

# TIANNENG GROUP

Global Leading  
Green Energy Solution  
Provider



## TIANNENG BATTERY GROUP CO., LTD TIANNENG INTERNATIONAL CO., LIMITED

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Tianneng Group Official

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# About Tianneng

Tianneng is a Global Leading New Energy Company committed to providing environmentally-friendly battery solutions for various industries worldwide since 1986.

Tianneng now has nearly 30,000 employees and more than 130 subsidiaries around the world. There are 18 production bases in 7 provinces in China and 1 oversea manufacturing center in Vietnam. Tianneng set up 7 R&D centers to constantly develop technology and keep innovation in the area of lead acid batteries, lithium batteries, hydrogen Fuel Cells, and Sodium-ion batteries.

## Honor:

- Top 1 in China Lead-acid Battery
- Top 10 in the Chinese battery industry
- Top 500 Chinese enterprises
- Global top 500 new energy enterprises

## Main Business areas:

- Battery and system Solutions (Motive, SLI, Energy Storage)
- Battery Recycling Solutions (Lead Acid battery recycling, Lithium-ion battery recycling)



**\$11.6 billion**

2023 Annual Sales



**A+H Listed**

6888.19.SH/00819.HK



**4000+**

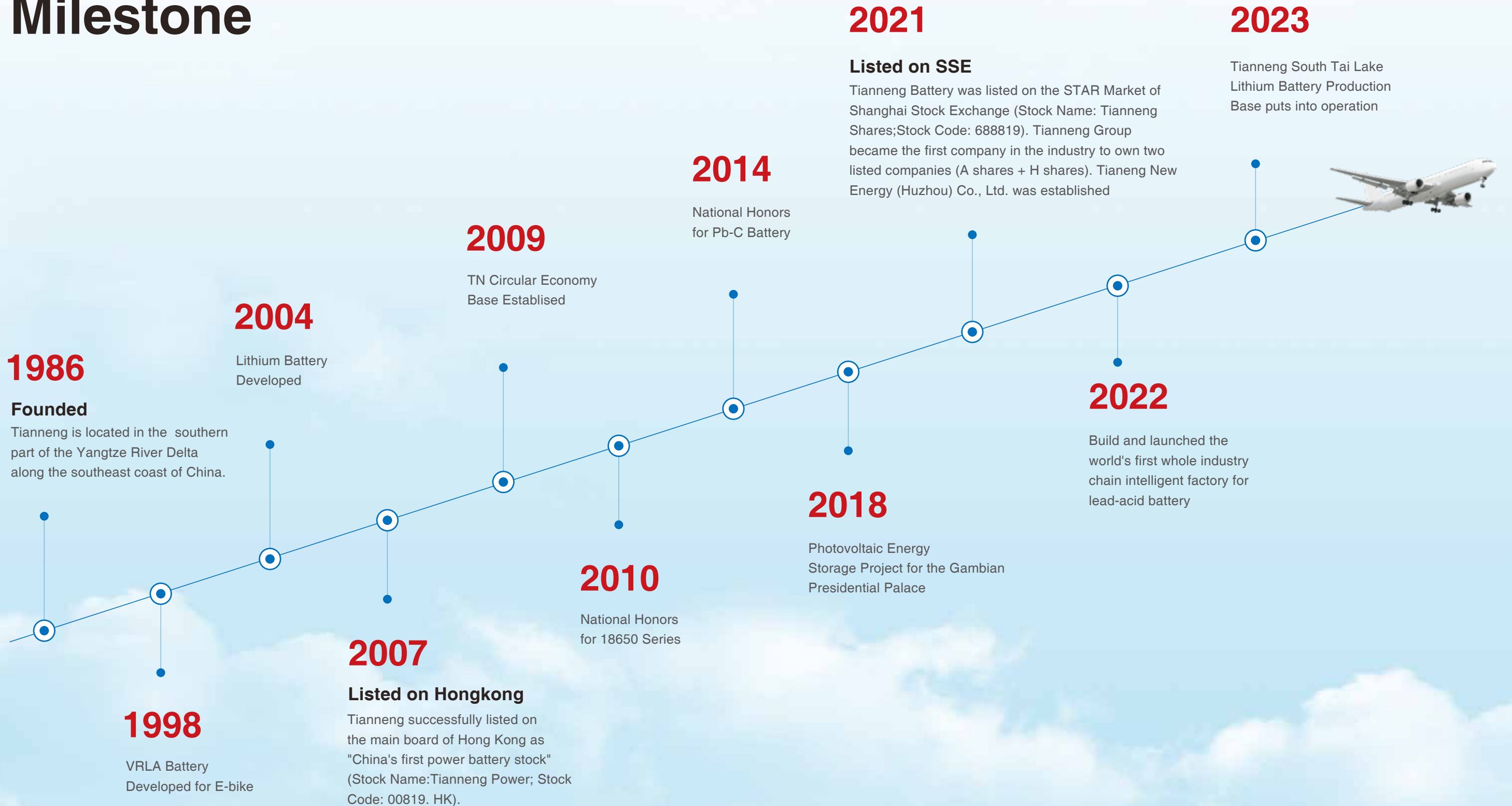
Patents



**No.21**

Global New Energy Enterprise Ranking

# Milestone



# Global Footprint

- 100+ Countries Footprint.
- 11+ Oversea Branches.
- Tianneng has a global footprint around the world, our business covers more than 100 countries and regions.
- **Market Performance**  
2023 Global Delivery: **110Gwh+**

## Headquarters

- **HQ:** Huzhou, Zhejiang, China
- **INT HQ:** Hongkong, China

## Branch

- **APAC:** Vietnam, Thailand, Indonesia, Philippines, Australia & New Zealand
- **South Asia:** India
- **MENA (Middle East and North Africa) :** Turkey, Nigeria
- **Americas:** Argentina, Colombia
- **Europe:** Netherlands



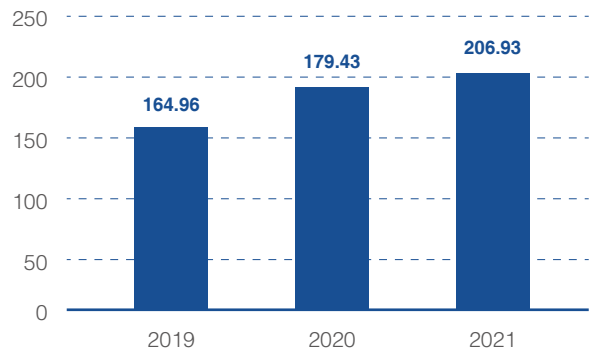
# R&D Strength

## R%D Investment & Outcome

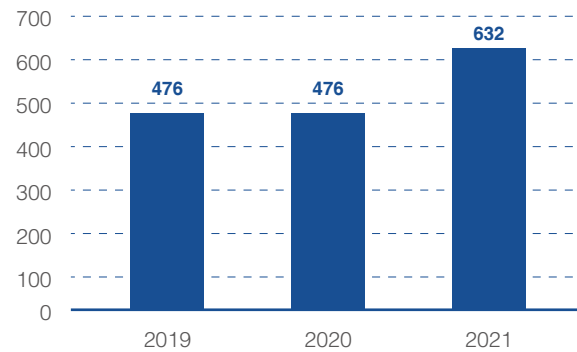
