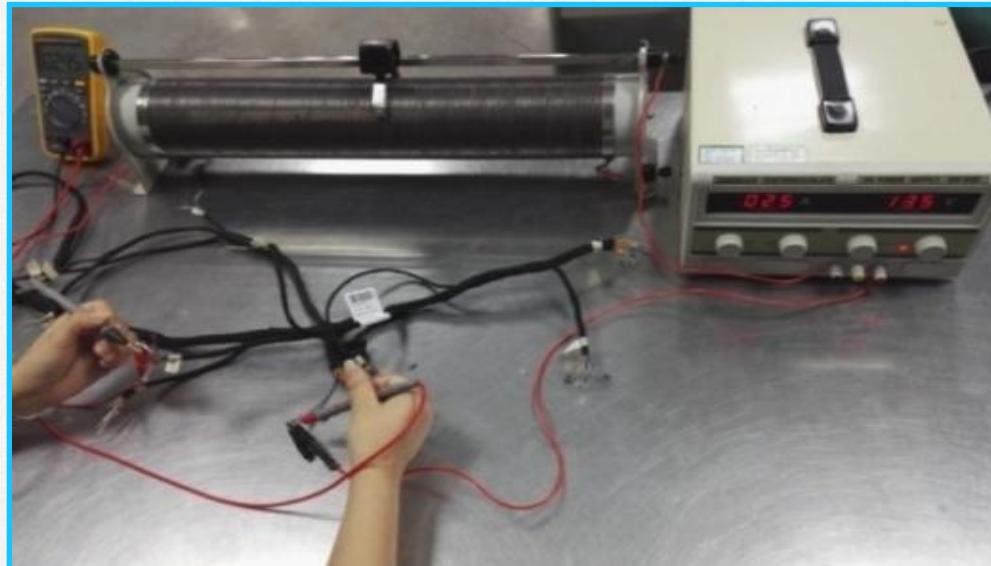
◆ 试验能力/Test Capacity

实验室

Lab

电气类检测设备

Electricity Inspection Equipment



电压降测试系统

适用于压接点、线束回路的电压降测试

Voltage Drop Test

Use for crimping point and cable harness return circuit voltage dropping test



低电阻测试仪

适用于压接电阻、导线电阻的测试

Low Resistance Tester

Suitable for resistance crimping and wiring resistance testing



LCR数字电桥

电容、电感、电阻测试

LCR

Test for capacitor, resistances and inductor

◆ 试验能力/Test Capacity

实验室

Lab

力学类检测设备

Strength Inspection Equipment



摇摆试验机

主要应用于检测3C电源插头、线束的耐弯折摇摆寿命

Wiggle Test

Use for testing the using-life for the power cable plug



硬度计

主要应用于金属的硬度测试

Durometer

Test the hardness for material
mainly apply to metal hardness test



插拔力测试仪

主要应用于接插件间的插拔力、
接触电阻测试

Mating & Unmating Force Test

mainly applied to testing the insertion
force and contact resistance between
connectors.

◆ 试验能力/Test Capacity

实验室

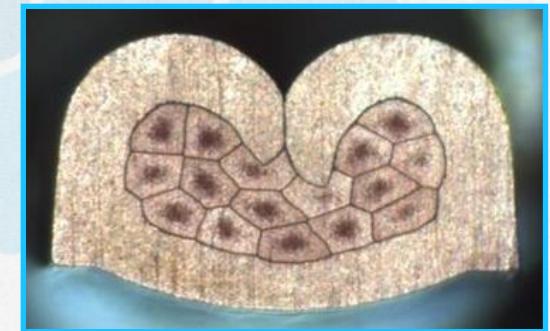
Lab

金相分析系统 Metallographic Analysis System



端子截面分析
主要监测导体的变形率、压缩度等

Terminal Sectional Analysis
Mainly supervise the deformation rate
and compressed limit of conductor



◆ 试验能力/Test Capacity

实验室 Lab

RoHS 10项 检测

10 items RoHS Inspection



能量色散X荧光光谱仪

Energy dispersive X-ray fluorescence spectrometer



RoHS 检测分析

RoHS inspection and analysis

◆ 试验能力/Test Capacity

实验室

Lab

2022年计划 2022 Plan

1. 增加 : 三综合振动台

1.Add : Three comprehensive vibration machine



2. 通过 : CNAS认证

2. Pass : CNAS certification



◆ 制造能力/Manufacturing Capacity

精益生产

Lean Production

1



2



精益生产

LEAN

3



4



◆ 制造能力/Manufacturing Capacity

汽车类产品交货及时率目标为100% , 2021年实际交货率到达100%

Vehicle harness target of timely goods delivery rate is to reach to 100%, actually 100% in 2021



