



# COMPANY PROFILE

Zhejiang RHI Electric Co., Ltd.

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Specialized in Cu/Al Connectors

# 01

## ABOUT US

- Corporate Presentation
- Development History
- Enterprise Culture
- Organization Chart
- Annual Sales

## About RHI

RHI specializes in manufacturing copper and aluminum busbar connections for new energy batteries and PVC-dipped products. It owns a 30,000+ square meter independent standard factory building.

## Staffing

The company now has more than 700 full-time employees, including more than 60 technical engineers and 80 QA inspectors.

## Equipment scale

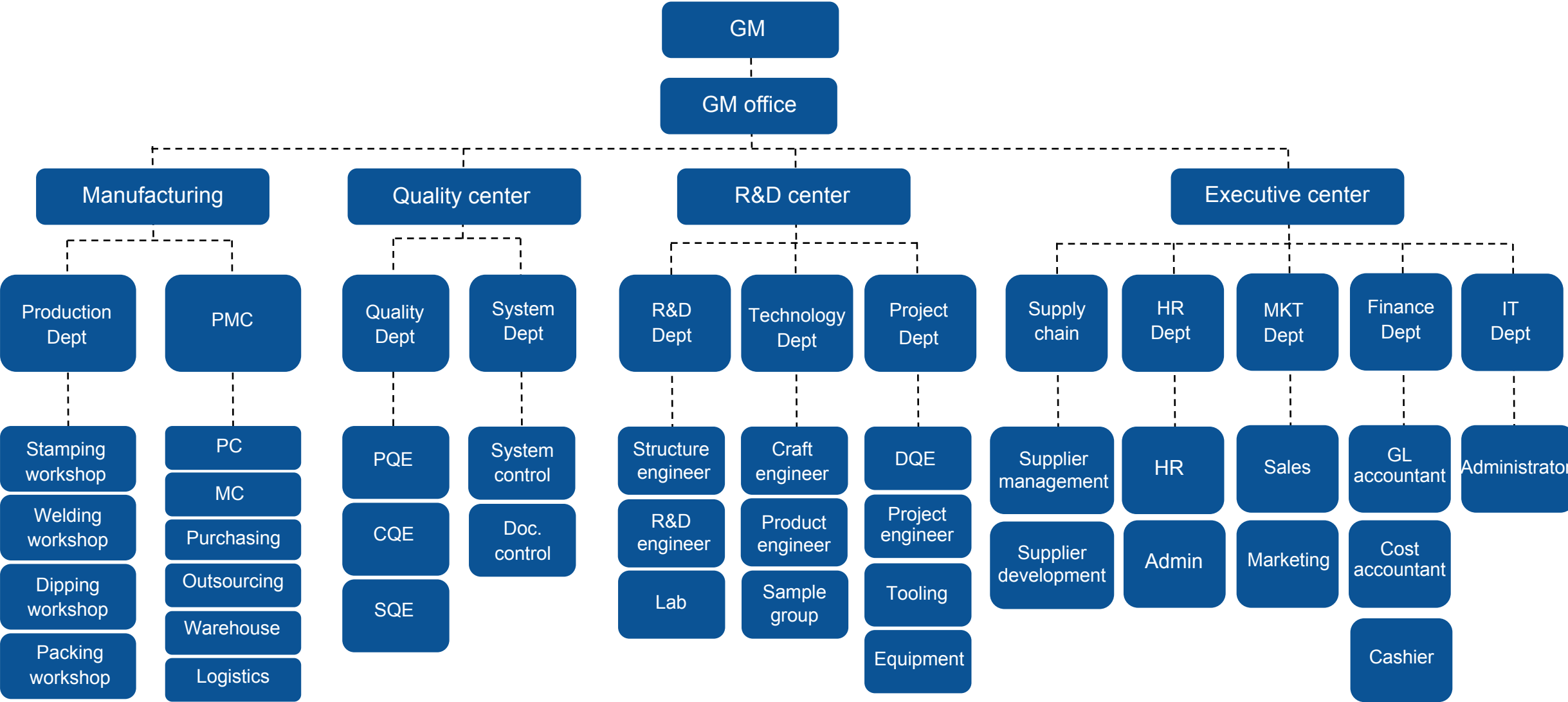
It has advanced manufacturing and testing equipment such as extrusion production lines, 3D bending auto production line, six-axis robot workshops, precision mold processing centers, quality testing centers, and labs.

## R&D Capabilities

RHI has the ability to concurrent design and develop with the OEMs.



# Organization Chart



# Development History

## Company Established

Registered as Yueqing RHI Electric Co., Ltd and started to supply PVC cover for industry of hardware, electrical electrician, home appliance etc.



2010

## New Energy Industry

Moved to Wenzhou Bridge Industrial Zone, renamed as Zhejiang RHI Electric Co., Ltd. Changed into the supplier of new energy connection system.



2013

## Tier 1 Supplier

Use extrusion production line and become a qualified supplier of Renault, FAW, Xiaopeng Motors, etc.!



2018

## Great Progress

Design and invest in various auto equipment, aiming to achieve automated, digitized technological production. Continuously support many OEMs.



2021

2011



## Global Business

The foreign trade dept was established and expanded the international business.

2016



## New Innovation

Moved to Xiangyang Industrial Zone with 7,500m<sup>2</sup> workshops. Use robot production line, and implemented IATF16949 quality management system.

2020



## Continued Expansion

MES system operation, combined with automation equipment, gradually achieve all-round information and automation of the factory, and expanded factory to 20,000 square meters.