Tianneng has always put technological innovation in an important position to promote enterprise development. Relying on the three-level R&D mechanism of "Headquarters Research Institute + Technology Center + Production Base Technology Department" and continuously increasing R&D investment, Tianneng has accumulated a number of core patents for lead storage batteries, lithium-ion batteries, and new battery technologies mainly for fuel cells.

### R&D Investment (million \$)

Proportion of sales: 2019: 2.67% 2020: 3.54% 2021: 3.69%



### No. of New Patents



**4000+** Patents

**120+** Standards

**1300+** Professors

## R&D Strategies

Tianneng has formed a complete and independent core technology system in improving the specific energy of batteries, improving the batteries' cycle life, improving the performance of batteries in low temperatures and other harsh environments, and improving the production efficiency, etc., and successfully realizing industrialization.

- New Material
- New Structure
- New Technology
- New Area

## Cooperation with World Top Universities and Associates.



Tianneng has cooperated with many famous universities and research institutes, such as the University of Berlin in Germany, the University of Wollongong and ALABC.

# Intelligent Manufacturing

Tianneng has the first domestic motive battery automatic continuous casting, rolling, continuous punching, and continuous coating production demonstration line, the domestic first small-density power battery intelligent automatic assembly demonstration production line and other digital production lines and a complete digital industry. The supply chain has the leading advantages of high equipment utilization, relatively stable production capacity, high product quality, flexible operation, and great product adaptability.



## Smart Factory

Applied artificial intelligence, big data, IoT, image recognition, machine learning, and other cutting-edge technologies to build an efficient smart factory.

