## ENGINEERING DESIGN GROUP

EMPOWERING INDUSTRIALIZATION OF

NEW TECHNOLOGIES

赋能新技术产业化的 工程设计集团



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TIANS ENGINEERING TECHNOLOGY GROUP CO., LTD

F13. 23-26, BUILDING A, TIANSHAN SCIENCE AND TECHNOLOGY INDUSTRIAL

PARK, NO. 530, YUHUA EAST ROAD, SHIJIAZHUANG, HEBEI, CHINA

400-082-6116

天俱时工程科技集团有限公司

中国·河北·石家庄市裕华东路530号天山科技工业园A座13、23-26层 400-082-6116

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LEADER · INNOVATION WINS THE FUTURE

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## 企业简介 **ABOUTTIANS**

## 企业文化 CORPORATE CULTURE

#### 年发展历程

More than 26 years of development

#### 中国工程总承包营业额

China's top 100 project general contracting turnover

#### 服务1000+行业领军企业

Serving over 1000 industry-leading enterprises

#### 精品项目,数百项获奖

Completed over 3500 projects and won hundreds of awards

天俱时始创于1998年,是一家赋能新技术产业化的工程设计集团,依托先进的设计理念和 前瞻性的国际视野,为全球客户提供技术研发、工程咨询与设计、工程总承包、智能装备、 自动化与信息化于一体的综合解决方案,帮助客户实现From Lab to Fab的产业化转化。 业务涵盖精细化工、含氟精细化学品、电子化学品、合成生物、生物发酵、生物医药、化学制 药、食品健康、冶金矿山等高科技行业领域。

天俱时具有强大的工艺技术能力,拥有瑞士咨询创新中心、智能装备研发中心、生物工程 实验室、化学工程实验室等多个技术研发平台,拥有10余位国内外院士和科学家,200余 位资深工艺技术专家、工程设计专家及生产管理专家,先后为1000余家知名企业提供咨询 设计服务及工程解决方案,完成3500余个精品项目建设,业务遍及中国、东南亚、欧洲、美 国、南非等30余个国家和地区。

TIANS Engineering Technology Group Co., Ltd., founded in 1998, is an engineering design group empowering industrialization of new technologies. Based on advanced design concept and forward-looking global perspective, we provide comprehensive solutions involving technology R&D, engineering consulting and design, EPC, intelligent equipment and automation & digitalization to help our clients achieving a From Lab to Fab industrialization transformation. Our business spans many high-tech fields, including fine chemicals, fluorine-containing fine chemicals, electronic chemicals, synthetic biology, biological fermentation, biomedicine, chemical pharmaceuticals, food and health, metallurgy and mining.

The greatest strength in TIANS lies in the process technologies as we set up a consultancy and innovation center in Switzerland, an intelligent equipment R&D center, a bioengineering laboratory, a chemical engineering laboratory and many other technology R&D platforms, employ a dozen of domestic and foreign academicians and leading scientists, and over 200 seasoned process technology experts, engineering design experts and production management specialists, provides consulting and design service and engineering solutions for more than 1,000 established companies, and accomplishes over 3,500 quality projects in more than 30 countries and regions, including China, Southeast Asia, Europe, the US and South Africa.

我们致力于建设全球一流的工程设计集团,秉承"Tech the Future"的品牌理念,以强大的设计与工艺技术为核心,以系统集 成优化为特色,以一次性试生产成功为目标,为客户创造价值,推动行业进步,造福社会,惠及未来。

We strive to build a world-class engineering design group by adhering to our brand concept of "Tech the Future". With advanced design and process technologies as our core, system integration and optimization as our service features and successful production trial run at the first time as our goal, we work hard to create values for our clients, propel progress in industries, benefit the development of society and deliver a better future.









TEN ARTICLES OF MANAGEMENT BE A MAN BEFORE YOU DO ANYTHING

精英治企

创新驱动

陈平实验室

INNOVATION DRIVEN

四项基本原则武亚锋会议室

10 + STUDENT UNION

# 行业领域

## INDUSTRY FIELD

#### 精细化工

Fine Chemical Engineering

含氟化学品、电子化学品、高纯材料、功能性高分子材料、新能源新材料.....

Fluorinated chemicals, Electronic chemicals, High-purity formulations, Functional polymer materials, New energy, New materials...

