



Since 1976-50 Years of Professional Accumulation

Wuxi Zhanghua Pharm & Chem Equipment Co., Ltd.

Product Overview

Reaction · Crystallization · Filtration · Drying

Pressure Equipment – Mechanical Properties, Residual Stress Testing, Safety Assessment, and Reasonable Life Extension

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PART 01

Company Introduction

SINCE 1976 For 50 years, we have been committed to the R&D and manufacturing of reaction, crystallization, filtration, and drying equipment.

Company Profile



Enterprise profile

Founded in 1976, Wuxi Zhanghua Pharm & Chem Equipment Co., Ltd. has focused on the R&D and manufacturing of reaction, crystallization, filtration, and drying equipment for 50 years. We provide customized process equipment solutions for industries including pharmaceuticals, fine chemicals, pesticides, and new energy—especially for processes involving flammable, explosive, toxic, or highly corrosive materials.

Core advantage

Highly Sealed

Core advantage

High Vacuum

Core advantage

Full Automation


Industry Leading Position

- ✓ Pioneered the development of double-cone drying equipment in China (1978)
- ✓ Pioneered China's first Agitated Nutsche Filter Dryer (1999)
- ✓ First in China to obtain CSEI Helium Leak Testing Certification (2023)
- ✓ Drafted the CSTM standard for indentation testers
- ✓ The standard was officially incorporated into the National Standard for Evaluation of Heat Treatment Effects on Pressure-Containing Equipment (2026)

1

From equipment Manufacturer to solution leader

In 1978, we successfully developed China's first double-cone rotary dryer. In 1999, we pioneered the country's first Agitated Nutsche Filter Dryer in China, continuously steering process equipment toward integrated and intelligent solutions.

In 2023, we co-developed the "Deep-Sensing Micro-indentation Testing Technology—Portable Mechanics Laboratory." It was awarded the Gold Medal at the International Exhibition of Inventions of Geneva.

Our core methodology, the Indentation Energy Difference Method (T/CSTM 00824—2023), officially incorporated as Appendix G of the forthcoming National Standard GB/T 30583-2026—Code for Post-Weld Heat Treatment of Pressure Equipment, effective August 1, 2026.

2

Core Products: Designed to Deliver Customer Value

Wuxi Zhanghua's ANFD has taken the lead in China in passing official helium mass spectrometer leak testing certification, providing reliable containment for sterile pharmaceutical production and highly potent material handling.

3

Safety and Quality Built for Demanding Processes

Since 2005, Zhanghua has applied special materials such as Hastelloy in process equipment, supporting safer production for highly corrosive and highly active materials. For demanding process conditions involving flammable, explosive, toxic or hazardous materials, Zhanghua provides integrated safety solutions covering explosion-proof design, high-vacuum operation, high-containment structure and fully automated control systems.