◆ 制造能力/Manufacturing Capacity

生产线 Assembly Line

电控盒装配

Electronic Control Box Assembling



线束装配

Harnesses Assembling



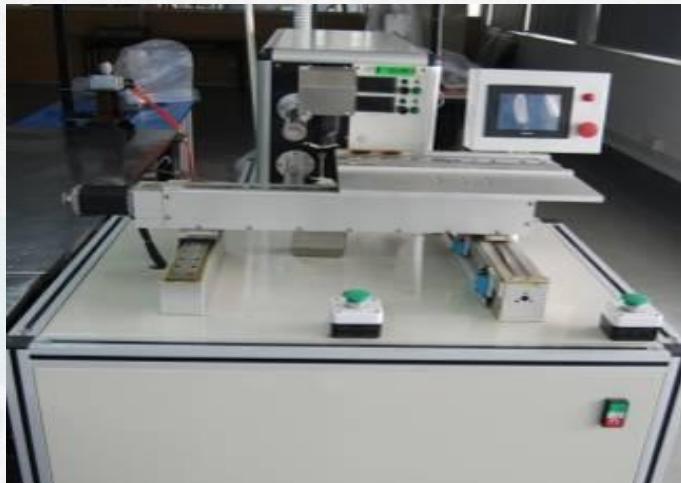
◆ 制造能力/Manufacturing Capacity

机器设备

Equipments



半自动压着机
Semi-automatic Crimping Machine



镭射机
Laser Machine

超音波焊接机
Ultrasonic Welding Machine



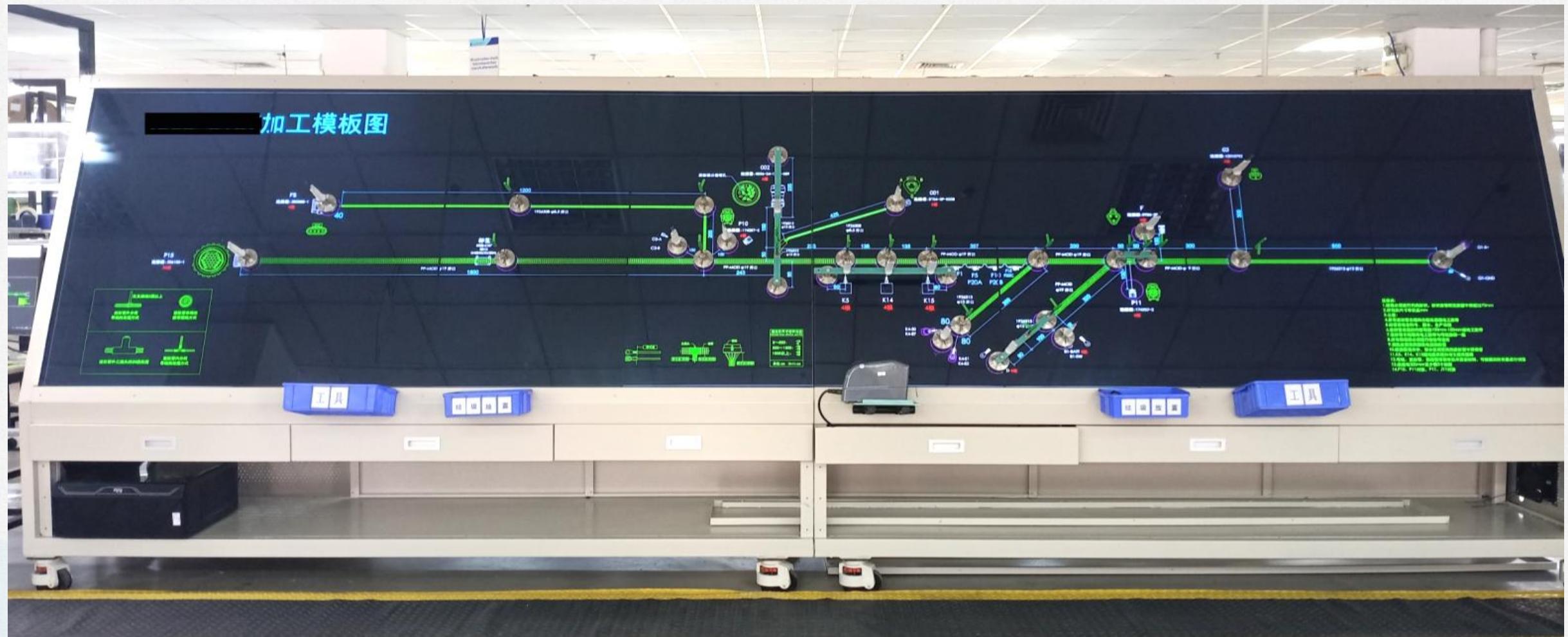
缠胶带机
Tape wrapping Machine



◆ 制造能力/Manufacturing Capacity

智能电子装配台

Smart Electronic Assembling Bench



◆ 制造能力/Manufacturing Capacity



模具管理
Tooling Management



注塑车间
Molding Workshop



注塑设备
Molding Machines



◆ 测试验证/Inspection verification

检验设备

Inspection Equipments



端子截面分析

主要监测导体的变形率、压缩度等

Terminal Sectional Analysis

Mainly supervise the deformation rate and compressed limit of conductor.