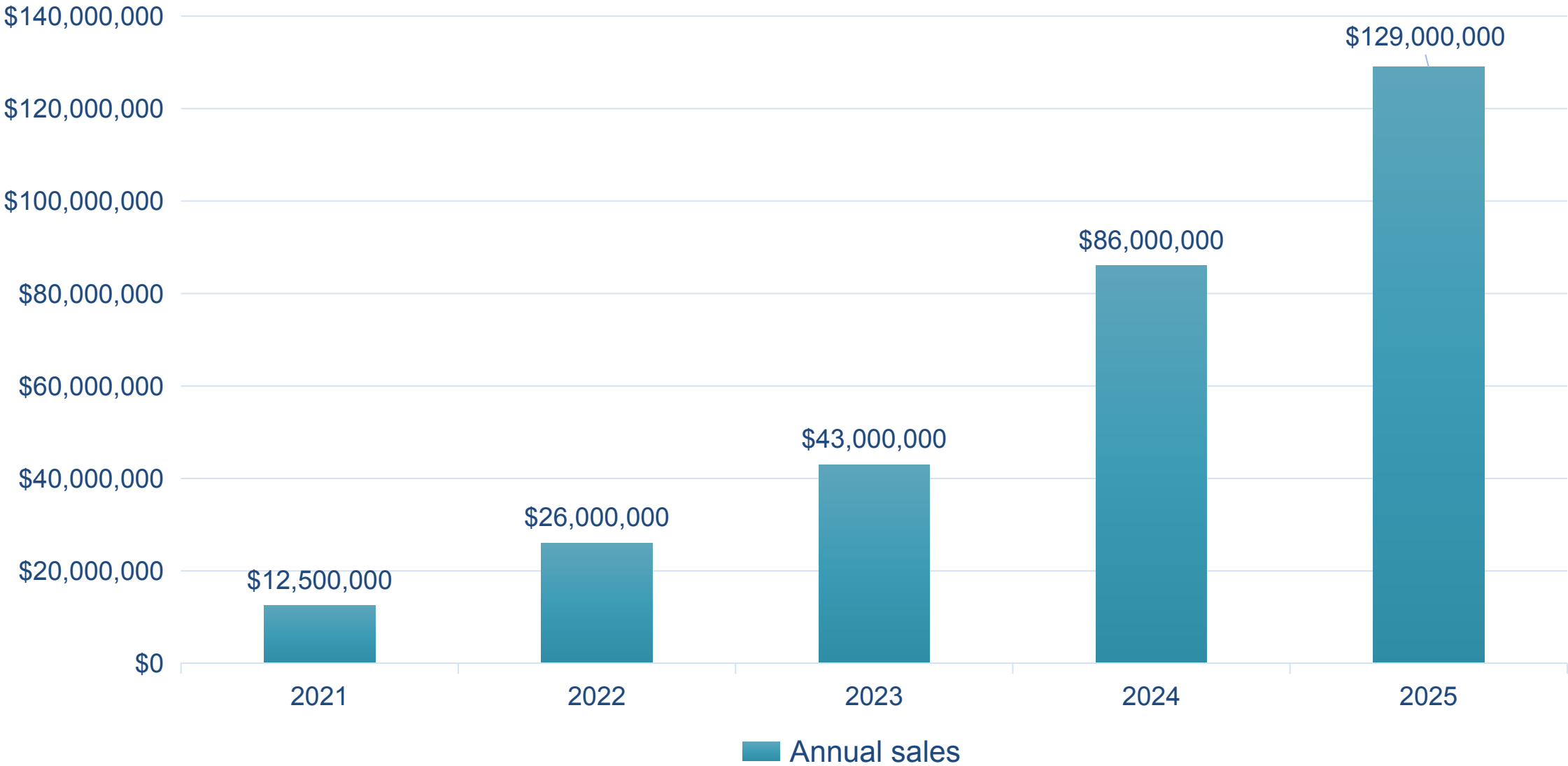
2022

## Early

Produced PVC dipping products in Bailuyu with 90m<sup>2</sup> factory.



# Annual Sales Forecast

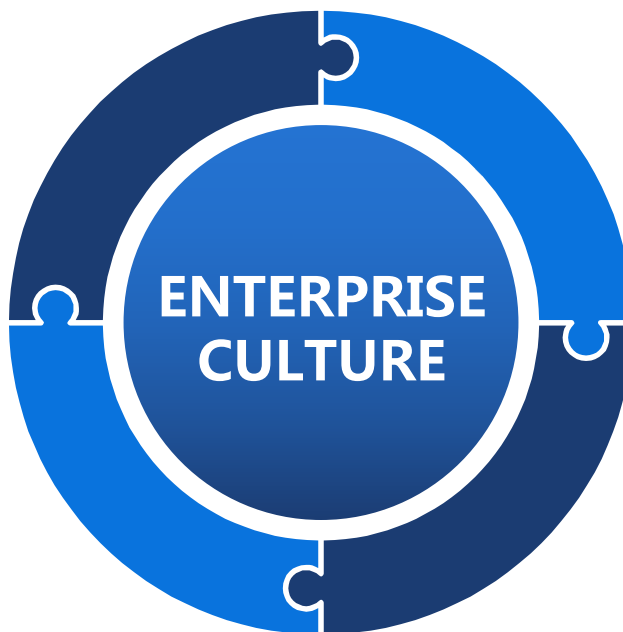


## Enterprise Spirit

“Uphold morality and integrity, spread green and hope.”

## Business Belief

Create value for customers, suppliers, employees, shareholders and make win-win cooperation.



## Corporate Vision

Leading industry innovation and promoting social progress

## Production Belief

Driving innovation through technology.

In the future

We'll keep exploring and working hard.

RHI is always striving in the areas of new energy battery connections and soft plastic products, offering high-quality products to more new energy companies. We aim for shared progress, promoting win-win collaboration between businesses, customers, and society for ongoing growth.

# 02

## PRODUCTS

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- Product Application
- Rigid Busbar
- Aluminium Busbar
- Cost Optimizing Solution
- Product Framework
- Flexible Busbar Series
- Injection Molded Busbars
- High Temperature Resistance Solutions