COMPANY PROFILE

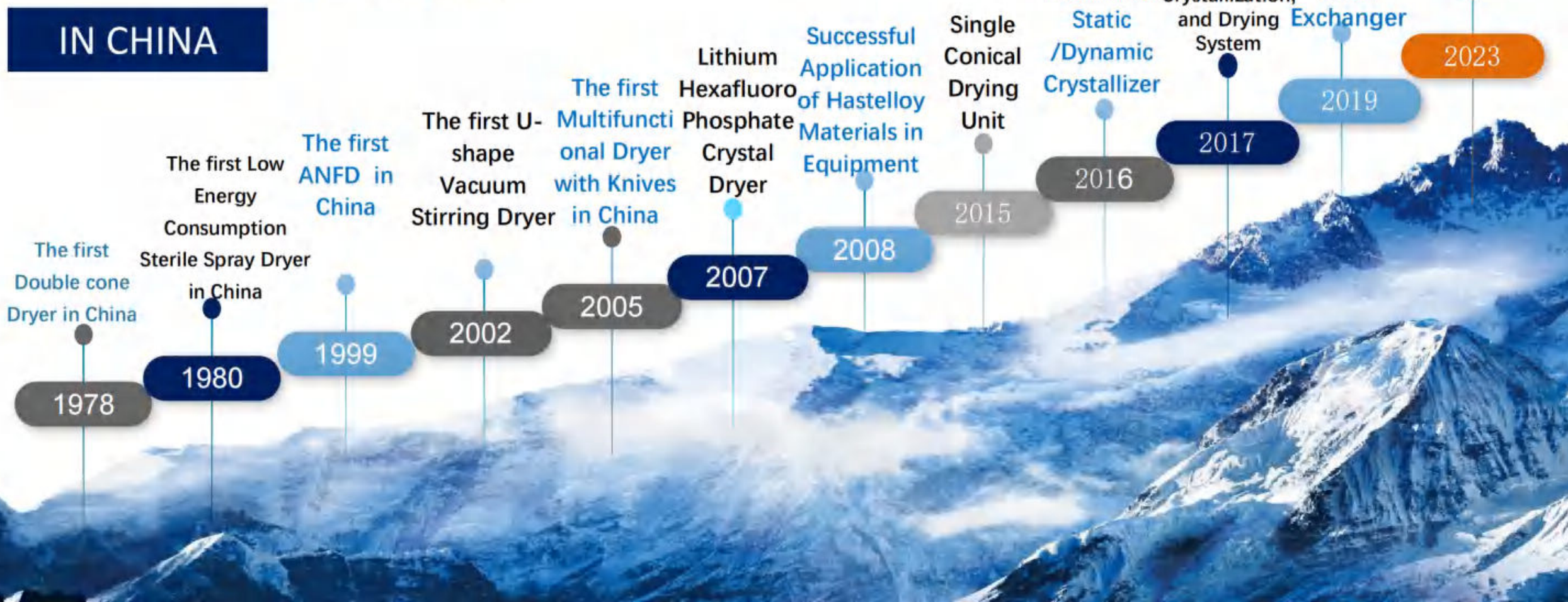
Company Profile



Domestic Leading
Technology

NO.1

IN CHINA



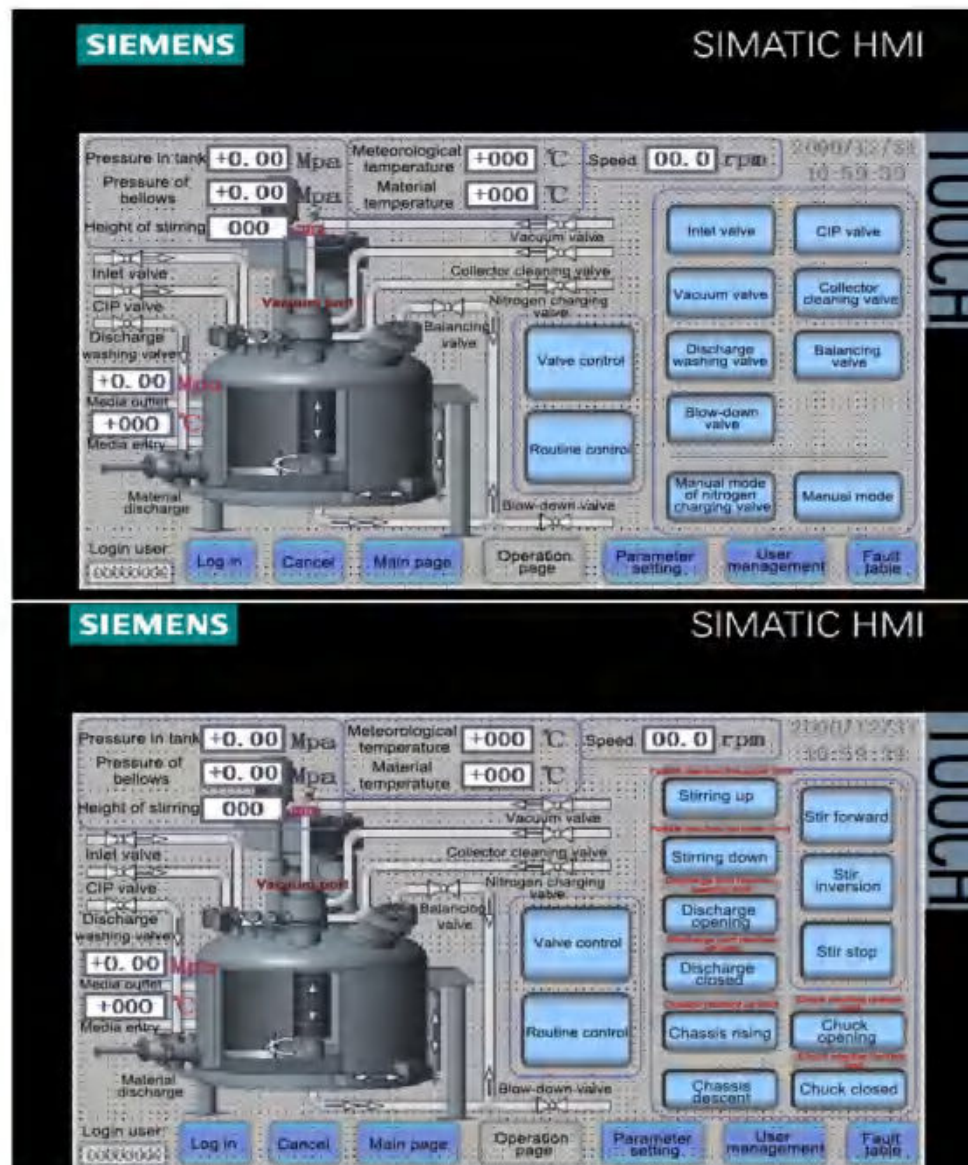
Company Profile

总经理 G.manager

质保工程师 Quality Assurance Engineer

设计审图责任人——设计人员	Person in Charge of design review- Designer
工艺责任人——工艺人员	Person in Charge of process - Technician
材料责任人——材料检验员	Person in Charge of materials - Material Inspector
焊接责任人——焊接技术人员 ——焊工	Person in Charge of welding - Welding Technician Welder
压力试验责任人——压力试验人员	Person in Charge of pressure tests - Pressure tester
热处理责任人——热处理技术人员 ——热处理操作工 (分包)	Person in Charge of welding - Welding Technician Heat-treatment Operator (subcontracted)
无损检测责任人——无损检测人员	Person in Charge of Nondestructive testing - Nondestructive Tester
理化责任人——理化试验人员	Person in Charge of Physicochemical testing - Physicochemical Tester
最终检验责任人——检验员	Person in Charge of final inspection - Inspector
计量责任人——计量员	Person in Charge of Measurement - Gauger
设备管理责任人——设备员	Person in Charge of equipment management - Device administrator
其他过程控制责任人——检验员	Person in Charge of other processes-Inspector

Quality Assurance



Design&Calculating Software(self-developed)



Qualifications & Advantages



Intellectual Property

40+

National Patents and Software Copyrights

- ✓ Patent of invention
- ✓ Patent for utility models
- ✓ Software copyright



International Certification

The equipment complies with FDA and CGMP requirements and has obtained multiple international certifications.



MOM



Team Strengths



Product After-Sales Service Engineer

After-sales service engineers with over 20 years of domestic and international on-site experience.



Technical Teams

Over 50% of technical workers have served the company for more than 10 years.



Export Capability

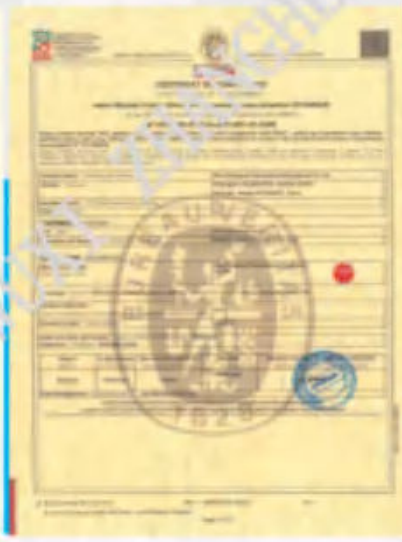
Equipment exported to numerous pharmaceutical and chemical enterprises in Europe and America.

Qualifications & Advantages



The Company Has Obtained Over 40 National Patents and Software Copyrights.

Qualifications & Advantages



Qualifications and Core Strengths



Pressure Equipment – Mechanical Properties, Residual Stress Testing, Safety Assessment, and Reasonable Life Extension



Key Technologies for Welding Deformation Control for Intrinsic Safety of Major Pressure Equipment" – CPCIF First Prize for Science and Technology Progress.



Key Technologies for the Design and Manufacturing of Micro/Compact Chemical-Mechanical Systems" – CPCIF First Prize for Science and Technology Progress.

Application Field and Core Competencies



Pharmaceutical industry

Active Pharmaceutical
Ingredient Production



Fine chemical

Chemical synthesis



Pesticides and fertilizers

Agricultural chemicals



New energy

Lithium battery
materials



New materials

Advanced materials



Non-standard Manufacturing Capacity



Double-cone drying equipment

5L-20m³



Agitated Nutsche Filter Dryer

DN150-DN4600



Paddle dryer

~16m³(machnical seal
design)



Pilot production line

Customized Design



Manufacturing of Special Equipment



Pressure Vessels

Design and Manufacturing of Pressure Vessels Below 100 Bars



Corrosion-resistant Special Materials

Plastic Lining, Lining Halar/ ETFE/PFA, Lining Enamel, Titanium
/Titanium Cladding, Hastelloy/Hastelloy Cladding, Monel etc. Duplex
2205, Duplex 2507



Sterile-grade Equipment

support GMP/CGMP-compliant production, subject to specific
project requirements and applicable standards.



PART 02

Main Business

**Complete Series of Reaction, Crystallization, Filtration& Drying Equipment
and Integrated System Solutions**

Overall Process Scheme



**DOUBLE CONE
VACUUM
DRYING UNIT**



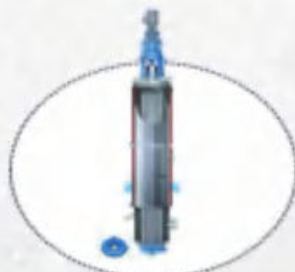
**API PACKAGING
MACHINE SYSTEM**



**CRUSHING AND
SIFTING MACHINE**



**SCRAPER-TYPE
FILM EVAPORATOR**



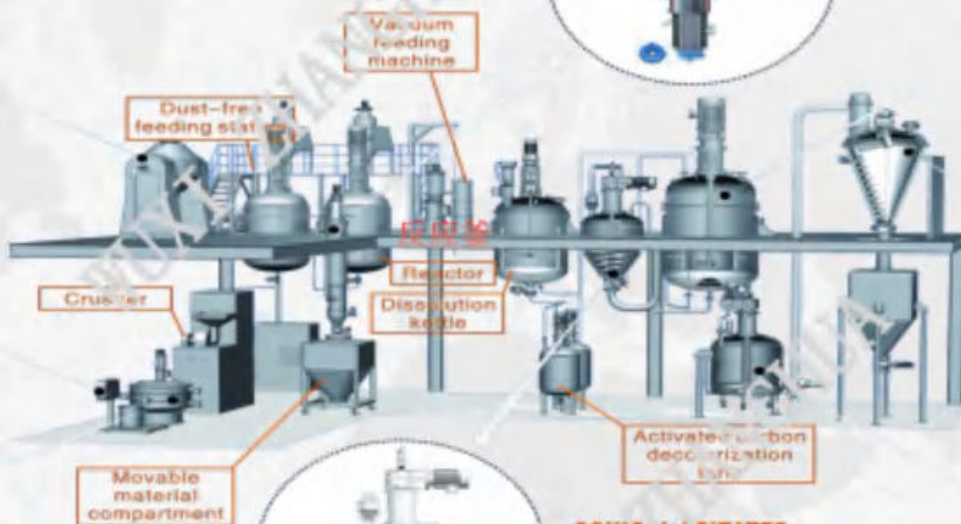
W-SHAPE CRYSTALLIZER



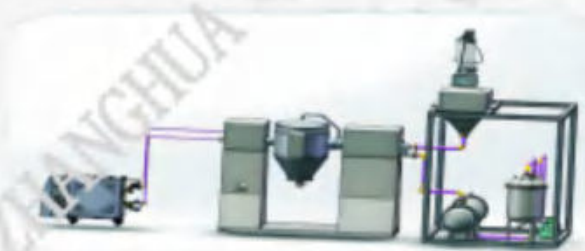
SINGLE-CONE DRYER



**AGITATED NUTSCHE
FILTER DRYER**



**CONICAL AGITATED
NUTSCHE FILTER DRYER**



Nutsche filter dryer (Filtration, Washing, and Drying Equipment Series)