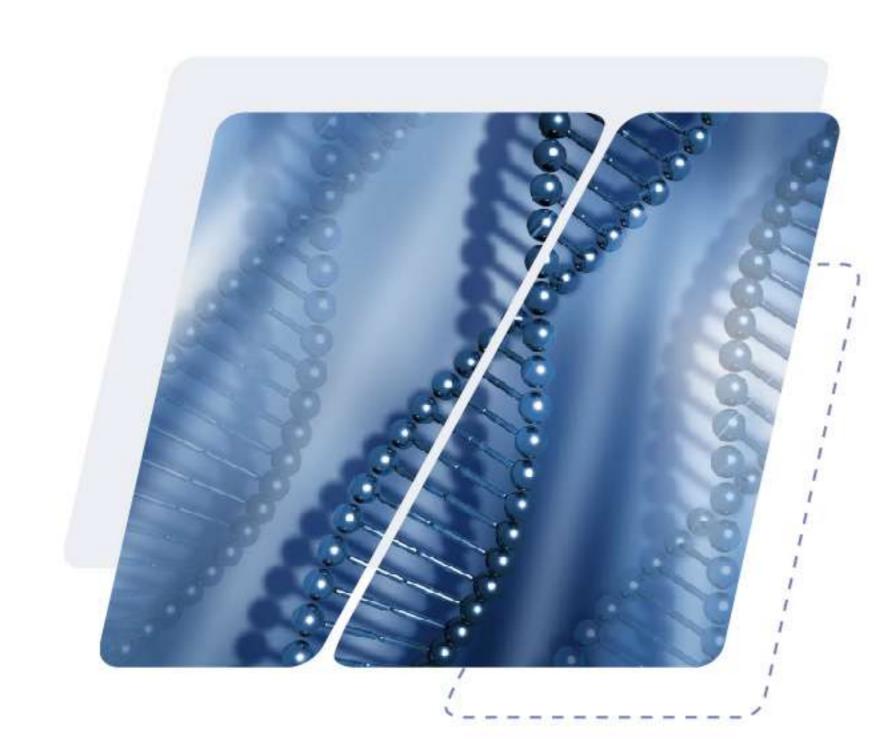


### 合成生物

Synthetic Biology

生物材料、氨基酸、医药、医美、天然健康产物、农兽药……

Biomaterials, Amino acids, Pharmaceuticals, Medical aesthetics, Natural health products, Agricultural, Veterinary drugs...

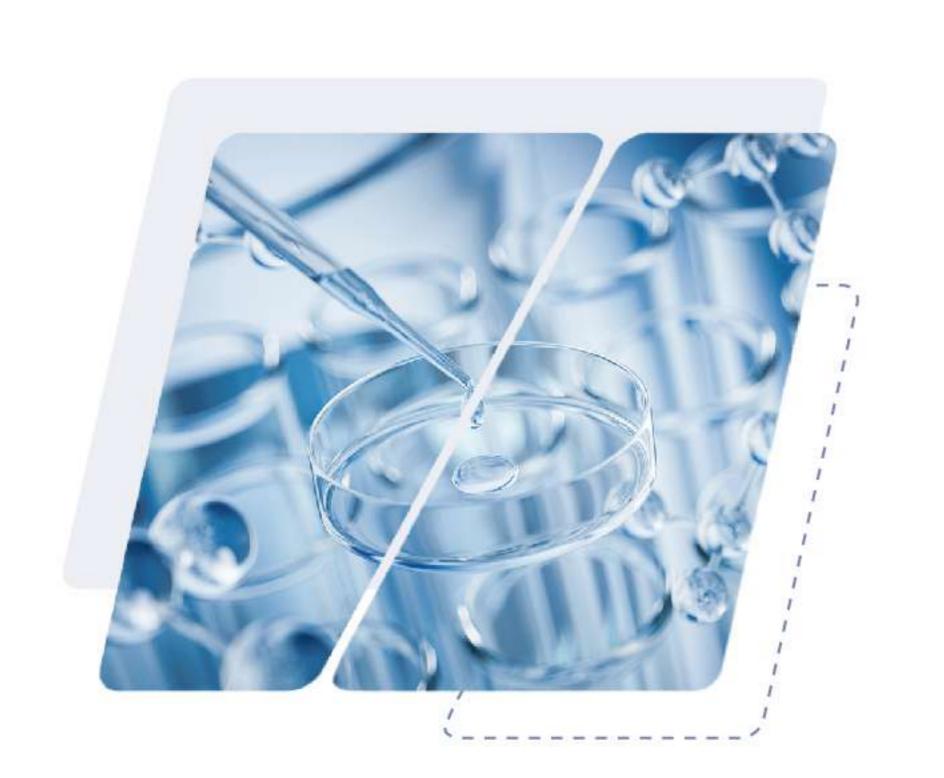


#### 生物医药

Biopharmaceutica

ADC、Car-T、疫苗、基因治疗、单抗、生物制品、重组蛋白.....