电源线综合测试仪

电源线耐内外高压、绝缘、极性等可靠性验证

Power line comprehensive test equipment

Inspecting reliability of high pressure resistance, insulation, polarity of Power line



拉力测试仪

检测端子与导体间的抗拉强度

Tensile tester

inspect the tensile strength between terminal and conductor

◆ 测试验证/Inspection verification

检验设备

Inspection Equipments

导通测试系统 (点位 : 1920)

检测线束回路的通断、短路现象

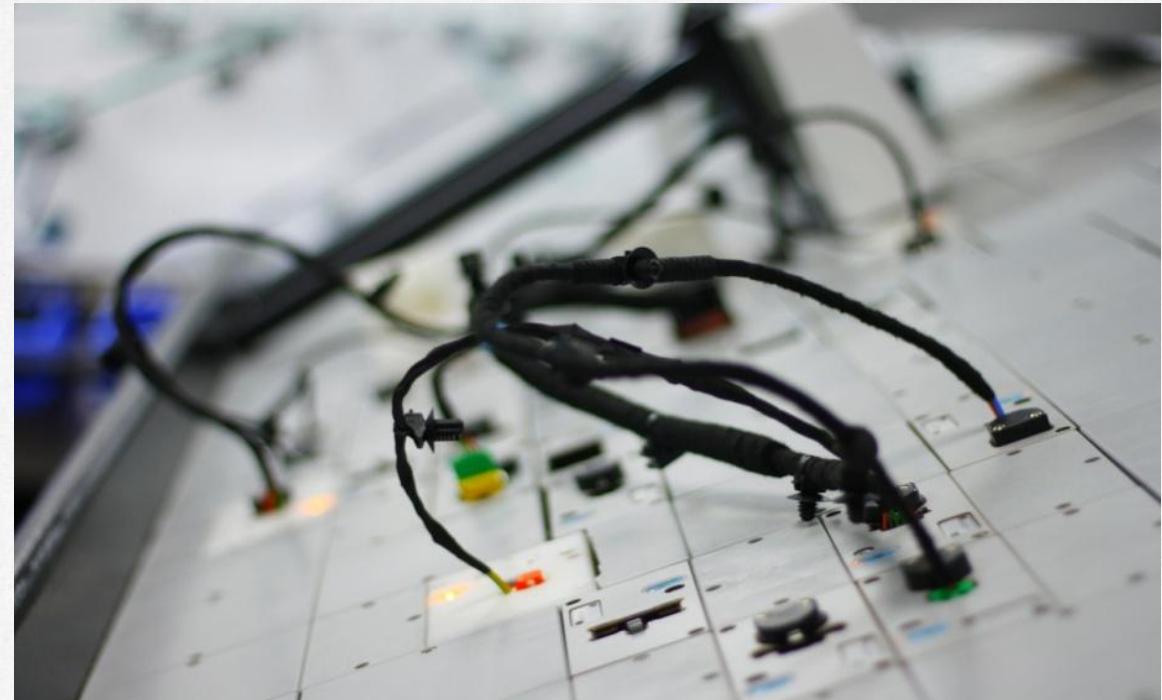
Conductivity test System (Dots : 1920)

Inspecting the phenomenon of on-off, short of cable harness circuit



通电检测: 生产成品线束100%通电检测

Conductivity Inspection : Finished products will be inspected 100%



◆ 质量管理/Quality Management

质量目标 Quality Objective

2021年度质量实际：

Quality Objective of 2021:

项目 Project	汽车类 Automotive (PPM)		非汽车类 Non-automotive (PPM)	
	目标值 Target	实绩 Actual	目标值 Target	实绩 Actual
交付 Delivery	≤7	0.85	≤50	50.25

其他评估项目：

Other assessment item :

评估项目 assessmen t item	不符合项关闭率 (内审后2个月) Unqualified items closing rate (2 months after internal audit)	体系外审 通过率 External Audit Pass Rate	客户满意度 Customer Satisfaction	三废的年度 监查符合率 Annual Inspection Pass Rate to 3 Wastes	环境事故发生率 及相关方投诉件数 Eco Complaint & Security Accidents
目标 Target	100%	100%	汽车类 Automotive : ≥98 非汽车类 Non-automotive : ≥94	100%	0件
实绩 Actual	100%	100%	汽车类 Automotive : ≥98.6 非汽车类 Non-automotive : ≥95.1	100%	0件

◆ 认证证书/Certifications

体系认证-相关证书

Systematic certificates-relative certifications



CE 认证
CE certificate



UL 认证
UL certificate



ISO9001:2015 认证
ISO9001:2015 certificate



ISO14001:2015 认证
ISO14001:2015 certificate



CCC 认证
CCC certificate



IATF 16949 : 2016 认证
IATF 16949 : 2016 certificate



安全生产认证
Work Safety Standardization



IPC会员
IPC Membership

联系方式/Contact



我们的联系方式：

Contact us :

地址/ADD : 厦门火炬(翔安)产业区同龙二路889号
No.889 Tonglong 2nd Road, Torch(XiangAn) Industrial Development Zone,
Xiamen , China

网站/Web : www.camo-cj.com

电子邮件/Email : celia.djerf@camomac.com

电话/TEL : +86 157 5071 7680