Agitated Nutsche Filter Dryer

Integrates filtration, washing, and drying; full closed-loop operation to avoid contamination and cross-contamination

High-sealing design to prevent leakage

✓ Fully automatic control, easy operation

✓ Material options: Many options

✓ Specification range: DN150-DN4600



Agitated Nutsche Filter

Designed specifically for solid-liquid separation and washing process, with a compact structure and small footprint, suitable for pilot-scale and small-scale production

✓ Compact structure with small footprint

✓ Low investment cost

✓ Suitable for pilot-scale and small-scale production with flexible

✓ Operation and easy cleaning



Multifunctional Dryer Unit with Blades

Equipped with special crushing blades, suitable for drying viscous materials, effectively preventing product caking and ensuring uniform drying

★ Design of Special crushing blades

★ Applicable to viscous materials

★ Prevent product caking

★ Highly efficient drying with uniform performance



Technical Highlight

Our ANFD series is the first in China to pass official CSEI helium leak testing certification, ensuring top-tier sealing performance for highly toxic, highly active, and sterile production environments.

Reaction, Crystallization & Drying Equipment



Reaction & Crystallization Equipment



Reactor



Multifunctional reactor, supporting various chemical reaction processes



W-shaped Crystallizer



Unique W-shaped design for optimized crystallization effect



Horizontal Static Crystallizer



Suitable for large-scale continuous crystallization production



Single Cone Rotary Crystallizer



Rotary design for uniform and efficient crystallization



Drying Equipment Series



Double-cone vacuum dryer



Specification: 5L-20m³, (first developed in China)



U-shape mixing Vacuum Dryer



Combined with hot air circulation, the efficiency is higher.



Single-cone spiral belt dryer



Fully sealed design with high vacuum

Low-energy consumption sterile spray dryer



Low-energy consumption design, aseptic level standard



First-of-its-Kind in China

The first double-cone dryer in 1978



in compliance with FDA

Complies with international pharmaceutical standards



Export to Europe and America

Serve global customers



PART 03

Innovative Products & Distinctive Systems

We enhance product performance through breakthrough technological architectures.

Innovative Products



Portable Indentation Tester

Using depth sensing micro indentation detection technology without sampling, mechanical properties and residual stress data of engineering structures can be obtained within 5 minutes



Small volume



Good compatibility



In light weight



High-accuracy



Applied range

Strength testing · Stress testing · Welding evaluation · Life assessment



Pre-load Force on-line Monitoring System

Based on ultrasonic principles, it enables long-term continuous online monitoring to provide early warnings for issues such as gasket creep, disc spring jamming, and bolt stress relaxation.



Wireless transmission



ExIICT6 Explosion-proof



10-channel monitoring



Nondestructive installation



Silicon Carbide Heat Exchanger

Using silicon carbide ceramic materials as heat transfer medium, it has excellent properties such as corrosion resistance, high temperature resistance, high thermal conductivity, high hardness, and wear resistance

✓ Excellent thermal conductivity

✓ Extensive corrosion resistance

✓ High hardness and wear resistance

✓ The medium remains uncontaminated



Technical specifications

Heat transfer area 1090m² · Diameter 2300mm · Weight 48 tons



Skid-mounted treatment system

Provide complete modular system solutions, including raw material tank, ANFD equipment, buffer tank, vacuum system, heating system, etc

☞ Filtration, Washing, and Drying System

☞ Reaction decolorization crystallization system

☞ Multifunctional Double Cone Drying System



Skid-mounted Treatment System



Reaction, Crystallization and Drying Experimental System



This system consists of a reactor, condenser, recovery tank, double-cone crystallizer, double-cone dryer, and a thermal oil heating system. It is specifically designed for validation experiments of new lithium battery processes.

After the synthesis reaction is completed in the reactor, the material undergoes condensation recovery and temperature-controlled crystallization in the double-cone crystallizer, followed by vacuum drying in the double-cone dryer. The entire process operates in a closed, continuous manner.

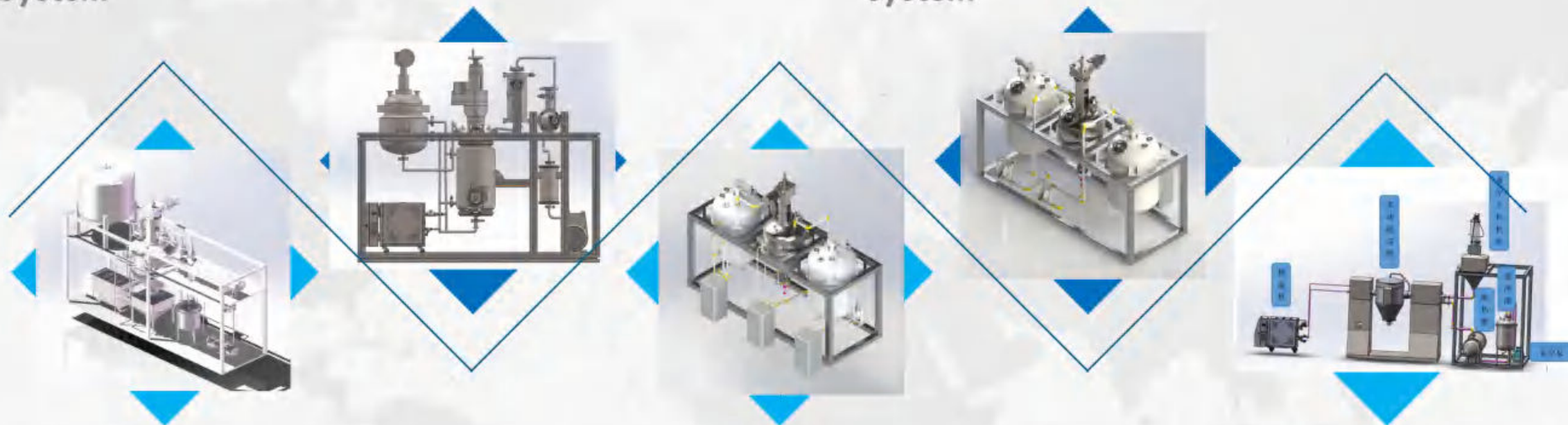
The system allows flexible adjustment of process parameters such as temperature, rotation speed, and vacuum level, helping users determine the optimal process conditions for different batches, evaluate product yield and quality, and provide data support for subsequent pilot-scale scale-up.