ADC、Car-T、Vaccines, Gene therapy, Monoclonal antibodies, Biologics, Recombinant proteins...



#### 化学医药

**Chemical Pharmaceutical** 

化学原料药、医药中间体、非无菌原料药、无菌原料药、高端固体制剂、无菌制剂……

Chemical APIs, Pharmaceutical intermediates, Non sterile APIs, Sterile APIs, High-end solid preparations, Sterile preparations...



#### 医疗器械

Medical Equipment

体外诊断、骨科材料、血袋、心脏支架、血液净化/灌流器、医用手套/口罩......

In vitro diagnosis, Orthopedic Materials, Blood bag, Cardiac stent, Blood purification / Hemoperfusion device, Medical Glove / Mask...



### 中药&食品

Traditional Chinese Medicine&Food

中药、食品、饮料、保健品.....

Traditional Chinese medicine, Food, Beverages, Health products...



## 权威资质

## QUALIFICATION

## 咨询与设计资质 / CONSULTING AND DESIGN QUALIFICATION

■ 化工石化医药行业工程设计甲级

建筑行业工程设计建筑工程甲级

■ 工程咨询单位甲级资信

■ 环境工程设计专项水污染防治工程甲级

■ 环境工程(固体废物处理处置工程、大气污染 防治工程)专项乙级

轻纺行业轻工工程乙级

特种设备固定式压力容器设计

特种设备压力管道设计GC1、GC2

.....

Class A for engineering design in chemical, petrochemical and pharmaceutical industry

Class A for engineering design in construction industry (construction engineering)

Class A for engineering consulting company

Class A for environmental engineering design in special water pollution prevention and

control project

Class B for special environmental engineering (solid waste treatment and disposal

engineering, air pollution prevention and treatment)

Class B for light industry engineering in light textile industry

Design of fixed pressure vessel for special equipment

GC1, GC2 for pressure pipeline design of special equipment

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## 施工资质 / CONSTRUCTION QUALIFICATION

■ 机电工程施工总承包壹级

建筑工程施工总承包贰级

■ 石油化工工程施工总承包贰级

■ 市政公用工程施工总承包贰级

■ 电子与智能化工程专业承包壹级

■ 防水防腐保温工程专业承包壹级

建筑装修装饰工程专业承包壹级

■ 环保工程专业承包贰级

钢结构工程专业承包贰级

消防设施工程专业承包贰级

电力工程施工总承包贰级

輸变电工程专业承包贰级

■ 特种设备压力管道安装GC1、GC2级

92000.00000

General contracting level I for mechanical and electrical engineering construction

General contracting level II for construction engineering

General contracting level II for petrochemical engineering construction

General contracting level II for municipal public works construction

Professional contracting level I for electronic and intelligent engineering

Professional contracting level I for waterproof and anti-corrosion insulation engineering

Professional contracting level I for building furnishing and decoration engineering

Professional contracting level II for environmental engineering

Professional contracting level II for steel structure engineering

Professional contracting level II for fire fighting facilities engineering

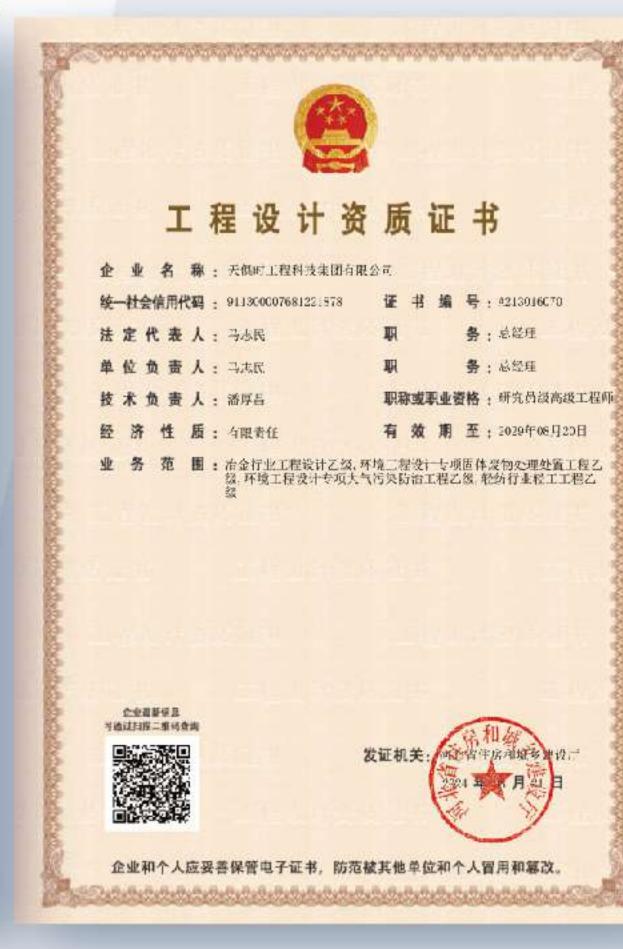
General contracting level II for power engineering construction