\*Owns the world's first whole industrychain intelligent factory forlead-acid battery

\*Automatic and intelligent lithium-ion battery production line

## Lifecycle Management

Executed the whole life cycle of the battery from demand, planning, design, production, sales, operation, usage, maintenance, recycling, and disposal.

## Quality Assurance

Real-time analysis of factory production data, Full process quality control, and information monitoring

## High Production Efficiency

Through rational planning and scheduling, improving the controllability of the production process and reducing the manual intervention in the production process, building a green production with high efficiency and energy saving

# Intelligent Manufacturing


  
**Strict Quality Control**
  
 100% Quality Assurance








Certificate

Tianneng deals with every product prudentially by focusing on every detail and ensuring the quality.

Tianneng catches up with the development trend of industrialization and informatization in 5G era, speeds up the development of digital economy, realizes the data connection of the whole process, and builds a smart platform.



**Digitization**  
Digital Management Platform





# Transportation

## Battery



## 3 Core Materials for Better Performance

 **Graphene** | Low Temperature Resistance

 **Carbon Fiber** | Perfect Discharge Performance

 **Rare Earth Alloy** | Long Cycle Life

## Advanced Services

- ① Provide Battery Components
- ② Provide Vehicle Components
- ③ Provide SKD Batteries
- ④ Provide Technical guidance

# Transportation



## Mobility&Leisure

Motive Battery

Long Mileage & Fast-Charge Capability

E-scooter

Golf Cart

Marine



## Automobile

Start Battery & Start-stop Battery

Excellent Instant Discharge Current & Long Cycle Life

Car

Truck

Bus



## Material Handling & Logistics

Traction Battery

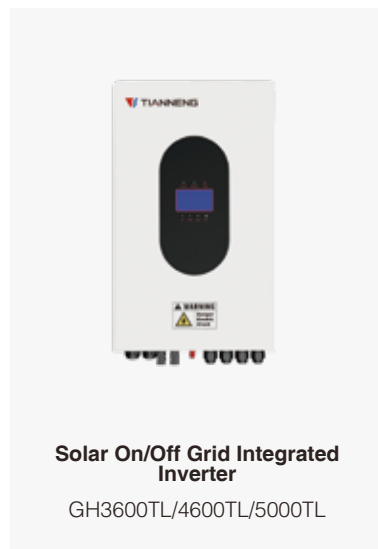
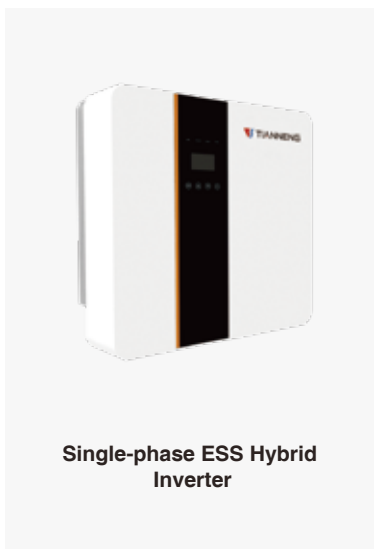
Maintenance Free - GEL Technology Continuous Large Current

Forklift

Stacker

# Energy Storage

## | Battery



## | Back-up Power



Telecom 5G



UPS



IDC



EPS



Security System

# Energy Storage



## Household

Household energy storage system

Green house with economic energy

Household

Solar Energy

Other renewable energy



## Business & Industry

Office buildings and factories

Stability, economy, and flexibility

UPS/EPS

Telecommunication

Electric Power



## Grid

Large energy storage power station

Large energy storage power station

Power grid

Power station

Power plant

# Battery recycling

## Lead-acid Battery Recycling

Tianneng contributes to developing a sustainable battery value chain to help achieve the global carbon neutrality target. Working at creating a close loop of battery production-application-battery recycling- Clean Regeneration-battery production.