Skid-mounted Treatment System



Filtration, Washing and Drying (Three-in-One) System

Reaction decolorization and crystallization system



ANFD(Filtration, Washing and Drying)Skid System

1. Raw material tank-washing, filtering, drying
2. buffer tank and matching vacuum (vacuum pump-buffer tank-condenser)
3. Heating system (TCU)

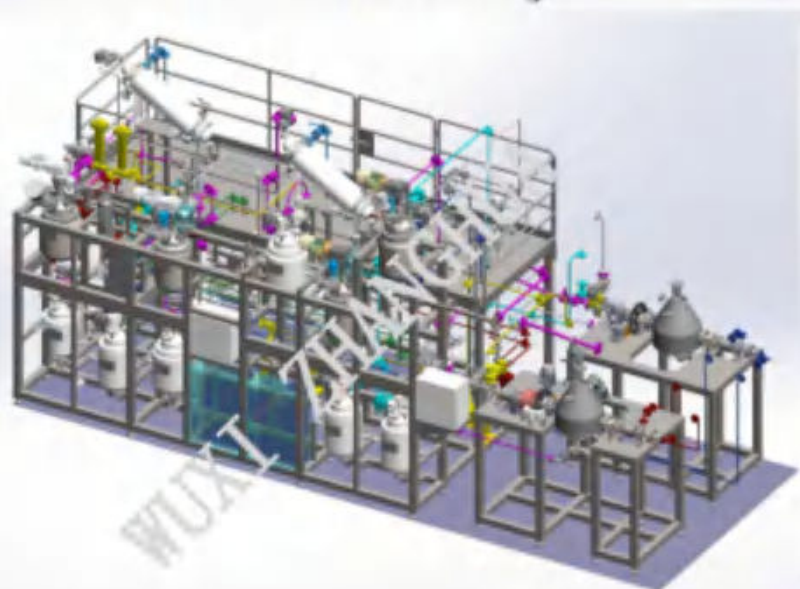
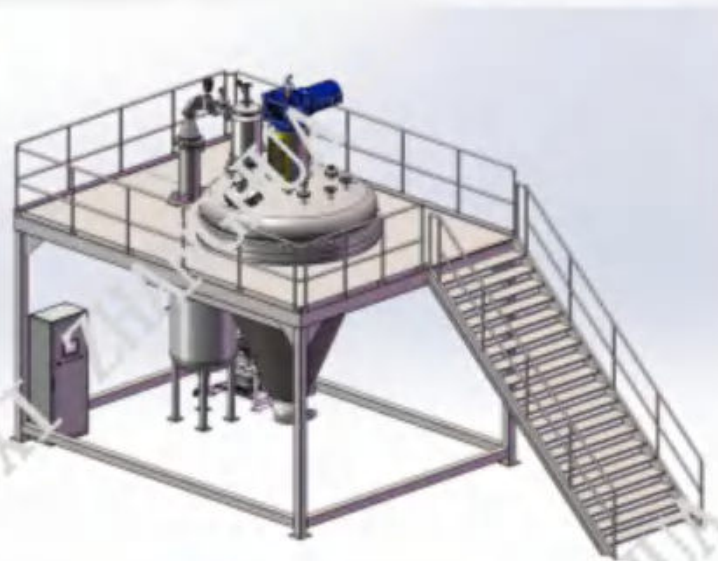
Reaction decolorization and crystallization system

1. Reactor
2. Decolorization tank
3. Crystallizer Tank
4. Heating system(TCU)

Rotary nutsche filter Drying System

1. Vacuum feeding unit - RNFD(multifunctional unit for reaction, crystallization, filtering, washing, drying, and crushing)
2. buffer tank and matching vacuum (vacuum pump-buffering tank-condenser)
3. Heating system(TCU)

Skid-mounted Treatment System



Skid-mounted Treatment System



Tilting Single-Cone Mixer & Dryer Unit

Highly Integrated and Unified Design

System Integration · Precise Temperature Control



Efficient Stirring and User-Friendly Operation

Tip-over Stirrer · Quick-Opening Flange



Reliable Discharge and Cleaning System

Zero-leak discharge · Online cleaning · Convenient sampling

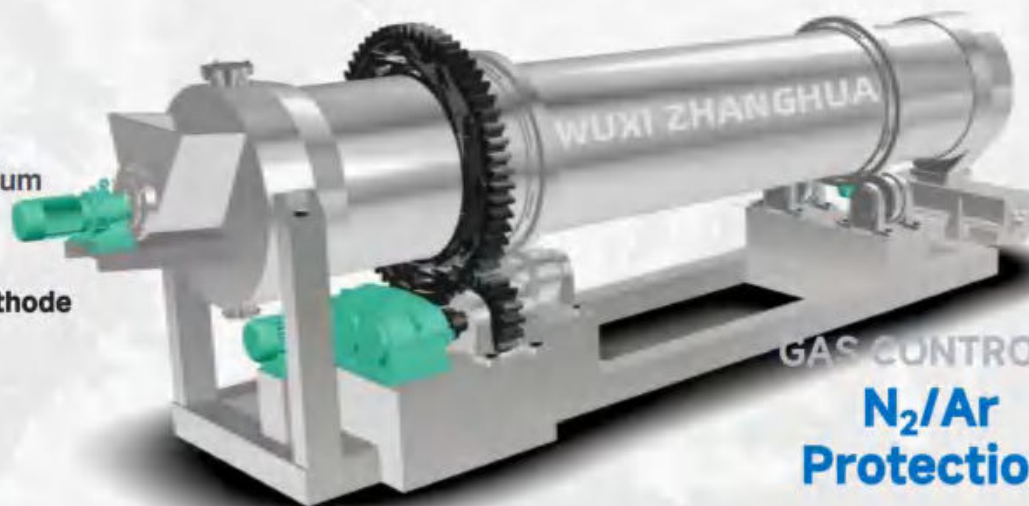


High-efficiency Mixing & Drying

Innovative Products & Distinctive Systems



Drum dryer



Lithium carbonate production

High-temperature Calcination of lithium pyroxene to enhance lithium ion extraction efficiency



Lithium Battery Anode Materials & Cathode Materials

Heat treatment processes such as graphitization and carbonization



Waste Battery Recycling

High-Temperature Pyrolysis for the Selective Separation of Organic Matter from Metal Materials

TEMP CONTROL
**Temperature
Difference $\leq \pm 2^{\circ}\text{C}$**

GAS CONTROL
 **N_2/Ar
Protection**

ENERGY SAVE
**Recovery of
Waste Heat**

AUTOMATION
PLC Control

Core Advantage

Four key features: precise temperature control, gas control, energy-saving control, and automation, ensuring product quality and production safety.

Innovative Products & Distinctive Systems



Improved Nickel Plating Technology

Core Advantage



Corrosion resistance

After 60 hours of salt spray test, the corrosion resistance is excellent.



Electrical isolation

Effectively prevent electrochemical corrosion



Persistent and durable

High-quality coating improves product service life.



Technical Feature



Precision Manufacturing

Integrating advanced electroplating and precision machining technologies, including specialized welding and hard coating processes, to ensure product quality meets international standards.



Outstanding Corrosion Resistance

No corrosion was observed after a 60-hour salt spray test, demonstrating exceptional corrosion resistance and suitability for various harsh environments.



Rigorous Quality Inspection

Multiple quality checkpoints throughout the process
From raw materials to finished products, ensuring full quality control

Customized Services

Tailored, according to the specific needs of customers and application scenarios, provide personalized electroplating solutions to meet various special requirements.

