



# Demi metal materials Co., Ltd

EMBARK ON THE PATH OF INNOVATION  
DILIGENCE AND WISDOM FORGE BRILLIANCE

# COMPANY PROFILE

Demi metal materials Co., Ltd is a one-stop service provider for heat conduction and dissipation, integrating research and development, production, and sales.

The company's main products include customized shovel tooth radiators, profile radiators, water-cooled liquid cooled plates water-cooled traction welding. precision hardware processing, etc. The company's products are widely used in various industries and fields such as aerospace, new energy, energy storage, photovoltaic inverters, transportation, communication equipment, consumer electronics, precision components, medical equipment, molds, automation equipment, etc.

## DEVELOPMENT HISTORY OF THE COMPANY

2008

Demi Metal has begun to take shape

2011

Demi Metal was established

2014

After in-depth integration and further focusing on services, Dongguan Demi Metal Materials Co., Ltd. was established in Dongguan

2016

The Demi team achieved an annual revenue of 100 million RMB

2018

In-depth services in the photovoltaic inverter field and the energy storage industry, achieving rapid growth in performance. In the same year, we were recognized as a "High-tech Enterprise" in Dongguan City.

2018

The factory area of DEMI Company has expanded from 6,000 square meters to 18,000 square meters. It has added CNC equipment and formed a research and development technical team, achieving a dual upgrade in production capacity and technology.

2022-now

Through comprehensive market analysis Resource integration, excluding peer clients in the EM industry, and adding several clients from listed companies. Continuously advancing product upgrades for photovoltaic energy storage Inverter motor Waiting for domestic giants to provide better and superior services the annual revenue has exceeded 420 million RMB

各项专利及发明共86项 / A total of 86 inventions and patents

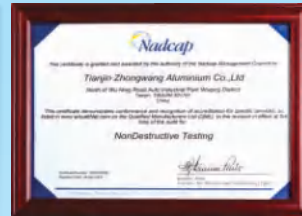
军工体系认证 / Military system certification

IATF 16949 汽车行业质量管理体系 / IATF 16949 Automotive Industry Quality Management System

ISO 9001 国际质量管理体系 / ISO 9001 International Quality Management System

ISO 14001 国际环境管理体系 / ISO 14001 International Environmental Management System

AS9100航空航天标准化质量管理体系 / AS9100 Aerospace Standardized Quality Management System





# SKIVING & HEAT PIPE HEAT SINK

## 铲齿&嵌热管散热器

### Excellent material selection

The raw materials are strictly selected, with good processing performance, good thermal conductivity and natural heat dissipation

### Meticulous craftsmanship

With excellent production equipment and meticulous craftsmanship, the product surface is smooth without burrs

### Non-standard customization

It can be customized according to customer requirements. The product can be cut in any length and width. The thinnest tooth plate can reach 0.01mm, the thickest 2mm, and the widest 700mm. Up to 130mm