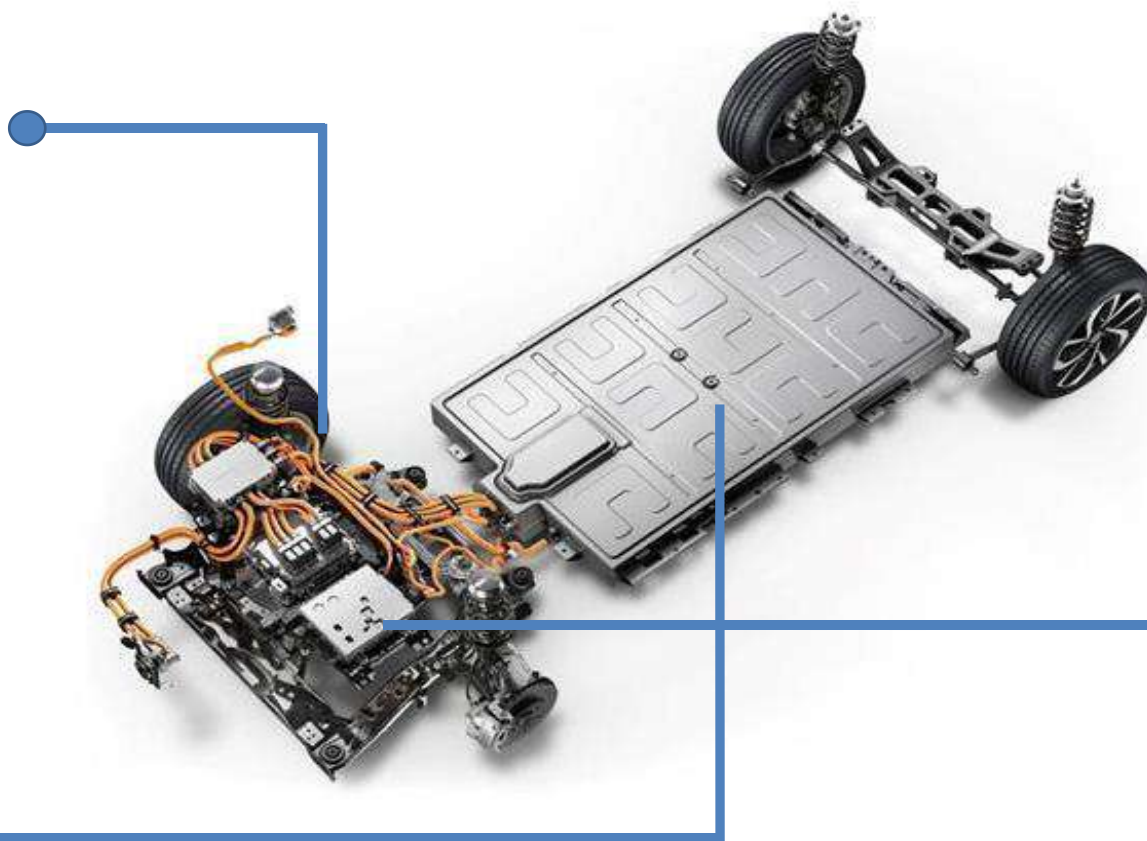
# New Energy Vehicle System



Motor



Battery



High voltage control box



Electric control

■ Busbars in new energy vehicles

# Energy Storage System



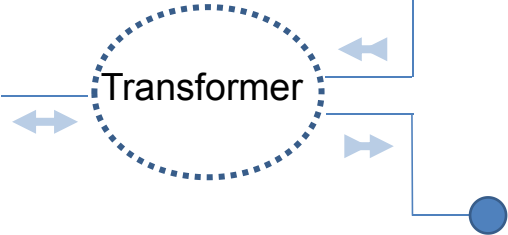
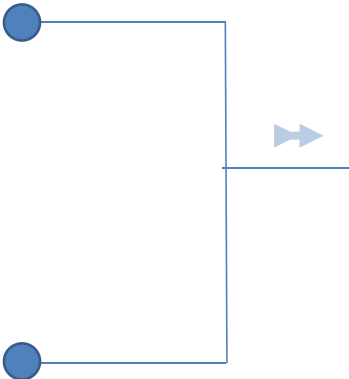
Wind power station



PV power station



Battery pack



Grid



Load power system



5G Station

■ Applicable to many energy storage system framework

# Rigid Busbar



► Rigid busbar



► Aluminum busbar

NO	Insulation type	Thickness	Insulating material	Withstand voltage	Temperature resistance
1	Heat-Shrink	1.0-1.5mm	EVA	3500V	-55-105℃
			PE	1000V	125℃
2	PVC dipping	0.8-2.0mm	PVC	3500V	-40-125℃
3	Powder coating	0.4-0.8mm	Epoxy	5000V	150℃
4	PI	0.15-0.25mm	PI	5000-8000V	-269℃-280℃



► 3D bending busbar



► Extruded aluminum busbar

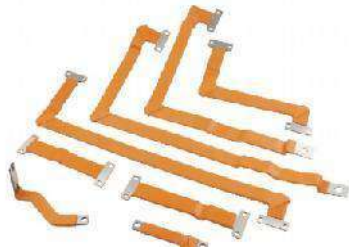
NO	Insulation type	Thickness	Insulating material	Withstand voltage	Temperature resistance
1	Extrusion	0.4-0.8mm	PA12	3500V	150℃
		0.5-2.0mm	PVC	3500V	-40-105℃



# Flexible Busbar



PVC dipping  
flexible busbar



Heat shrink  
flexible busbar

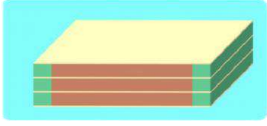
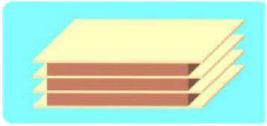
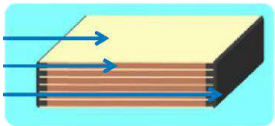