30-hour salt spray



40-hour salt spray



50-hour salt spray



60-hour salt spray

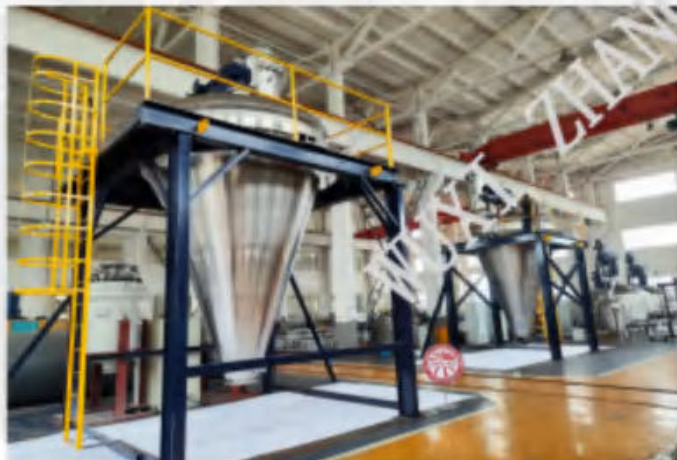


60-Hour Salt Spray Test

Innovative Products & Distinctive Systems



Single Arm Conical Vacuum Dryer



Structural Composition



Driving system



Shaft seal



Stirring arm



Spiral structure



Upper head



Cone



Cleaning system



Heating system



Vacuum component

13 Core Features

- | | |
|--|--|
| 01 Gentle agitation to prevent particle attrition and crystal breakage | 02 Preserve the intrinsic quality and polymorphic integrity of material |
| 03 Ultra-low energy consumption | 04 High vacuum, low temperature drying suitable for heat-sensitive materials |
| 05 Excellent heat transfer performance | 06 Variable screw speed control |
| 07 CIP-ready (Clean-in-Place) design | 08 Extremely low final moisture content |
| 09 High process flexibility | 10 Filling capacity 10%-100% |
| 11 High operational flexibility for multi-product campaigns | 12 Tilting discharge mechanism ensures complete emptying and drainability |

Applicable Scene

- ✓ Toxic materials containing solutions or water
- ✓ Drying Treatment of Explosive Materials
- ✓ Low-temperature drying of thermosensitive materials

Innovative Products & Distinctive Systems



Portable Indentation Tester



PMT-1000

- Tensile Property
- Biaxial Residual Stress
- Hardness
- Fracture Toughness etc.

Depth Sensing Micro-indentation Technique
— Mobile Mechanics Laboratory

Non-destructive & On-line Testing
Obtain the Accurate Results Within 10 Minutes!



Material Certificate



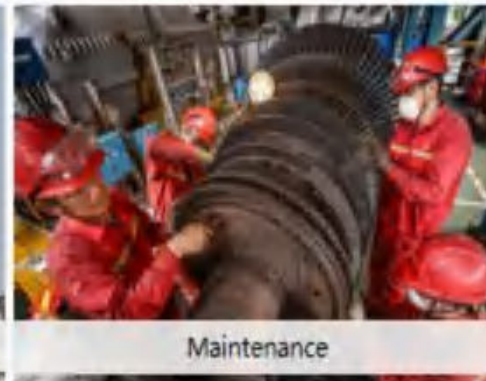
Manufacturing



Heat treatment



Performance monitoring



Maintenance



Aging life assessment

The portable indentation instrument adopts advanced depth-sensing micro-indentation detection technology to obtain the mechanical properties and residual stress data of engineering structures online without sampling.

Innovative Products & Distinctive Systems



Portable Indentation Tester

Micro-indentation Technique



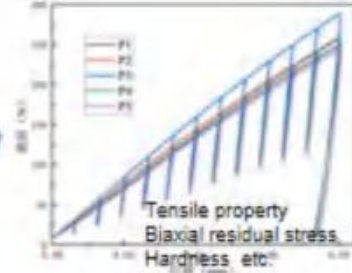
Equipment (to be) in Service



Polishing



Indentation testing



Multi-output



Application Mode



Cutting



Samples



Professional preparation



Various tests

- Highly accurate nondestructive tensile and fracture toughness testing equipment
- Accurate life evaluation of in-service and extended-service equipment

Innovative Products & Distinctive Systems



Portable Indentation Tester



1. Strength on-line test
2. Customization of heat treatment scheme
3. Stress nondestructive testing
4. Equipment failure analysis
5. Welding procedure qualification
6. Equipment life assessment

BS 7138
CCS 2.0



中华人民共和国国家标准

GB/T 30583—2026
代替 GB/T 30583—2014

承压设备焊后热处理规程

Specifications for post weld heat treatment of pressure equipment

2026-01-28 发布

2026-08-01 实施

国家市场监督管理总局 发布
国家标准化管理委员会

The nondestructive indentation testing technology of "deep perception-micro indentation-indentation energy difference method" developed by Wuxi Zhanghua team won the gold medal in Geneva International Invention Exhibition.

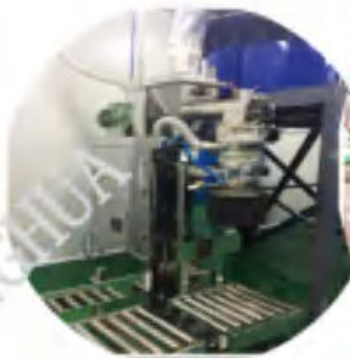
His team drafted the group standard T/CSTM 00824-2023 "Indentation energy difference method for residual stress determination of pressure equipment".

GB/T 30583-2026 Rules for Post-weld Heat Treatment of Pressure Equipment, which was implemented in August 2026, has formally included the indentation energy difference method in Appendix G as a recommended method for evaluating the effect of post-weld heat treatment, which indicates that this technology has risen from academic exploration to national standard method.

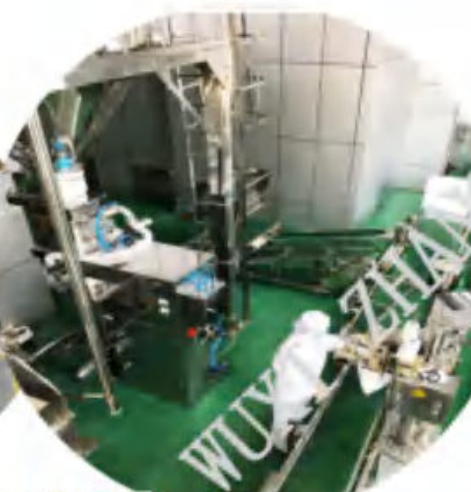
Innovative Products & Distinctive Systems