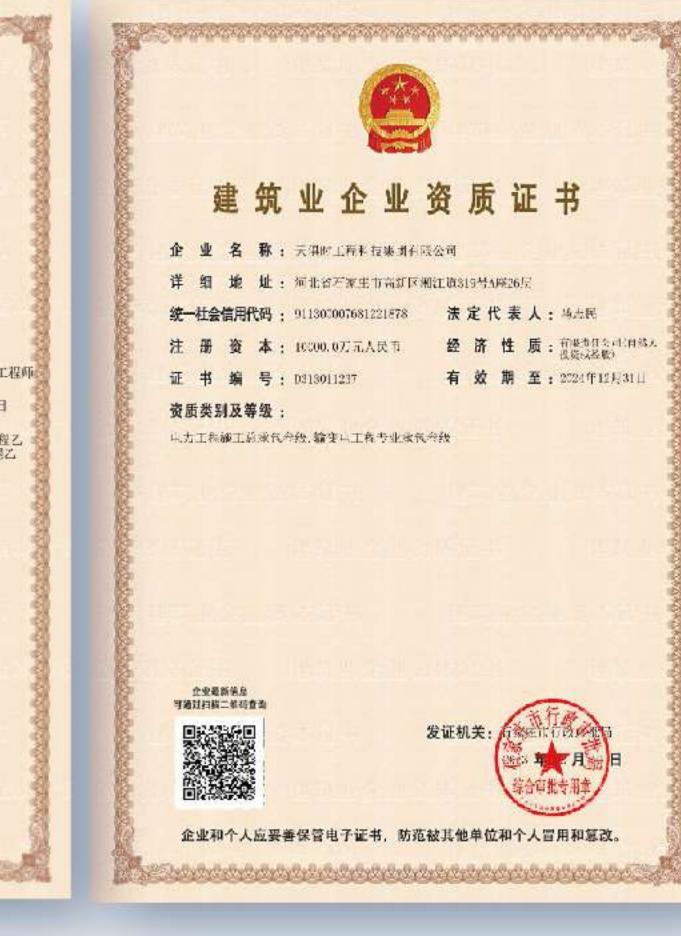
Professional contracting level II for power transmission and transformation engineering

Special equipment pressure pipe installation GC1、GC2

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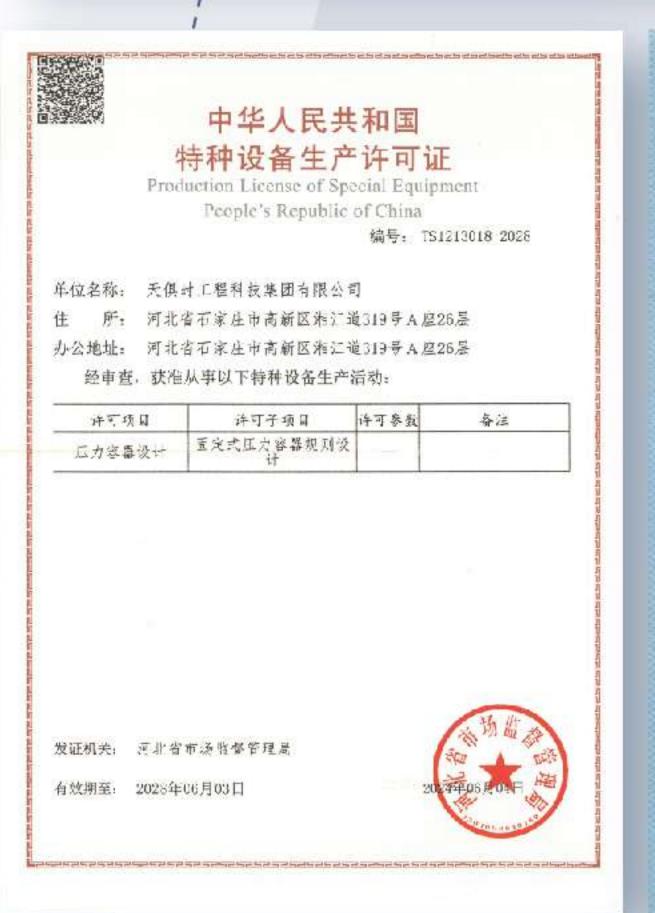