Flexible busbar

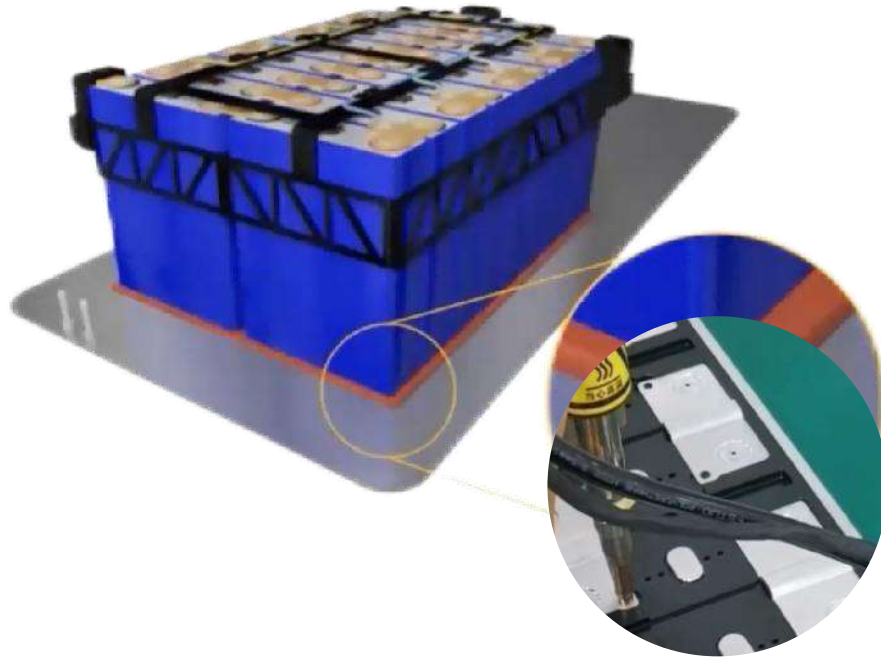


Extruded flexible  
busbar

Performance Parameter	
Parameter name	Parameter value
Cu conductivity	≥57MS/m
Insulation material	PVC/PA12/PE
Environmental protection	RoHS
Fire-retardant rating	UL94V-0
Working temperature	-40 ~ 105℃ 125℃/200℃
Working voltage	DC1500V/3000V
Conductor material	T2 Cu/Al



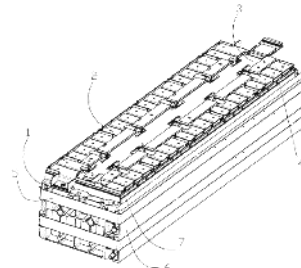
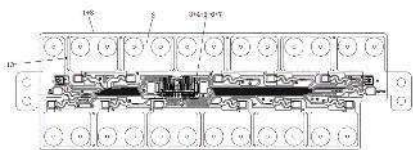
# Aluminum Busbar



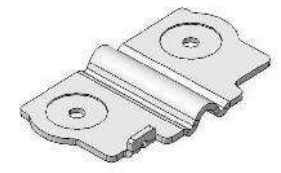
Cylindrical cell

Prismatic cell

Pouch cell



Stamped type



Dovetail slot type

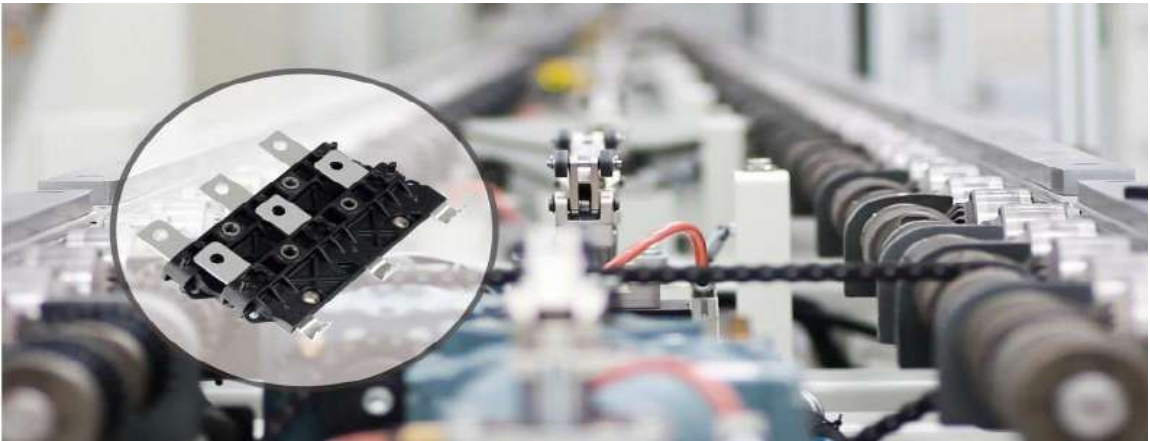


Riveting type



Cu/Al composite type

Performance Parameter	
Parameter name	Parameter value
Ageing-resistant	158°C/168h
Fire-retardant rating	AC 1000V
RoHS	Qualified
Protection level	UL94V-0
Working temperature	-40~105°C 125°C/180°C
Insulation material	PA66/PA6T/PPS
Conductor material	T2 Copper/Aluminum



# PVC Dipping Covers



## Coverall type

All-sided protection, corrosion resistance, and safer



Eco-friendly flame-retardant materials



## Single type

Insulation protection, simple and more efficient



Over 20 years of PVC dipping process experience

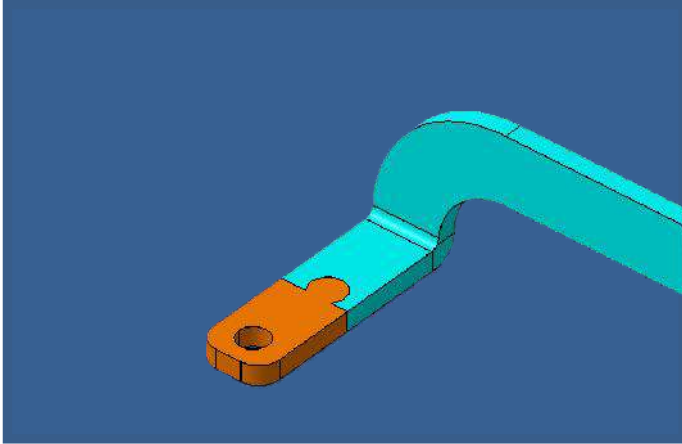


## Cable type

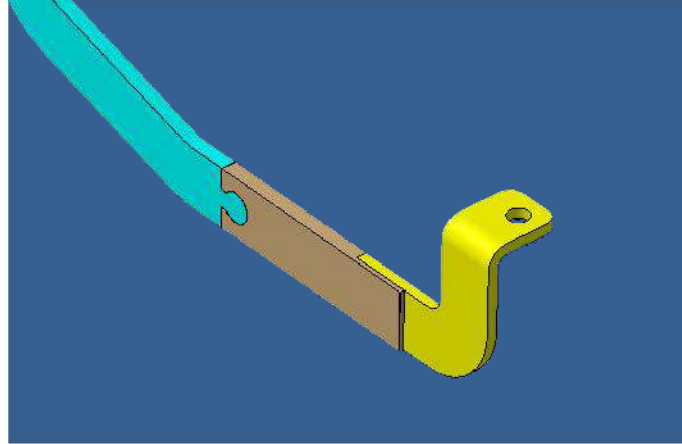
Combination, better protection, and more durable