Automatic quantitative packaging system



DCS-50/A5 Powdered material 20-50kg



DCS-50/A4 Granular material 20-50Kg/bag



DCS-50/B2,B3 Hopper scale 25-50kg

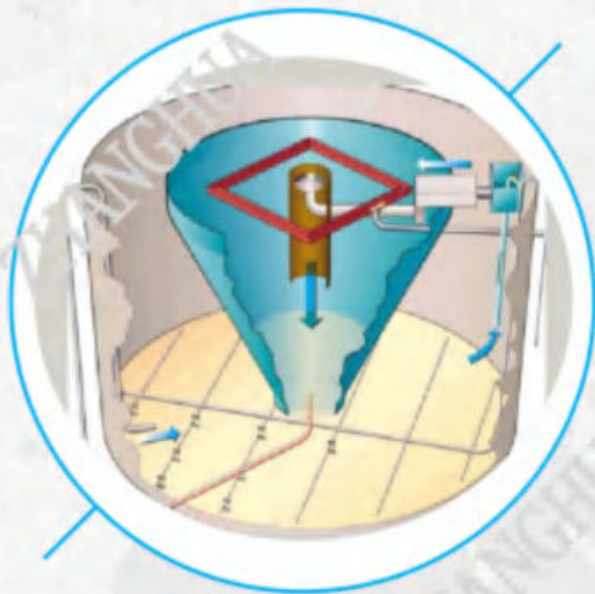


DCS-1000/1,2,3 500-1000kg

Research Project



Sludge and Waste
Water Treatment
Catalytic Wet Air Oxidation
Technology

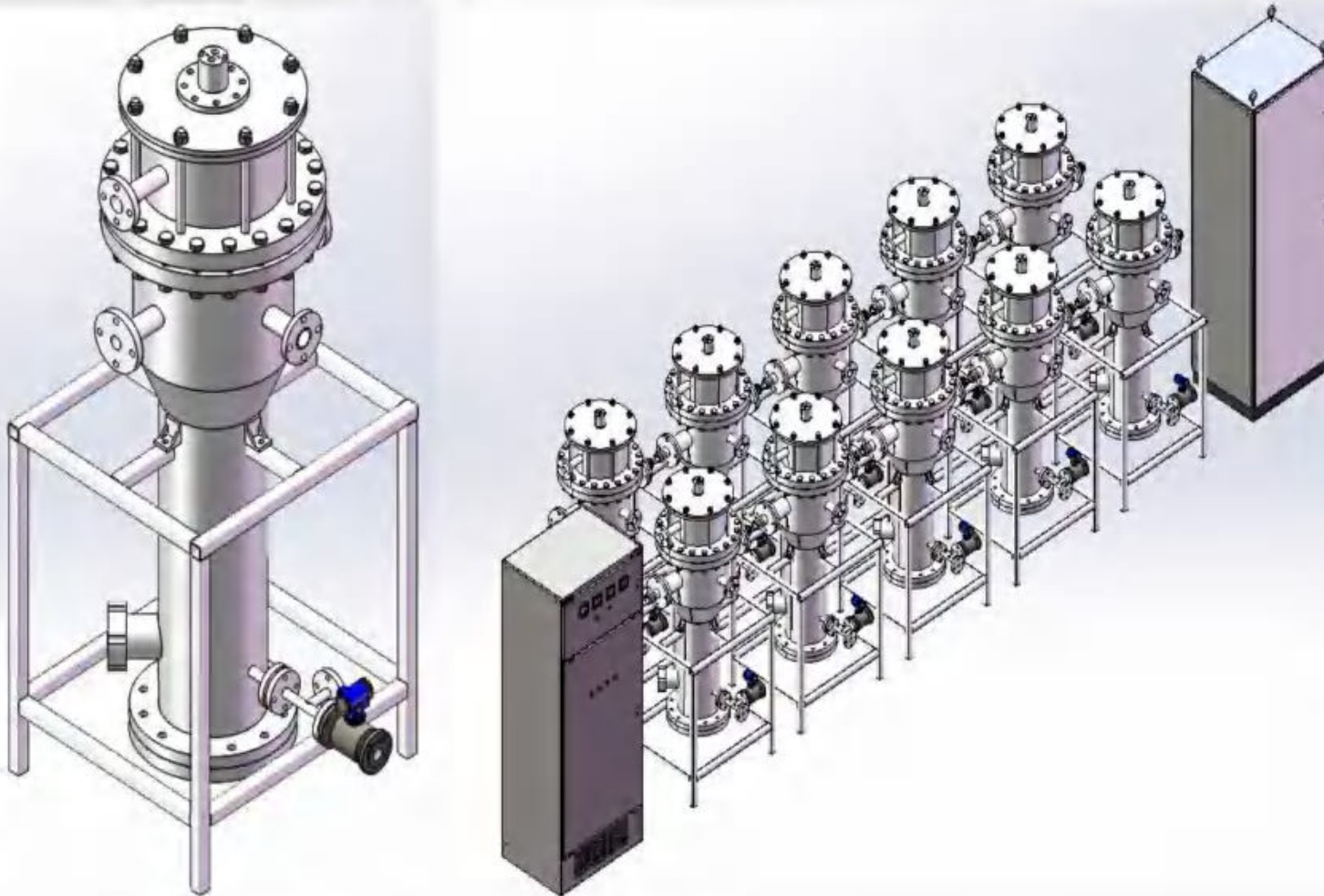


AIS (Adventure
Integrated System)



Continuous Tubular
Crystallizer

Continuous Gas-liquid/liquid-liquid Ultraviolet Reactor



Device composition and function

Light source system

Ultraviolet lamp or visible light source is used to provide light energy with a specific wavelength, which excites photocatalyst (such as TiO_2) to generate reactive oxygen species (ROS) to drive the oxidation reaction.

Reaction cavity

Corrosion-resistant materials (such as Shi Ying or Teflon) are designed and equipped with temperature control and stirring devices to ensure uniform mixing of reactants and stable reaction conditions.

Gas treatment unit

Integrated tail gas absorption and purification module (such as activated carbon adsorption or alkali washing) to treat by-products (such as CO_2 and volatile organic compounds) generated by the reaction, which meets the environmental protection emission standards.

RESEARCH PROJECT

Research Project



Continuous Gas-liquid/liquid-liquid Ultraviolet Reactor





Insoluble Sulfur

Morphology and color

Yellow powdery porous solid belongs to amorphous sulfur, and industrial products are mostly oil-filled type (accounting for 99%), and non-oil-filled type is rare.

Dissolution characteristics

Insoluble in carbon disulfide, water and other common solvents, this characteristic is the core basis of its naming.

Density and flammability

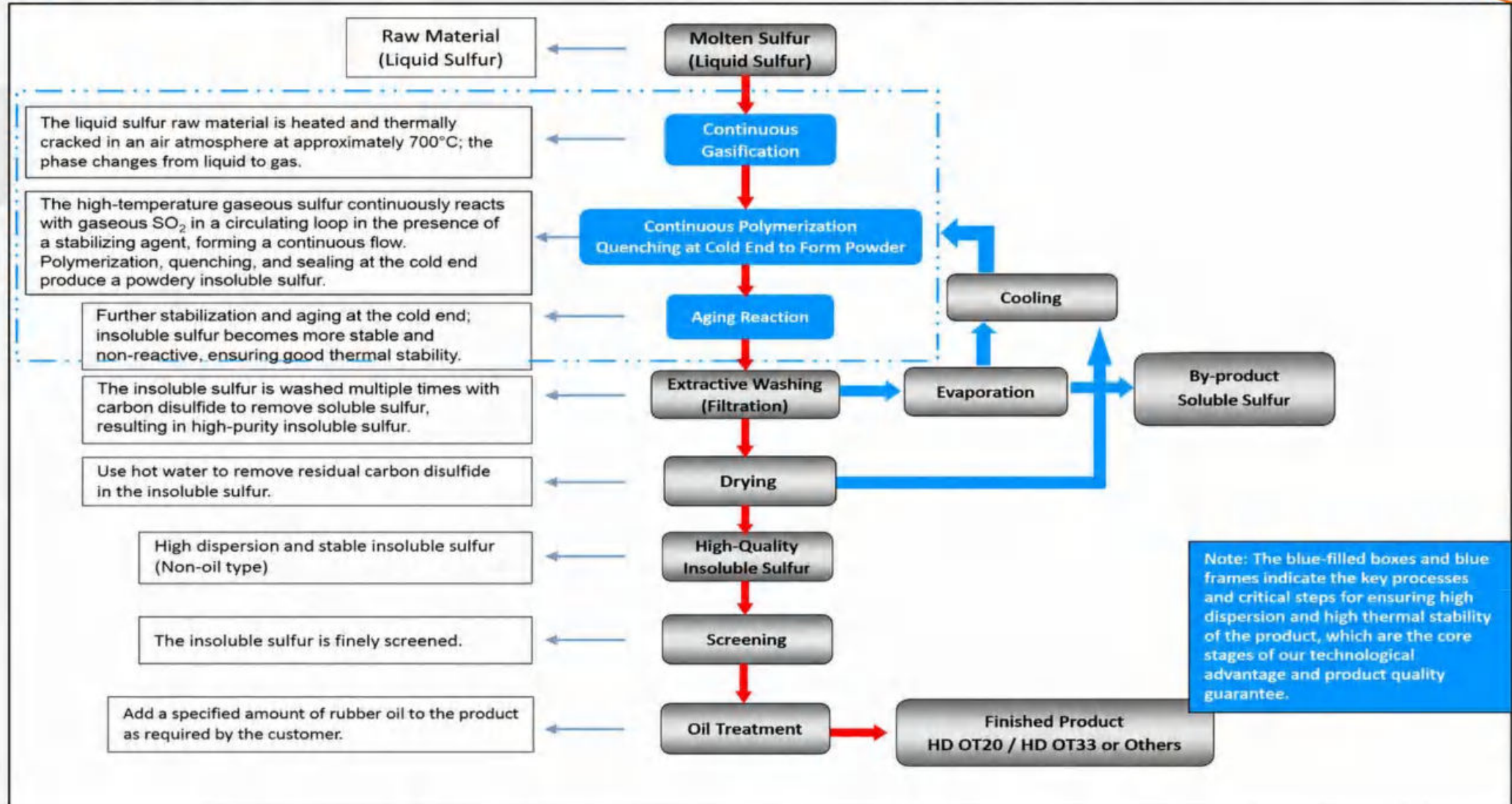
The density is about 2 tons/m³, which is a flammable solid. The spontaneous combustion temperature is 205°C, and the dust has the risk of explosion.