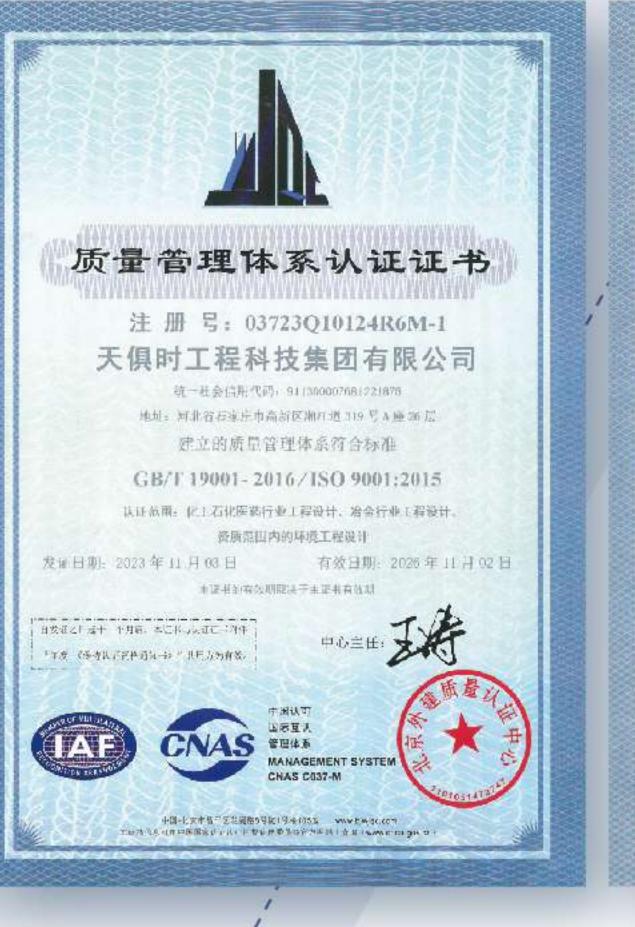














## 业务范围 BUSINESS SCOPE

## 高效灵活地Turnkey服务或菜单式选择服务

Provide EPC contracting or menu selection service to fully meet your project needs