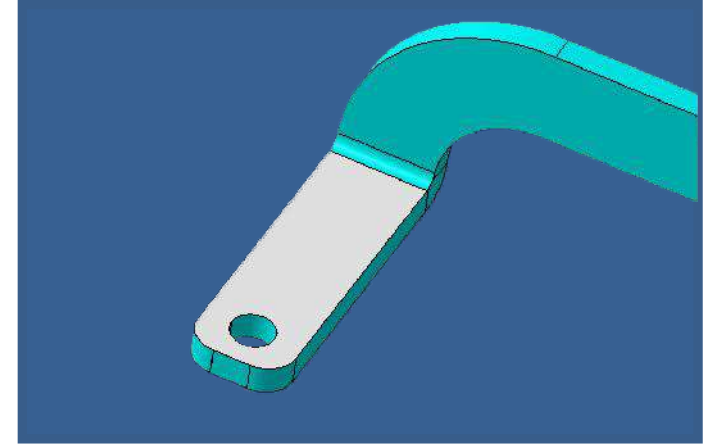
Customize based on drawings



**Cu to Al Conversion  
Solution 1**



**Cu to Al Conversion  
Solution 2**



**Cu to Al Conversion  
Solution 3**

Copper busbars are important parts of battery packs for high-voltage connections. RHI can achieve lightweight design by optimizing material selection and design.

RHI is specialized in copper-aluminum welding, converting copper to aluminum, solid-flexible combination welding, and aluminum-aluminum welding, which reduced lots of costs for customers without affecting the function.

# High Temperature Resistance Solutions



**Ceramic  
composite tape**



**Outer wrapped with  
mica tape**



**Wrapped inside with  
mica tape**

After 10 minute fire testing qualified below:

1. Withstands 3500V DC voltage.
2. Leakage current is <1mA for 60 seconds.
3. Insulation performance is 1000V DC for 60 seconds.
4. Insulation resistance is  $\geq 500\text{M}\Omega$ .

01

## Improve security

The solution can effectively reduce the risk of accidents caused by battery overheating.

02

## Improve performance

The solution can enhance the overall performance of new energy vehicles. By optimizing the heat dissipation design of the battery system, it effectively improves the battery's lifespan and charging/discharging efficiency, extending the overall driving range of the vehicle.

03

## Improve energy efficiency

The solution can improve the utilization efficiency of battery energy. By precisely controlling the battery temperature, it can reduce energy losses, enhance battery charging and discharging efficiency, and further extend the battery lifespan.

04

## Environmental sustainability

The advanced technology used in the solution can improve the battery's recyclability, reducing pollution from discarded batteries. Besides, by mitigating the risk of battery overheating and fires, it also minimizes environmental damage resulting from accidents

# 03

## Company Strength

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- Production Sites
- Mould Center
- Storage Center
- Laboratory Facilities
- R&D Capabilities
- Production center
- Experimental Facilities
- QS Certificates



## Factory No.1

RHI's No. 1 factory serves as the main production base, covering nearly 20,000 square meters. It houses automatic welding lines, linear stamping workshops, dip molding areas, and extrusion lines. With over 500 employees, RHI primarily supplies support products for new energy vehicle and energy storage applications.



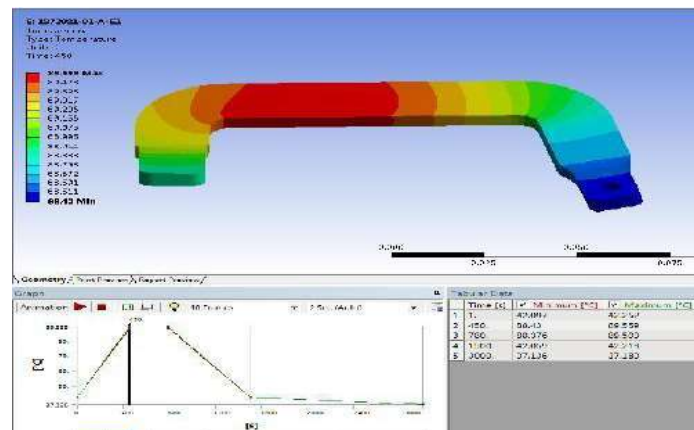
## Factory No.2

The No. 2 factory is a total production area of over 12,000 square meters. Adopted special production lines, hired more than 300 production staff and invest in 100 large-scale equipments to achieve 1 million sets/month. It mainly provides specialized production services for high-quality customers.