### Since 2009

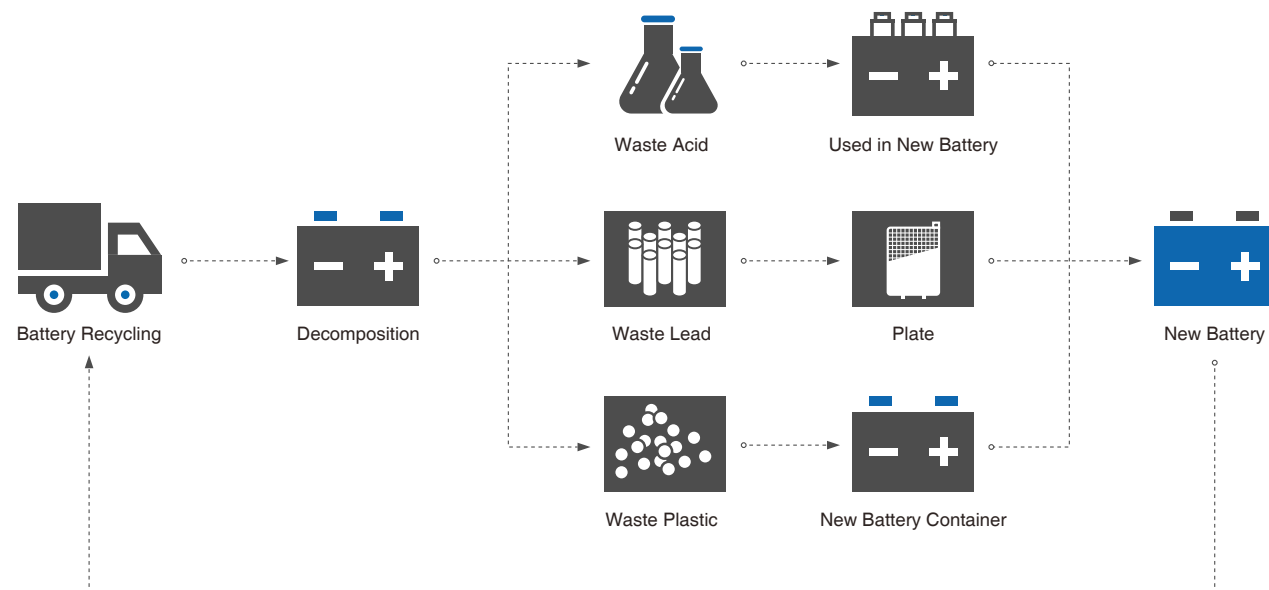
Since 2009, Tianneng have been committed to the construction and improvement of the waste lead-acid battery recycling system.

### 3 large-scale recycling bases

Owns three domestic recycling bases and has become a national pilot base for circular economy standardization.

### Large recycling scale

At present, the total annual recycling of lead-acid batteries can reach 900,000 tons, producing more than 600,000 tons of recycled lead, saving 20 million tons of lead ore per year.