俱匠心·赋能新技术产业化 CREATOR·EMPOWERING INDUSTRIALIZATION OF NEW TECHNOLOGIES



## T-EPC工程总承包 T-EPC

## T-EPC模式的首创者和践行者

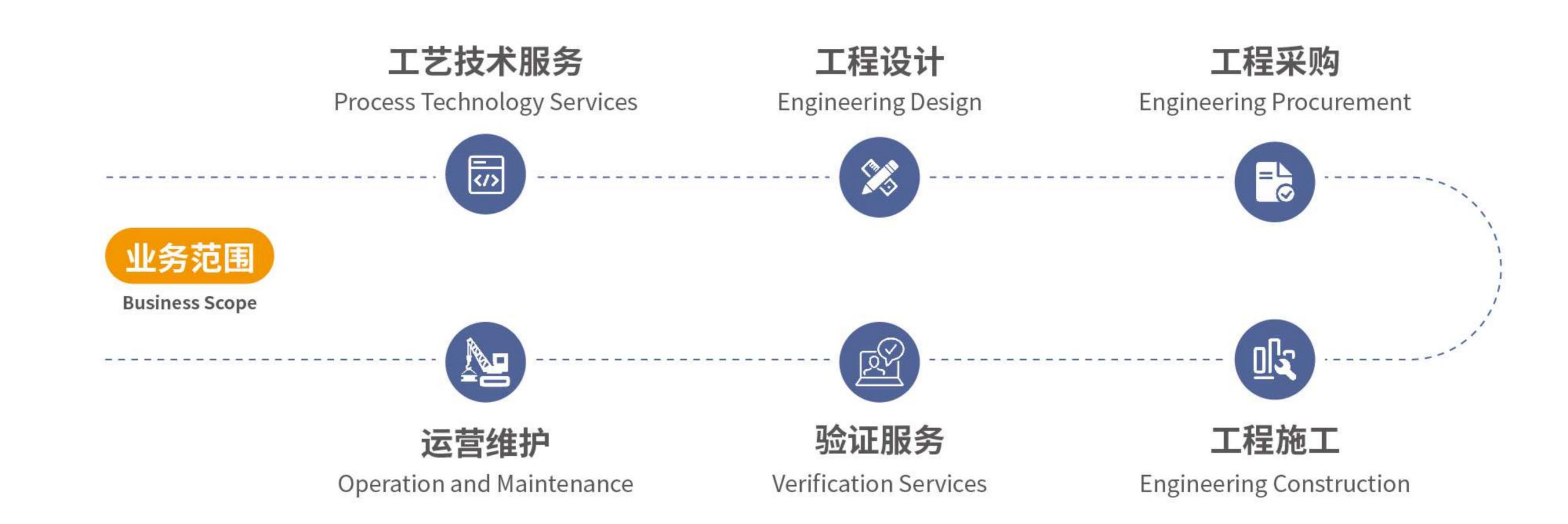
Pioneer and Practitioner of T-EPC



天俱时致力于为客户提供项目建设全过程各阶段的整体解决方 案,以工艺技术与设计为核心,以系统集成优化为特色,以一次性 试生产成功为目标,帮助客户应对创新技术产业化的复杂挑战,

实现From Lab to Fab的信仰之跃。

TIANS Group is committed to providing customers with comprehensive solutions for all stages of the project construction process, With process technology and design as the core, system integration optimization as the characteristic, and one-time trial production success as the goal, TIANS is committed to helping clients cope with the complex challenges of innovative technology industrialization and achieving the leap of faith from Lab to Fab.



One Stop Service

提供专业咨询、设计、采购、 施工、培训、试生产、运维及 GMP验证于一体的工程一 站式服务。

Provide a one-stop engineering service that integrates professional consulting, design, procurement, construction, training, trial production, operation and maintenance, and GMP verification.

#### 工艺技术与设计

Process Technology Experts & Design Experts

工艺技术与设计专家贯穿项 目全流程;由工艺技术或设 计专家担任项目现场总指 挥。

Process technology and design experts run through the entire project process; The overall commander of the project site shall be appointed by process technology or design experts.

#### 系统集成优化

Integrated System Optimization

多领域融合的产业 know-how,全专业垂直的 一体化集成。

Industry know-how that integrates multiple fields and vertically integrates all specialties.

Successful One-Time Trial Production

价值链向传统EPC服务前后 延伸,一次性试生产成功率 100%。

The value chain extends to traditional EPC services, with a 100% success rate in one-time trial production.

# 工艺技术

## PROCESS TECHNOLOGY

## 技术专家多维支持,提供各阶段专业服务

Multi-dimensional support from technical experts to provide professional services at all stages

天俱时是赋能新技术产业化的工程设计集团,以工艺技术为 核心,以多年工程技术沉淀为依托,在充分理解与分析工艺 本质的基础上,为业主提供技术路线成熟、产品质量稳定、成 本可控和安全运行等全方位工艺技术服务。

TIANS Group is an engineering design group that empowers the industrialization of new technologies. With process technology as the core and years of engineering technology accumulation as the foundation, TIANS provides comprehensive process technology services for owners, routes, stable product quality, controllable costs, and safe operation, based on a full understanding and analysis of the essence of the process.





#### 完善的技术平台

A comprehensive technology platform

拥有瑞士咨询创新中心、智能装备研发中心、生物工程实验室、化 学工程实验室、环保技术中心等多个技术研发平台,通过与高等 学府、科研院所技术平台合作,根据客户的特定需求提供各类产 品工艺包、工程技术包以及定制化解决方案,满足不同客户的个 性化需求。

TIANS has multiple technology research and development platforms, including the Swiss Consulting and Innovation Center, Intelligent Equipment R&D Center, Bioengineering Laboratory, Chemical Engineering Laboratory, and Environmental Protection Technology Center. Through cooperation with technology platforms of higher education institutions and research institutes, we provide various product process packages, engineering technology packages, and customized solutions according to the specific needs of customers, meeting the personalized needs of different customers.