Thermal performance parameters

The melting peak temperature is high (it is still stable above 200°C), and the decomposition temperature reaches 230°C, which is 50% higher than that of ordinary sulfur.

Research Project

Process flow chart of insoluble sulfur



Global Sales, Qualified Service
营之全球，臻细服务



PART 04

Applications & Achievements

张华医药设备

Serving Over 1,200 Global Users · Equipment Exported to Multiple Countries
Including Europe and America

CASE STUDIES & TESTIMONIALS

Typical Customers



1200+

Service users



50 Years

Professional Experience



FDA

Comply with



The Whole World

Export capability



Typical Customer Case



Pfizer (Singapore)

World-renowned pharmaceutical company



Novartis Pharmaceuticals

Long-term collaboration since 2006



Syngenta

OEE>95%



ABA Chemical

Operated smoothly for over 3 years



High Customer Ratings

“ Novartis Pharmaceuticals

The equipment operates stably with excellent performance, providing strong quality assurance for products. It boasts robust technical capabilities and highly professional after-sales service.

“ Syngenta

"Remote operation is convenient, with outstanding solid-liquid separation performance, achieving an OEE over 95%. After-sales service provides rapid response and professional reliability.

“ ABA Chemical

"The device has been running smoothly for more than three years with good operating conditions. Wuxi Zhonghua is an ideal supplier, providing patient and detailed installation guidance as well as timely after-sales service."

CASE STUDIES & TESTIMONIALS

Key Engineering Cases

Typical Engineering Cases



Pilot Production Line for Lithium Hexafluorophosphate and New Energy Lithium Battery Materials

Provide comprehensive production line design and manufacturing services with fully enclosed and fully automated operation.



Siegfried (Nantong, CN)

Invested by Siegfried AG, Switzerland
Provides pharmaceutical equipment compliant with international standards, meeting cGMP requirements.



Yaben Chemica

The pharmaceutical and pesticide fine chemical
Production bases cover areas such as Taicang, Rudong, and Binhai.

Special Use Cases



Hastelloy Agitated Nutsche Filter Dryer

Equipped with a special isolator capable of withstanding both positive and negative pressure



Hastelloy double-cone dryer

Equipped with special docking valve, 6300L large capacity.



Design of Special Breathing Valve

DN3000 Agitated Nutsche Filter Dryer, meeting special process requirements



Movable pilot-scale equipment

Pilot-scale Agitated Nutsche Filter Dryer deployment for Hastelloy with flexible configuration



Kilogram-scale pilot production line

Fabojin (China) Pharmaceutical Technology Development

Export performance

2007

Export to Holland

2008&2015

Export to Pakistan & Switzerland

2017

Export to Israel

2018

Export to Italy & Russia

2020

Export to Hungary

2021

Export to Britain

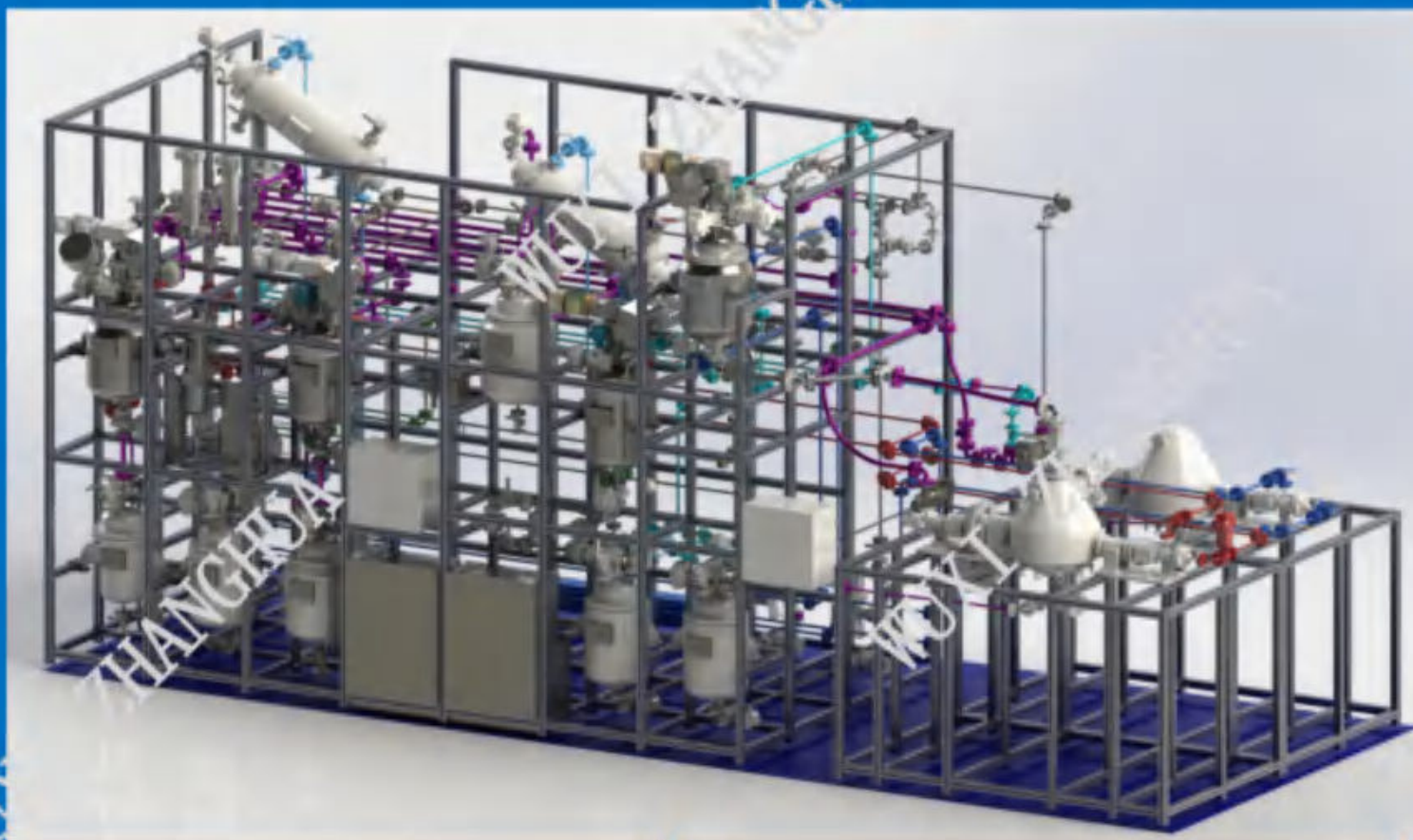
2022

Export to Singapore & Malaysia

2024&2025

Exported to India, Russia & Spain, etc.

Pilot Production Line System for Lithium Hexafluorophosphate



This Pilot Production Line Consists of Four Core Modules.