# R&D Capabilities



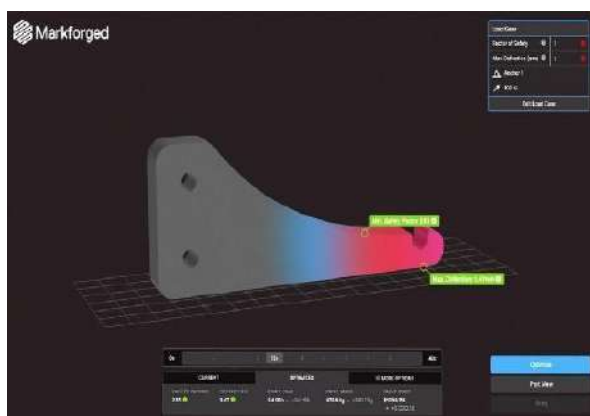
3D structural design



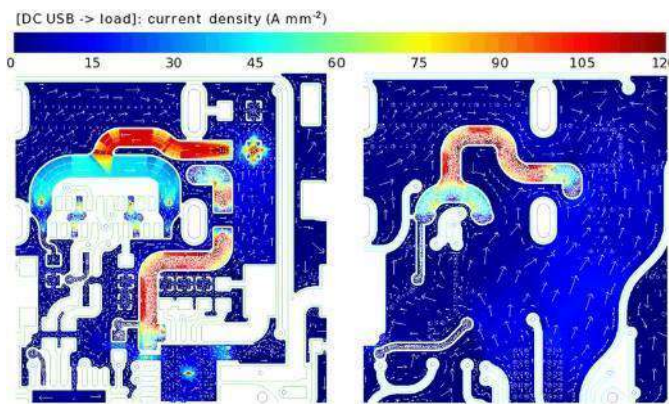
Thermal simulation/ANSYS Icepak



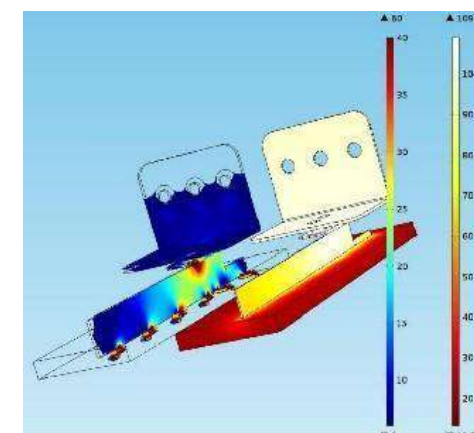
Heat dissipation analysis



Current load simulation



Current density simulation



Mold flow analysis

## Mould Development Center

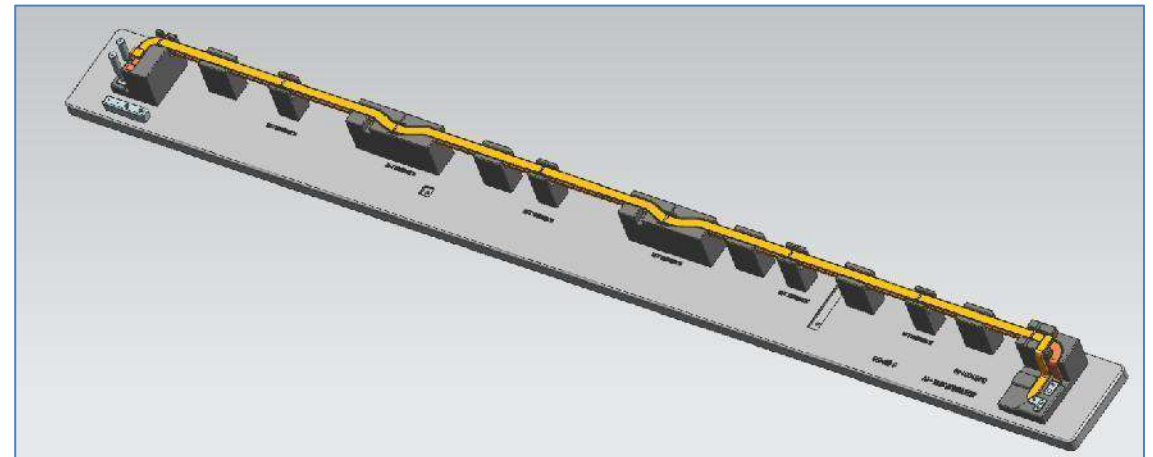
RHI introduced automatic line cutting equipment for mould center in 2016. Now we have 12 line cutting machines, 2 milling machines, 5 bench drilling machines and 2 grinding machines, 6 mold developers,. We can produce more than 20 moulds and 100 fixture per month.



Line Cutting Machine

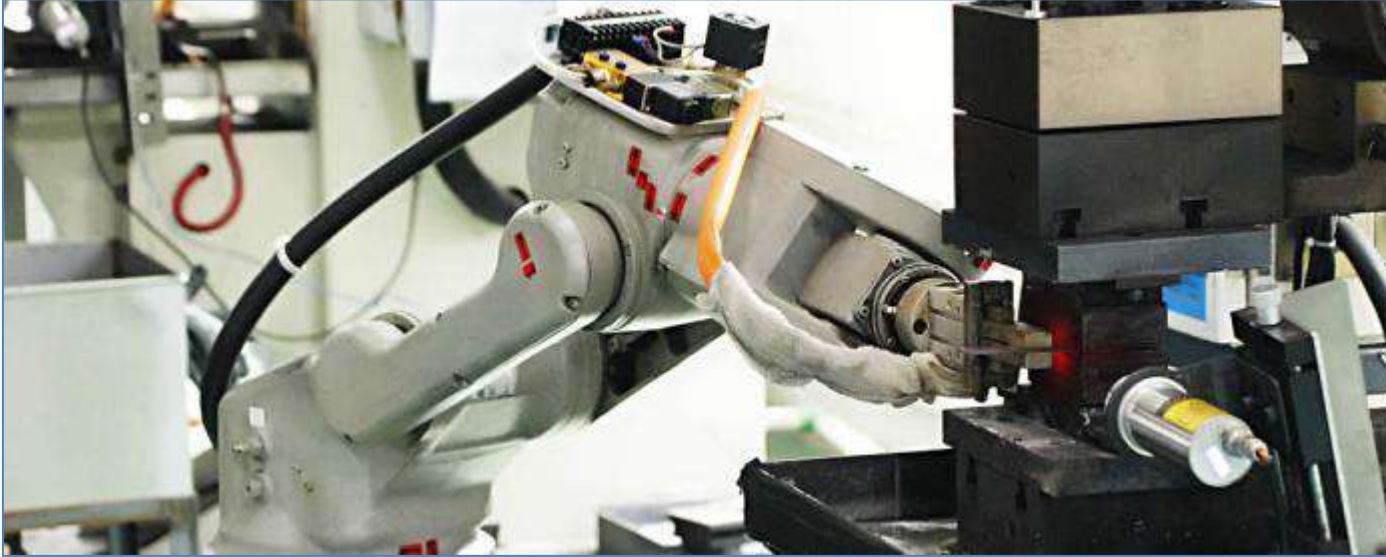


Moulds



Fixtures/Gauges

# Flexible Busbar Workshop



## New Energy Flexible Busbar Workshop

Flexible busbar workshop has more than 30 polymer diffusion welding machines. In order to ensure production cycle and meet different technical and production requirements of customers.

## Automated Welding Workshop

Robot welding machines can complete a variety of welding parameters, ensure the stability of welding, and improve the production efficiency.



# Extruded Busbar Workshop



Four automatic, standard & independent production lines for extrusion





Spring machine

## 3D Bending Workshop

We have several 3D automatic bending machines, which are able to complete various bending tasks efficiently and precisely.