#### 强大的专家团队

Powerful team of experts

拥有10余位国内外院士和科学家,200余位资深工艺技术专家、 工程设计专家及生产管理专家;

专家团队宏观审慎、把控全局,将车间生产工艺、建造工艺与环保工艺并行考虑,思维前置,确保设计的时效性,达到项目一落地即实现绿色生产的效果;

专家团队对行业发展趋势有着敏锐洞察力和前瞻性,能在产品战略、方向上为业主建言献策,帮助业主产品落地及市场开拓。

TIANS has over 10 domestic and foreign academicians and scientists, as well as over 200 senior process technology experts;

The expert team is macroscopically cautious and controls the overall situation, considering workshop production technology, construction technology, and environmental protection technology in parallel, with a forward thinking approach to ensure the timeliness of the design and achieve the effect of green production as soon as the project is completed;

The expert team has keen insight and foresight into industry development trends, and can provide suggestions and recommendations for owners in product strategy and direction, helping owners to implement their products and expand their markets.

# 工程咨询与设计

## ENGINEERING CONSULTING & DESIGN

## 设计服务全线贯穿,见证项目从始到终

Design service runs through the whole process

## 双行甲 资质

BIM Center

300+ Design Team 设计团队 Design Project Case

天俱时设计设有化工医药设计院和瑞士生物医药咨询创新中心两大平台,拥有300余位以国际知名设计专家及国内勘察设计大师为核心的高素质设计团队,具有前瞻性的国际化视野和丰富的设计经验,为客户提供最具落地性、符合法规要求的工程咨询与设计服务,实现方案、投资、工期和项目品质的全方位保证。我们秉承"Just for Better Design"的设计理念,将未来的需求融入当下的设计,让每一项设计都成为未来的引领者。

TIANS Design has two teams: the Chemical and Pharmaceutical Design Institute and the Swiss Biomedical Consulting Innovation Center. It has a high-quality design team of more than 300 internationally renowned design experts and domestic survey and design masters as its core. With a forward-looking international perspective and rich design experience, TIANS Design provides customers with the most practical and compliant engineering consulting and design services, ensuring comprehensive guarantee of solutions, investment, construction period, and project quality. We adhere to the design philosophy of 'Just for Better Design', integrating future needs into current designs and making every design a leader of the future.

#### 咨询服务

- **通** 项目评估与规划
- 1 项目建议书
- %)可行性研究
- (%) 概念设计
- ② 安全诊断
- ② 绿色建筑与节能评估

#### 工程设计服务

- (鹽) 精细化工工程设计
- 合成生物工程设计
- 生物医药工程设计
- (四) 化学制药工程设计
- (母)食品健康工程设计
- (學) 医疗器械工程设计
- ◎ 自动化及数字化工厂设计

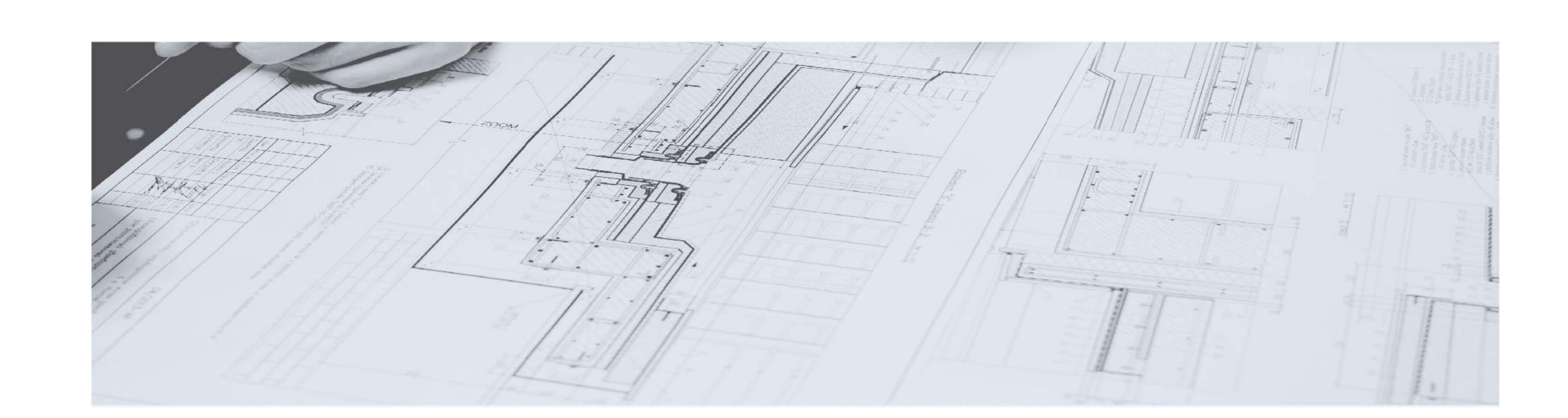
#### **Consulting Services**

Project Evaluation and Planning
Project Proposal
Feasibility Study
Conceptual Design
Safety Diagnosis