# NEW ENERGY VEHICLES AND ENERGY STORAGE EQUIPMENT

## 新能源汽车、储能设备

常用牌号：3003定制型材（口琴管等）、6063T6定制型材、5052铝板

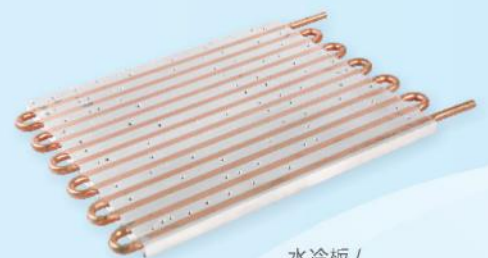
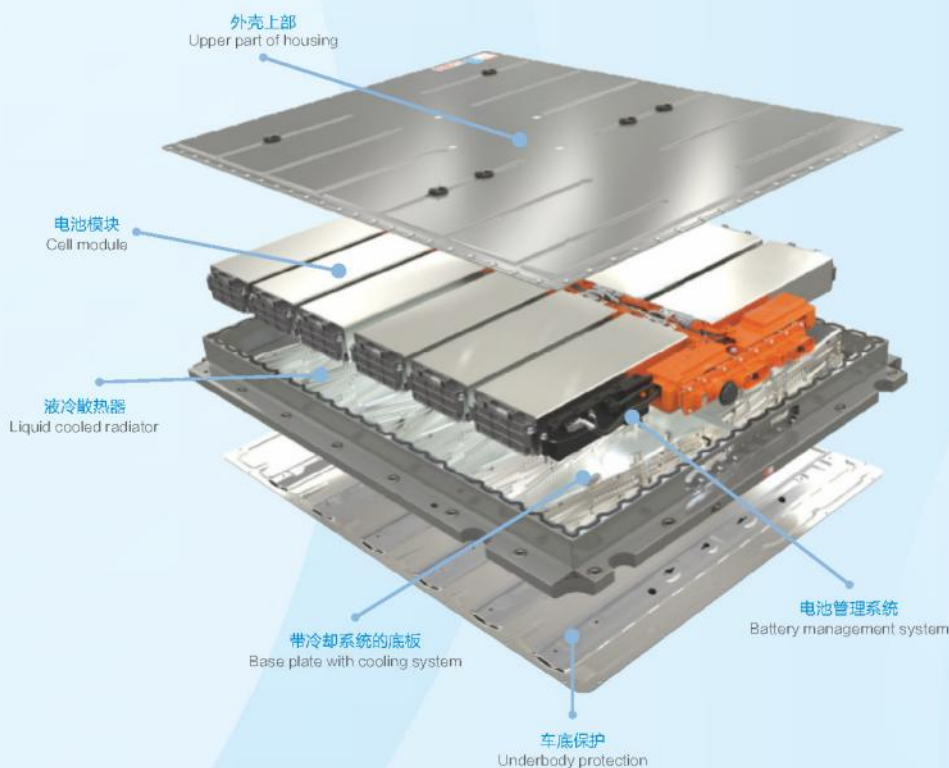
Common grades: 3003 customized profiles (harmonica tubes, etc.), 6063T6 customized profiles, 5052 aluminum plates

铝合金车身要比钢质车身轻40%，从而提升新能源汽车的续航能力，同时也提高了车身的耐腐蚀性能；满足新能源和储能领域所要求的经济、高效同时又有散热、焊接及塑性加工的需求。

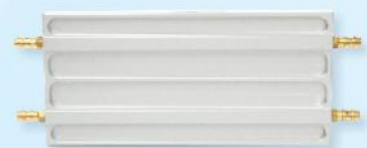
The aluminum alloy body is 40% lighter than the steel body, thereby improving the endurance of new energy vehicles and improving the corrosion resistance of the body; Meet the economic and efficient requirements of the new energy and energy storage fields, while also meeting the needs of heat dissipation, welding, and plastic processing.



新能源 / New energy



水冷板 /  
Water-cooling plate





# APPLICATION SCENARIO

## 应用场景

### Excellent material selection

Strictly select raw materials, with good processing performance, good thermal conductivity and natural heat dissipation

### Exquisite craftsmanship

Excellent production equipment, exquisite craftsmanship, smooth and burr free product surface

### Non standard customization

Customized according to customer needs, the product can be cut in any length and width. The thinnest teeth can reach 0.01mm, the thickest 2mm, the widest 700mm, and the highest 130mm