3D bending machine

# Stamping Workshop



## Stamping Workshop

It includes punching workshops, bending workshops and cutting workshops. We have punching machines, watercutting machines, laser cutting machines and CNC bending machines to complete various product work efficiently and accurately.



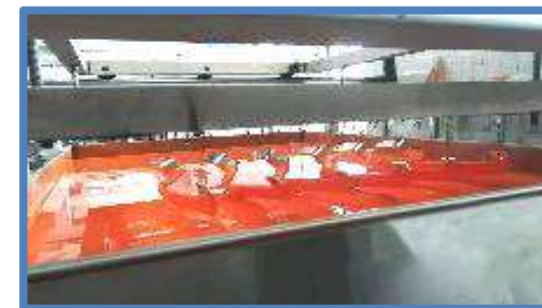
# PVC Dipping Workshop

RHI®

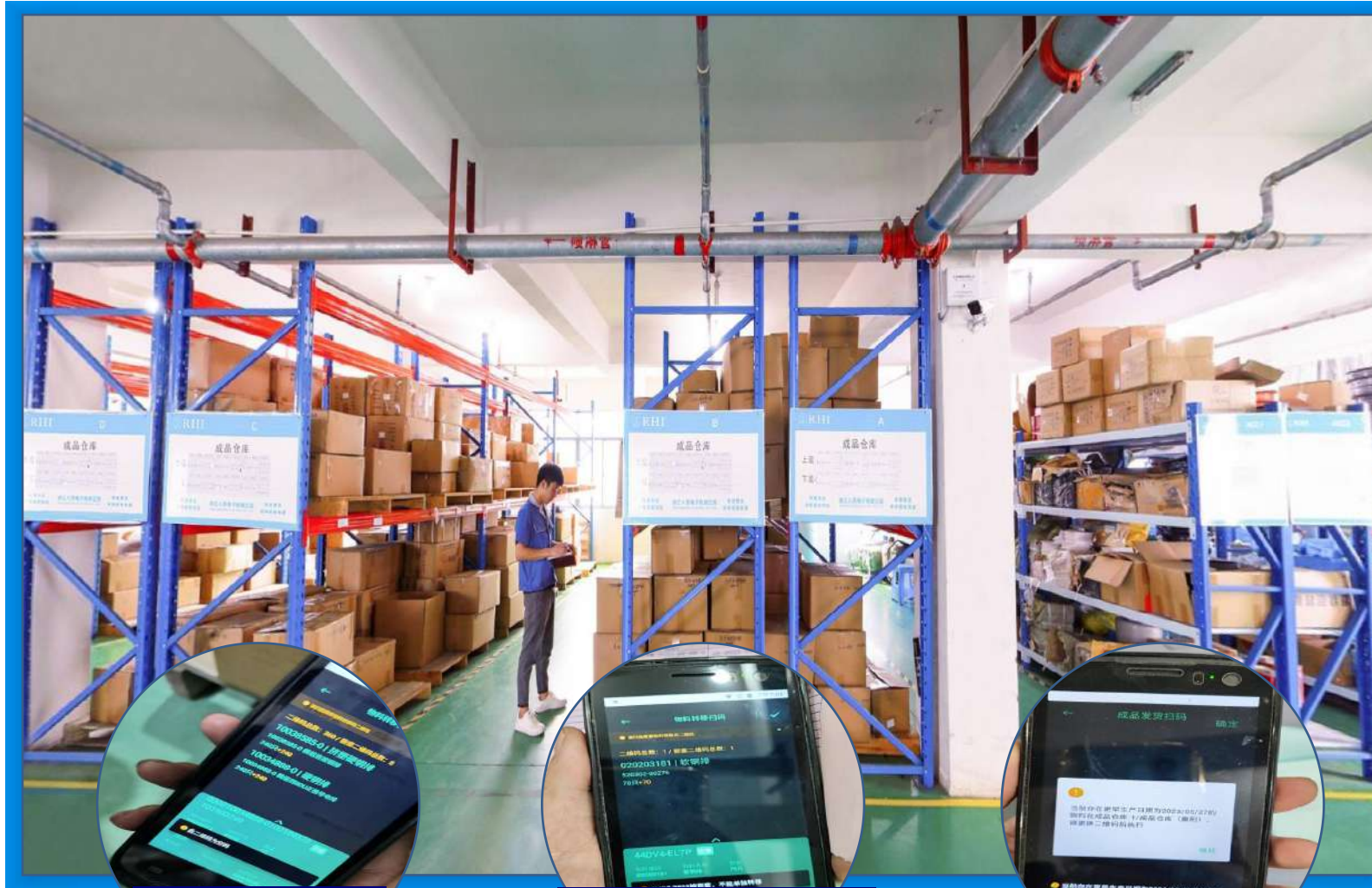
方正为人·永泽天下  
UPHOLD MORALITY AND INTEGRITY, SPREAD GREEN AND HOPE.

## Automatic PVC dipping workshop

With more than 10 years dipping process experience, unique technology for PVC insulation and have methods for controlling the producing processes. Products look beautiful & glossy. Could independently finish the dipping process for copper bars.