- 1、Feeding and Reacting System**
- 2、Crystallization and Solid-Liquid Separation System**
- 3、Exhaust Gas Absorption and Solvent Recovery System**
- 4、Automatic Control and Public Utilities**

Pilot Production Line System



**Pilot Reactor and
ANFD**



**KG Scale Pilot
Production Line**



**On site commissioning
DN500 ANFD**

**FaboGen (China) Medical Technology Development is invested by
FibroGen headquarters in San Francisco, USA.**

Integrated Filtration, Washing and Drying System



Clean Workshop Antibiotic Drug Production

Special Applications of Three-in-One Devices



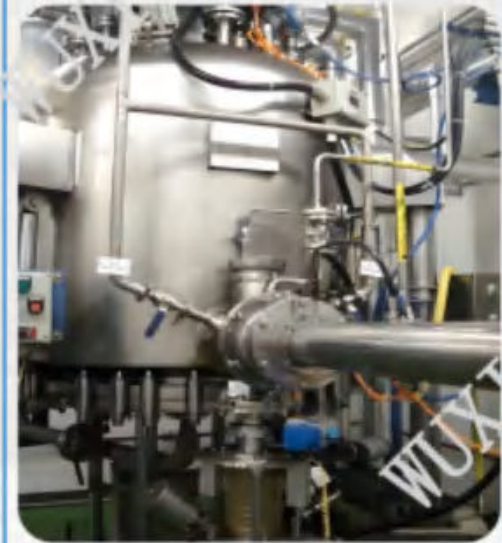
**Hastelloy ANFD with
cylindrical isolator (resistant
to positive pressure and
negative pressure)**



**Hastelloy ANFD
with Special
Isolators**



**ANFD with
special isolator**



**Hastelloy ANFD
with Breathing
Valve**

National Exclusive: Agitated Nutsche Filter Dryer passes Official Helium Leak Testing Certification

[illegible]

Special Applications of Three-in-One Devices



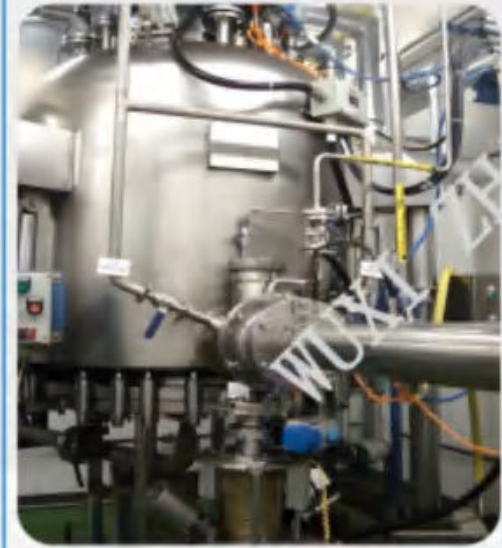
**Hastelloy ANFD with
cylindrical isolator (resistant
to positive pressure and
negative pressure)**



**Hastelloy ANFD
with Special
Isolators**



**ANFD with
special isolator**



**Hastelloy ANFD
with Breathing
Valve**

Project Case



Siegfried



syngenta
先正达®

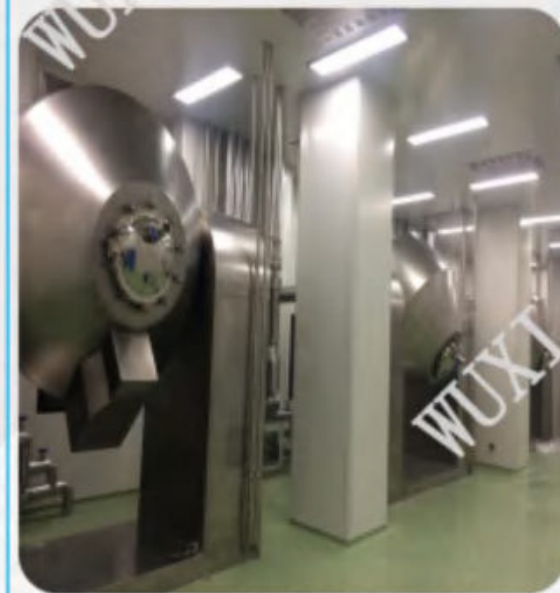


Ciba



NOVARTIS

Double Cone Vacuum Drying Unit



Heat Exchanger



Heat exchange area: 1090 m² Diameter: 300mm Length: 7700mm Total weight: 48 tons



• 设计/计算软件



Design-expert
实验设计与优化实验



PART 05

CFX
流体动力学分析



HTRI
换热器设计与计算

Quality Certification & Customer Support



ANSYS
静力学、动力学等有限元分析



ABAQUS
工程模拟有限元



SolidWorks
CAD三维设计

Compliant Manufacturing — All equipment is produced in an ISO Class 5 (Class 100) laminar flow workshop, adhering to FDA and cGMP standards.



Matlab
控制系统设计及数值分析



Fluent
流体力学分析、传热优化



PTC Creo Parametric
三维结构设计



QUALITY

Quality comply with FDA and meet with CGMP Code



International certification standard

Meet FDA and CGMP certification requirements

✓ FDA

✓ CGMP

Certified Product Series

Single cone vacuum dryer
Meet the requirements of aseptic production

Cylindrical Cone Drying Equipment
Efficient Drying Solutions

PILOT ANFD
Laboratory-scale application

LAB ANFD
Small-scale production

Large size ANFD
Large-scale industrial production, the specification can reach DN4600

Class 100 laminar flow workshop



Clean production environment

Class 100 laminar flow purification system to ensure product cleanliness.



Strict quality control

Quality monitoring from raw materials to finished products.



Professional operation team

Strictly trained professional and technical personnel.

SERVICE

Customer Support System

Nearly 50 years of professional experience and all-round service system

01



Spare Parts

Provide original factory spare parts to ensure long-term stable operation of equipment and rapid response to customer needs. Professional engineers offer on-site

02



Guidance and Commissioning Services

Guidance for installation and commissioning to ensure smooth equipment operation. Provide specialized training in equipment

03



Training

Operation and maintenance to enhance customer operational skills.

04



Remote Support

24-hour remote technical support for rapid diagnosis and resolution of equipment issues

05



Field Service

Global service network with on-site maintenance by professional engineers ensures smooth equipment operation.



Service hotline
**All-weather
response**



Service area
**Global
coverage**



Professional team
Rich experience

**Customer first,
service first**

Empowering High-Barrier Strategic Emerging Industries

Based in Wuxi and drawing upon 50 years of experience in pharmaceutical equipment manufacturing, Zhang Hua has focused extensively on developing integrated process equipment solutions for high-purity and ultra-high-purity battery materials and semiconductor materials, compatible with the complete spectrum of lithium batteries, sodium batteries, solid-state batteries, and wet electronic chemicals. By transplanting pharmaceutical-grade aseptic and containment technologies into the electronic chemicals field, it achieves precise management of ultra-pure processes, delivering system-level equipment safeguards for ppb-level metal ion control in manufacturing processes.



01

Recovery of Precious Metal Catalysts

Platinum (Pt), palladium (Pd), rhodium (Rh), ruthenium (Ru), iridium (Ir), silver (Ag), gold (Au), and rare earth oxides such as lanthanum oxide, cerium oxide, dysprosium oxide, terbium oxide, etc.



02

Specialty Polymers

Polyaryletherketone (PAEK) family: PEEK, PEK (polyetherketone), PEKK (polyetherketoneketone), etc. Polybenzimidazole (PBI) N-Butylpyrrolidone (NBP), N-Methylpyrrolidone (NMP)



03

New Energy Battery Materials

Cathode and anode materials, electrolytes (lithium hexafluorophosphate, sodium hexafluorophosphate), solid-state battery additives, boron isotopes (boron-10, boron-11), and sodium battery electrolytes.



04

Semiconductor Electronic Chemicals

Electronic specialty gases; solid precursors such as TMA (trimethylaluminum) and TMG (trimethylgallium); high-purity oxide and nitride powders or slurries for advanced manufacturing processes—for example, HPA (high-purity alumina); and photoresists, among others.



05

Advanced Ceramic Powders

Alumina (Al_2O_3), zirconia (ZrO_2), beryllia (BeO), magnesia (MgO)

Service hotline
ne
**All-weather
response**



Service area
**Global
coverage**



Professional Team
Rich experience

**Customer first,
service first**

Clients List



Pfizer



NOVARTIS

FIBROGEN



BASF
We create chemistry

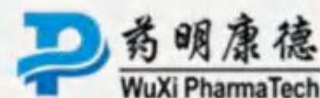


Siegfried

Johnson & Johnson
强生



syngenta
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BIOCAD
Biotechnology Company





Thank You For Your Attention!

Look forward to working with
you to create a better future.



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**Founded in 1976 · 50 years of professional
expertise · Serving over 1,200 global users**