储能逆变电机柜



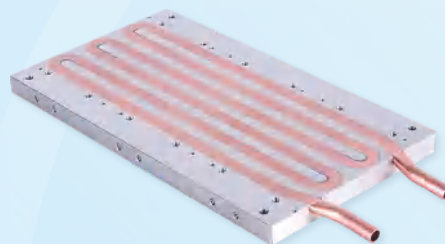
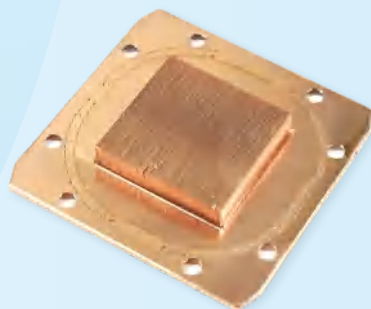
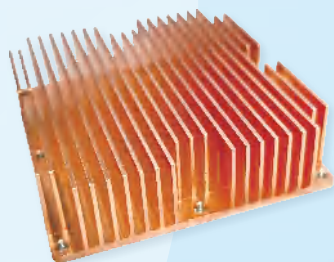
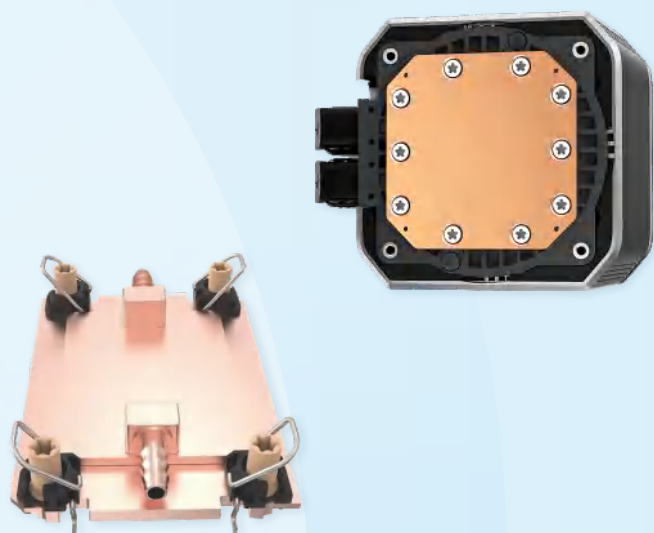
行业领域 Industry Fields	具体应用案例 Specific application cases	技术效益指标 Technical benefit indicators
数据中心 Data Center	刀片服务器集群散热（单机柜功率密度5KW） Blade Server Cluster Cooling (Single Cabinet Power Density 5KW)	PUE值降至1.15以下，IT设备能耗↓30% The PUE value is reduced to below 1.15, and the energy consumption of IT equipment is decreased by 30%
新能源装备 New Energy Equipment	换流阀模块强制风冷系统 Converter valve module forced air cooling system	温升控制≤8K（1200A负载工况） The temperature rise control is less than 8K (under 1200A load conditions)
汽车制造 Automotive Manufacturing	电驱系统散热管理平台 Electric Drive System Cooling Management Platform	热损耗减少22%，续航里程↑15% Heat loss is reduced by 22% and the cruising range is increased by 15%
化工反应釜 Chemical Reactor	精密温控反应器配套散热 Heat dissipation supporting precision temperature - controlled reactors	温度波动范围±0.8℃（±5℃设定） The temperature fluctuation range is ±0.8 degrees (set at ±5 degrees)