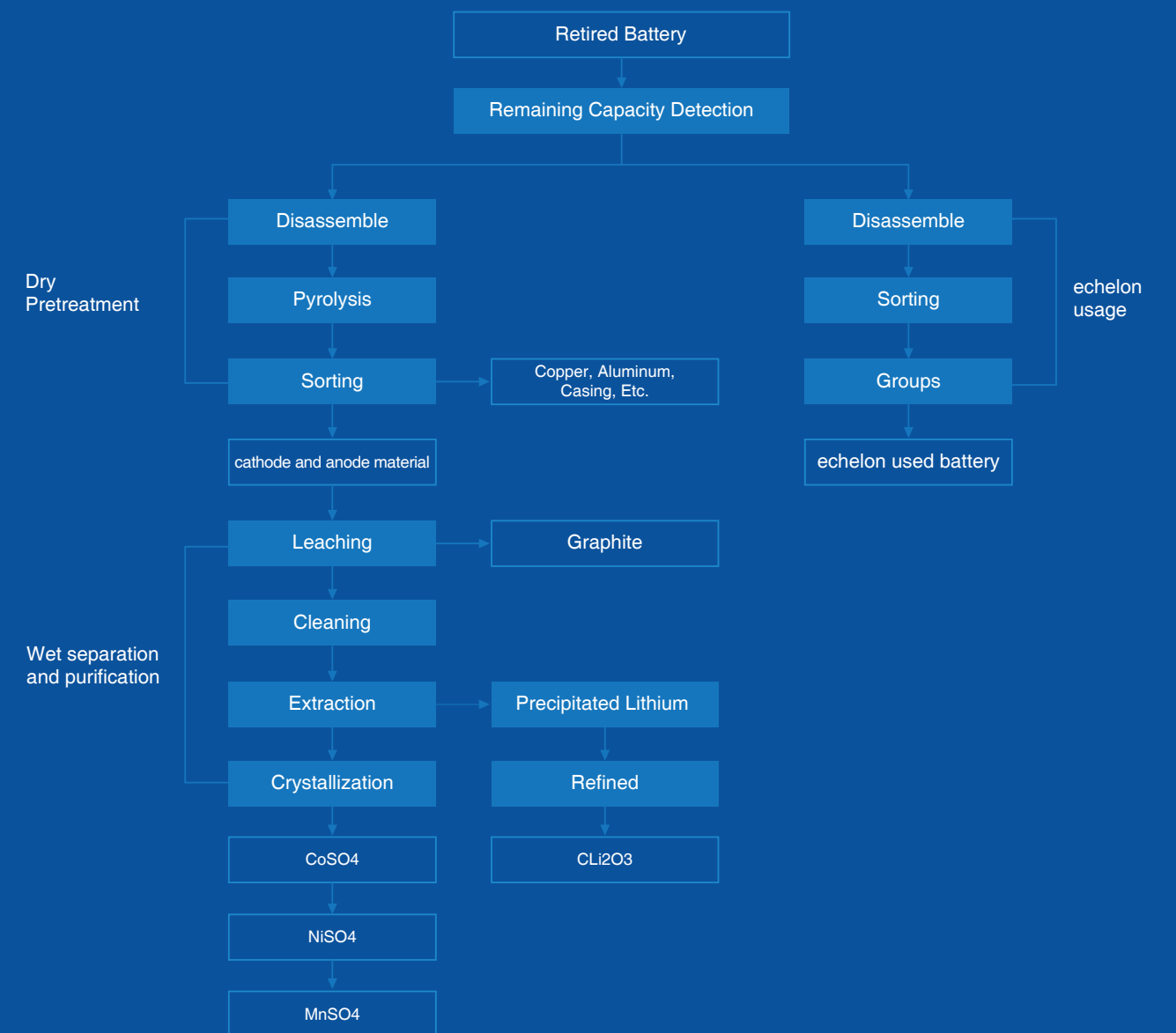


## Lithium-ion battery Recycling

**Estimate Waste Lithium battery disposal capacity: ≈ 126,000Tons**  
 23,000Tons (in operation) + 103,000 Tons (on constructions)

**Own 27+ patents, 40+ Industry/Nation Standard formulations**

Participated in the formulation and revision of nation/industry standards related to lithium battery recycling and materials



# Corporate Culture

## Social Responsibilities

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We have earned the trust of the market, and we will carry more social responsibility to repay the whole society.

# Sustainable development

## The commitment to Leveraging the power of Tianneng to promote green development

The commitment to sustainable development is the core tenet of Tianneng Group's development. Since the establishment of the company, Tianneng has been committed to promoting harmony between people and nature with a higher quality level of development and meeting the needs of people for a better life with cleaner and more efficient products. We focus on developing in a way that benefits people, the environment, and society in a sustainable manner.



## Our actions, sustainable practices

### 1. Supply Chain Management

Tianneng Group hand in hand work with global high-quality suppliers to jointly optimize supply chain management of the supply chain ecosystem. Strategic alliances in the supply chain were established to enhance the competitiveness of the whole value chain system.

### 2. Labor & Human Rights

Tianneng Group Strictly abides the global law and regulations such as "the Labor Law" in the recruitment and employment of global staff. The company actively strives to create a diversified and impartial working environment for employees and establishes management systems such as "Regulations on Human Resource Management" and "Control of Tianneng Group and Recruitment Management Measures of Tianneng " to clarify the rights of employees and ensure that all employees are not discriminated against on the basis of religion, gender, disability, etc.

### 3. Intellectual Property Protection

Tianneng Group takes r&d development as the priority. Established an innovation team composed of international top experts from the United States, Japan, South Korea, etc., The research industry involves new energy batteries, new energy materials, intelligent manufacturing, and green cycle, etc. Tianneng also sets up the department of Project and Intellectual Property to deal with the application of the related project .

### 4. Safeguard the Green Homeland

Tianneng Group has comprehensively explored a new model of green growth. Starting from green battery products, green workshops, green factories, green parks, green standards, green supply chains, etc., with the help of big data and IoT technology. It puts "green intelligent manufacturing" into the whole process of production and operation, leading the industry to develop in a green, high-end, and intelligent direction.

# CONTACT US NOW!

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### Disclaimer

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The information contained in this brochure is complete, accurate, and current to the best knowledge of Tianneng. However, Tianneng reserves the right to modify the information and data from time to time without giving further notice. The right of final interpretation vests in Tianneng to the fullest extent permitted by law.

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