# Storage Center



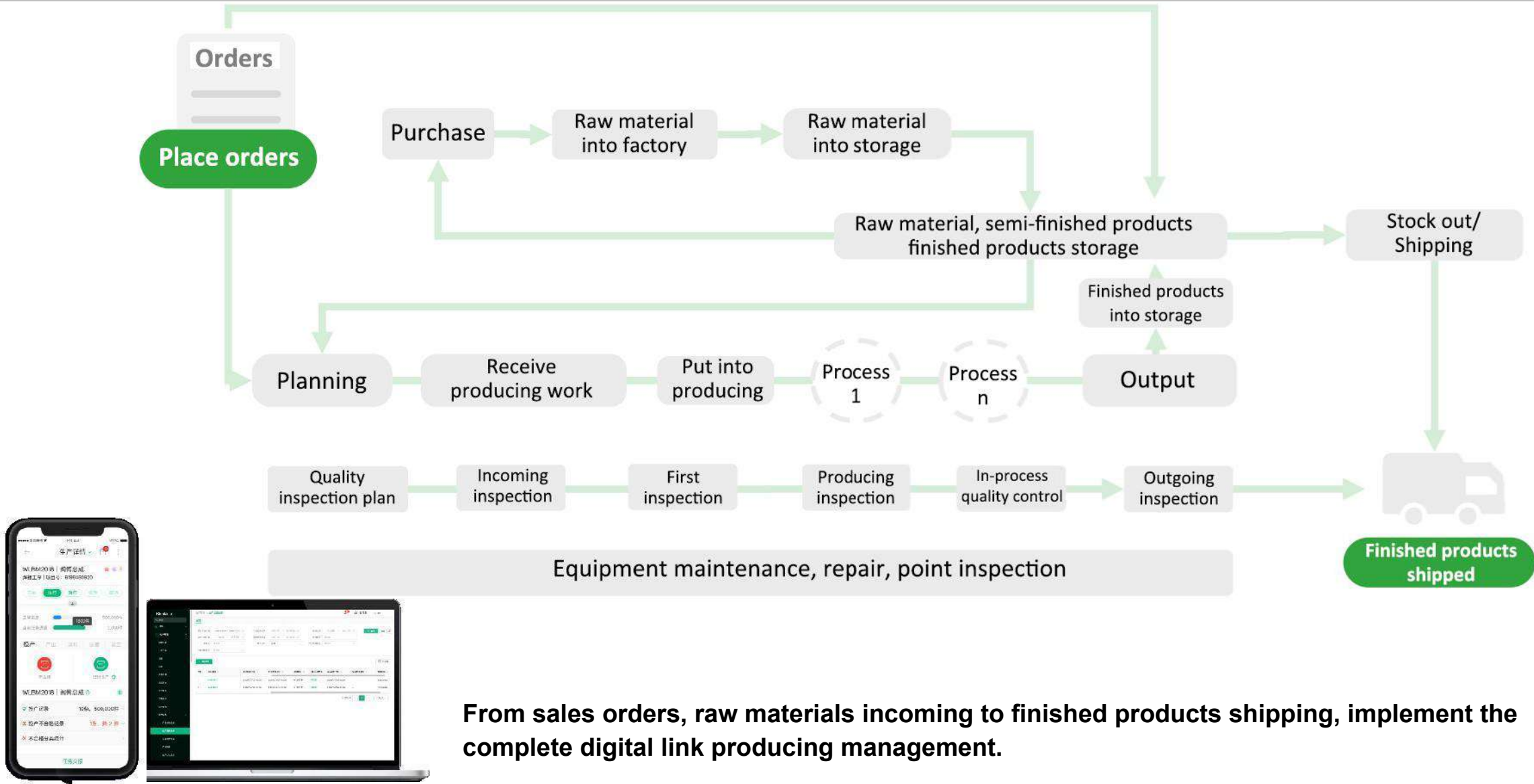
Scan to Ship

Scan to transfer

First in First out



# Experimental Facilities



From sales orders, raw materials incoming to finished products shipping, implement the complete digital link producing management.

# Laboratory Facilities



Metallographic Testing Equipment



Coordinate Measuring Machine



Thermal Shock Test Chamber



Temperature Shock Chamber



Constant temperature and humidity tester



Image Measuring Tester



Precise Salt Spray Tester



Tracking Test Apparatus



Microhardness Tester



Wire Bending Test Machine



Pulling Force Tester



Insulation Withstand Voltage Tester (Precision Tracing)



Fatigue Testing Machine

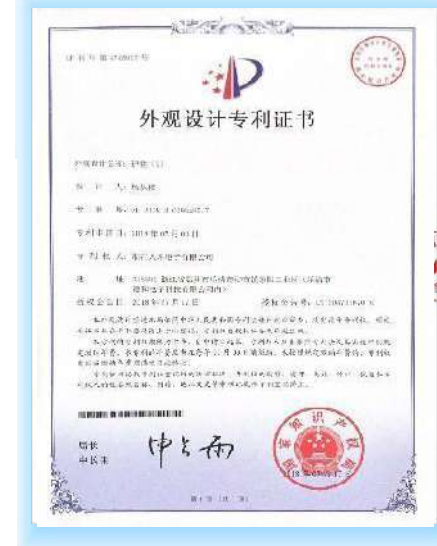
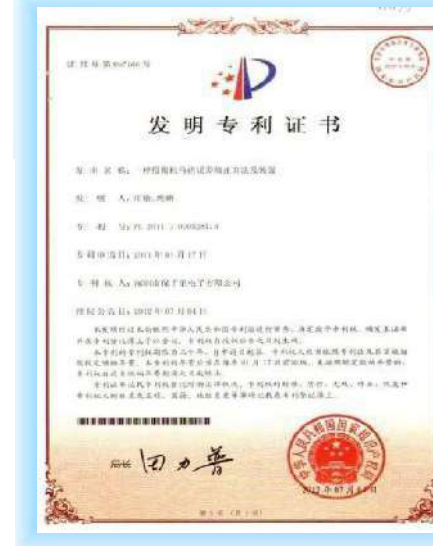


Hardness Tester and Dial Indicator



Multichannel Temperature Tester

# QS(quality system) Certificates



Now we have 26 patents, including 2 invention patents, 6 design patents, 18 utility model patents, and several patents under application.

# 04

## PARTNERS

- Automotive Clients
- Matching Vehicle Models
- Battery Pack, BMS & Motor Clients
- Corporate Vision

# Automotive Customers



**XPeng MOTORS**



**HOZON AUTO**



**NIO**



**LEAPMOTOR**



**GEELY**



**CHERY**



**Great Wall Motor**



**Faw Jiefang**



**DONGFENG MOTOR**



**RENAULT**



**VINFAST**



**ARRIVAL**

# Battery Pack, BMS & Motor Clients



**CATL**



**CALB**



**VREMT**



**SVOLT**



**SUNWODA**



**ENVISION**

# Matching Vehicle Models



**XPeng P7**



**XPeng G6**



**XPeng X9**



**Tank Series**



**DEEPAL**



**Benz Smart**



**Chery Tugella L**



**Chery Galaxy**



**ZEEKR**



**VOLVO**



**VOYAH**



**AION**



**LYNK&CO**



**Faw Group**



**HOZON Auto**



**Chery QQ Icecream**



**Chery Ant**



**CLEVER**

# To Be The Leading Manufacturer

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## EV&ESS Connectors



# THANKS