# LIQUID- COOLED PLATE

## 水冷&液冷散热器

水冷板（液冷板）是在导热基板上采用埋管、钻孔、微水道加工、双层焊接等方式形成流道，通过液体流动带走热量。

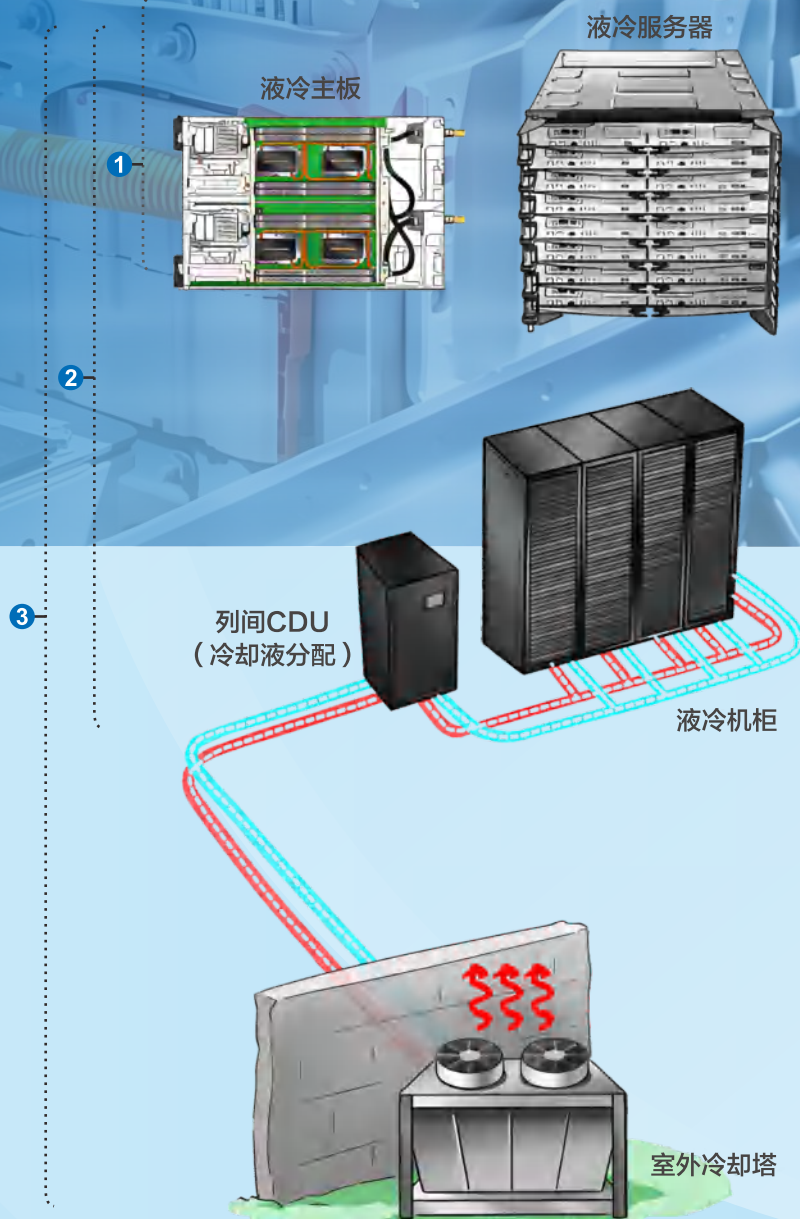
Water cooled plate (liquid cooled plate) is a type of plate that uses buried pipes on a heat-conducting substrate. Drilling, Micro waterway processing, Double layer welding and other methods are used to form a flow channel, which carries away heat through liquid flow.





# APPLICATION SCENARIO

## 应用场景



行业领域 Industry Fields	具体应用案例 Specific application cases	技术效益指标 Technical benefit indicators
超算中心 Supercomputing Center	液冷刀片服务器集群 (单机柜功率密度15KW) Liquid - cooled blade server cluster (power density of a single cabinet: 15KW)	PUE值降至1.12以下, IT设备能耗↓40% The PUE value is reduced to below 1.12, and the energy consumption of IT equipment is decreased by 40%.
云计算基地 Cloud Computing Base	托管服务器液冷散热方案 Liquid - cooled heat dissipation solution for hosted servers	散热功耗占比从35%降低至12% The proportion of heat dissipation power consumption is reduced from 35% to 12%.
5G基站 5G Base Station	基站电源模块液冷系统 Liquid - cooled system for base station power modules	整机率提升至96%, 噪声≤65dB(A) The overall machine rate is increased to 96%, and the noise is lower than 65dB(A)
生物医药 Biomedicine	高温PCR仪群组冷却 Cooling for high - temperature PCR instrument groups	温度控制精度±0.2℃ (4℃设定) The temperature control accuracy is 0.2 degrees (set at 4 degrees).

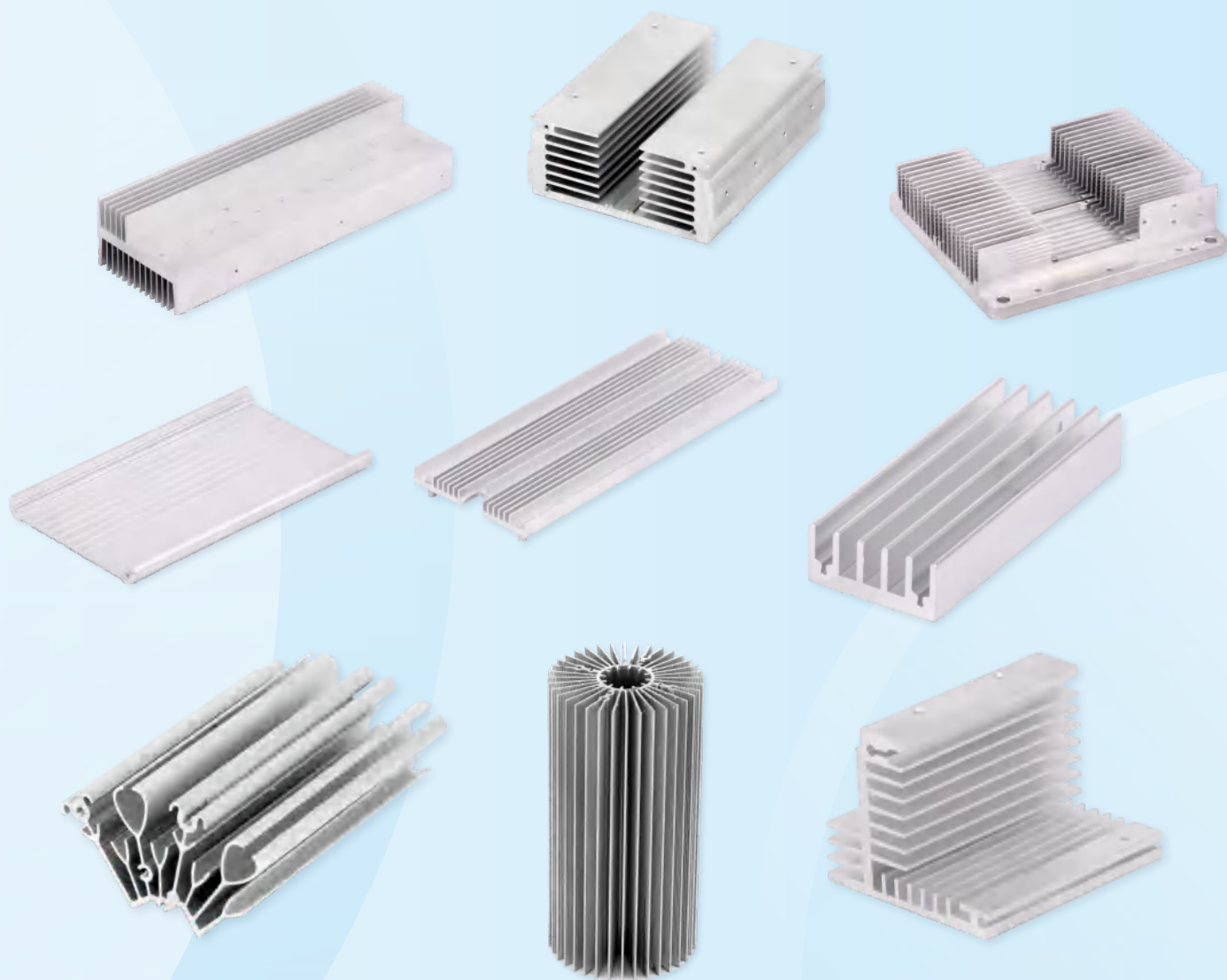


# PROFILE HEAT SINK

## 型材散热器

More than 5000 choices of extruded heat sinks with different processing shapes

These solutions enable higher power systems to achieve a wide range of natural convection solutions, and can also be combined with high-performance forced convection cooling fans. DEMI's extruded heat sinks range from simple flat fin structures to complex geometric shapes, used to optimize the cooling effect of any board or equipment.

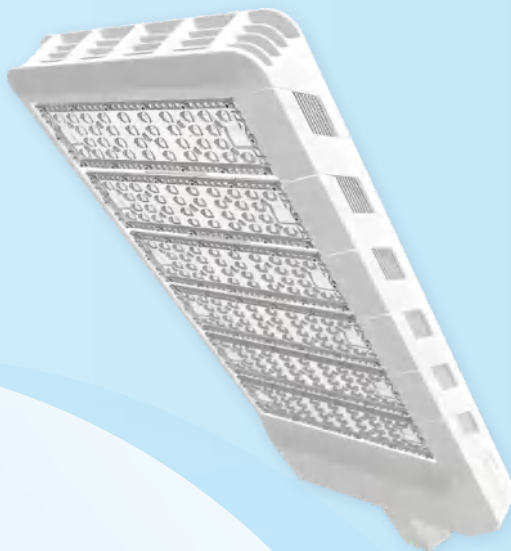


# APPLICATION SCENARIO

## 应用场景

### Industrial LED Lighting

In dusty, vibrating industrial settings like factories, DEMI's cooling solutions combine natural and forced convection to efficiently dissipate LED heat, ensuring stable lighting. The extruded heat sinks' robust, complex shapes optimize heat dissipation and enhance durability, supporting safe and efficient industrial operations.



行业领域 Industry Fields	具体应用案例 Specific application cases	技术效益指标 Technical benefit indicators
电子设备散热 Heat dissipation of electronic devices	电源模块.存储散热.保障高负荷运行稳定性 Heat dissipation for power module storage to ensure the stability of high – load operation	PUE值降至1.15以下，IT设备能耗↓20% The PUE value is reduced to below 1.15, and the energy consumption of IT equipment is decreased by 20%
LED照明领域 LED lighting field	确保低噪音运行同时维持光效 Ensure low – noise operation while maintaining luminous efficiency	温升控制≤6K（800A负载工况） The temperature rise control is less than 6K (under 800A load conditions)
汽车电子系统 Automotive electronic systems	电子器件系统散热管理平台 Heat management platform for electronic device systems	热损耗减少12%，使用寿命↑45% Reduces heat loss by 12% and improves life expectancy by 45%
医疗设备 Medical equipment	精密温控反应器配套散热 Heat dissipation supporting precision temperature – controlled reactors	温度波动范围±2.0℃（±8℃设定） The temperature fluctuation range is ±2 degree (set at ±8degrees)



# PRECISION HARDWARE PROCESSING PARTS

## 精密五金加工配件

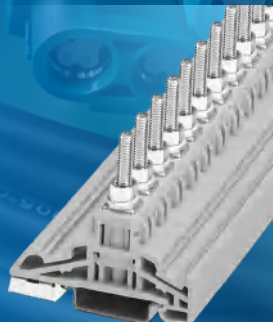
- ▶ 大量减少工装数量，加工形状复杂的零件不需要复杂的工装。如要改变零件的形状和尺寸，只需要修改零件加工程序，适用于新产品研制和改型。
- ▶ 加工质量稳定，加工精度高，重复精度高，适应飞行器的加工要求。
- ▶ 多品种、小批量生产情况下生产效率较高，能减少生产准备、机床调整和工序检验的时间，而且由于使用最佳切削量而减少了切削时间。
- ▶ 可加工常规方法难于加工的复杂型面，甚至能加工一些无法观测的加工部位。

- A significant reduction in the number of tooling is required to process parts with complex shapes without the need for complex tooling. If you want to change the shape and size of a part, you only need to modify the part processing program, which is suitable for new product development and modification.
- Stable processing quality, high processing accuracy, high repeatability, suitable for the processing requirements of aircraft.
- In the case of multi variety and small batch production, the production efficiency is higher, which can reduce the time for production preparation, machine tool adjustment, and process inspection, and also reduce cutting time due to the use of optimal cutting quantity.
- It can process complex surfaces that are difficult to process using conventional methods, and even some unobservable machining parts.



# APPLICATION SCENARIO

## 应用场景



XT60电池连接线



安德森电池连接线



储能光伏连接线



安德森大电流线



电池电瓶电源连接线



大电流安德森线束



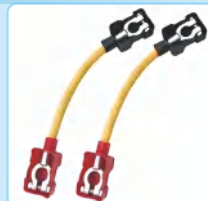
储能移动电源线



储能移动电源线



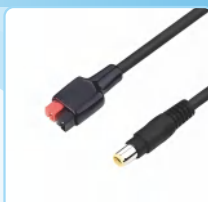
储能柜母座连接线



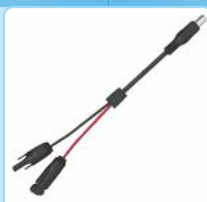
电池正负极搭铁线



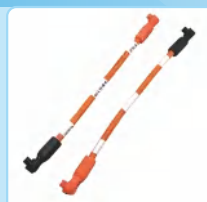
储能光伏延长线



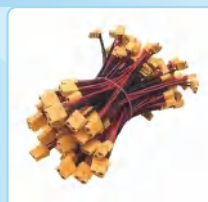
折叠太阳能板延长线



太阳能板延长线



光伏储能柜线束



艾迈斯电池包线

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# PRODUCTION STRENGTH

## 生产实力

- ▶ 完善的生产管理组织架构与熟练的生产工艺设计.研发.品控经验。
- ▶ 拥有国内外先进的设备，团队高效灵活的组织能力，可以满足各种客户弹性交付需求。
- ▶ 目前我司拥有一支专业的团队，员工人数200人。
- ▶ 设备包含：CNC加工中心、铲齿机、走心机、走刀机、切断设备、滚齿机、摩擦焊、恒温恒湿、散热仿真测试、热管测试、高低温测试、拉力测试、三次元、二次元、膜厚仪、粗糙仪等等设备共计150多台。

- A sound production management organizational structure and proficient production process design Research and development Quality control experience.
- We have advanced equipment both domestically and internationally, and our team has efficient and flexible organizational capabilities, which can meet various customers' flexible delivery needs. At present, our company has a professional team with 200 employees.
- The equipment includes more than 150 sets of CNC machining center, tooth relieving machine, centering machine, tool feeding machine, cutting equipment, gear hobbing machine, friction welding, constant temperature and humidity, heat dissipation simulation test, heat pipe test, high and low temperature test, tensile test, three-dimensional, anime, film thickness meter, roughness meter, etc.



摩擦焊设备



龙门数控铲齿机



cnc加工中心生产线



高精度数控走心机



1130数控加工中心机



数控走心机车间



电脑锣加工中心



摩擦焊接设备

# QUALITY CONTROL CAPABILITY

## 品控能力

完善的品质部门组织架构，有专业的品质管理团队20余人，拥有国内外先进的检测设备！

Perfect organizational structure of the quality department, with a professional quality management team of more than 20 people, and advanced testing equipment at home and abroad!



粗糙仪



膜厚仪



三次元检测设备



二次元



# QUALITY CONTROL

## 质量控制

- ▶ 拥有多套先进测试仪器及测量检测工具，光谱分析仪，金相显微镜，万能试验机，三次元实验室测试及质检团队超过20人
- ▶ 原材料成分检测，制程标准化作业

We have multiple sets of advanced testing instruments and tools, spectral analyzers, metallographic microscopes, universal testing machines, and a team of over 20 people in the three-dimensional laboratory testing and quality inspection

Raw material composition testing, process standardization operation



三次元 / Three-D



金相显微镜 / Metallographic microscope

硬度计 /  
Hardness tester machine



光谱分析仪 / Spectral analysis instruments

# R & D CAPABILITIES

## 研发能力

研发团队：研发工程师、仿真工程师、测试工程师20人

结构设计：CREO

热仿真：FloEFD、Flotherm

QMAX：耐压测试、流阻测试

性能测试：热阻测试机、风速仪、压降仪、风洞、高低温循环、冷热冲击、高温老化、水冷循环系统

**R&D team:** 20 R&D engineers, simulation engineers, and testing engineers

**Structural design:** CREO

**Thermal simulation:** FloEFD、Flotherm

**QMAX:** Withstand voltage test, Flow resistance test

**Performance test:** thermal resistance tester, anemometer, pressure drop meter, wind tunnel, high and low temperature cycle, cold and hot shock, high temperature aging, water cooling cycle system



高温恒温箱 /  
High temperature  
thermostat



热管Qmax测试 /  
Heat pipe Qmax test



高低温循环老化测试 /  
High and low temperature  
cycle aging test



热阻性能测试 /  
Thermal Resistance  
Performance Test



# COOPERATIVE CLIENTS

## 合作客户

铸就未来，携手迈向创新之路

Shaping the future, embarking on the path of innovation



## 企业愿景

成为中国铜铝新材料应用领域解决方案布道者

### Corporate Vision

To become a solution preacher in the application field of  
copper and aluminum new materials in China

## 企业使命

用心服务好客户，缔造价值！

推动行业进步发展！成就员工幸福生活！

### Enterprise mission

Serve customers well and create value!

Promote the progress and development of the industry!

Achieving a happy life for employees!

Demi metal materials Co., Ltd

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