#### **Engineering Design**

Green Building and Energy Saving Assessment

Fine Chemical Engineering Design
Synthetic Bioengineering Design
Biomedical Engineering Design
Chemical Pharmaceutical Engineering Design
Food Health Engineering Design
Medical Device Engineering Design
Design of Automation and Digitization Plants



## T-EPC设计理念

T-EPC Design Concept

基于多年T-EPC实施经验,设计人员具备项目建设全过程视野,充分理解项目全流程,能够从工艺优化、节能降耗、绿色环保、建设实施、成本控制等多方位多角度为客户提供高质量智力支持,帮助客户实现投资、进度和项目品质的多方位保证。

Based on years of experience in T-EPC implementation, designers have a comprehensive perspective on the entire project construction process, fully understand the entire project process, and can provide high-quality intellectual support to clients from multiple perspectives such as process optimization, energy conservation and consumption reduction, green environmental protection, construction implementation, and cost control, helping clients achieve multi-dimensional guarantees of investment, progress, and project quality.

## 可落地的图纸深度

Landable Drawing Depth

设计人员均具有2年以上现场施工服务经验,兼具设计、优化、工程建设及运行调试经验,能够提供集落地性、可实施性、操作运行合理性于一体的设计服务。

Designers have over 2 years of experience in on-site construction services, including design, optimization, engineering construction, and operational debugging. They are able to provide design services that integrate practicality, feasibility, and operational rationality.

## 高效、迅速的 设计响应

Efficient & Rapid Design Response 基于设计人员对建设全过程深度参与的经验,能够对项目建设各阶段的设计服务需求做到高效、迅速的响应,为项目全程保驾护航。

Based on the experience of designers deeply participating in the entire construction process, they are able to efficiently and quickly respond to the design service needs of each stage of project construction, providing full support for the project.

## 数字化交付

Digital Delivery

专业的BIM设计团队,采用智能PID、PDMS、SP3D等软件进行正向三维设计,实现数字化交付。

A professional BIM design team uses intelligent PID, PDMS, SP3D and other software for forward 3D design, achieving digital delivery.

#### 14

#### REATOR·EMPOWERING INDUSTRIALIZATION OF NEW TECHNOLOGIES **俱匠心**·赋能新技术产业化

# 智能装备 SMART EQUIPMENT

## 打造智慧工厂 实现智能制造



Intelligent Manufacturing Makes Smart Factory

## 自动化与信息化工程 AUTOMATION AND INFORMATIONIZE ENGINEERING

## 一深耕行业Know-How,助力企业数字化转型

Industry Know-How Expert Powering Clients Digitalization Transfer

天俱时自动化与信息化团队深耕行业Know-How,精通主要生产工艺及生产辅助过程的核心技术,将自动化与信息化技术与生产工艺紧密结合,提供从系统设计、集成开发、工程实施到调试验证的一站式服务,拥有电子与智能化工程专业承包壹级资质,是西门子在中国的16家全球解决方案合作伙伴(SOP)之一;助力企业数字化转型,实现智能制造。

Know How, proficient in the core technologies of main production processes and production auxiliary processes. They closely integrate automation and information technology with production processes, providing one-stop services from system design, integrated development, engineering implementation to debugging and verification. They have the first level qualification for electronic and intelligent engineering professional contracting and are one of Siemens' 16 global solution partners (SOPs) in China; Assist enterprises in digital transformation and achieve intelligent manufacturing.

#### 中国领先

#### 化学合成原料药、中间体自动化工程中国领先

China's leader of chemical synthetic API and intermediate automation project

#### 行业领集

#### 自动化工程合同规模制药行业领先

Automation engineering contract scale pharmaceutical industry leader

数字化咨询与设计 Digital Consulting and Design	工艺过程自动化 Process Automation	公用工程自动化 Utility Automation	エ厂信息化 Factory Informationize	计算机化系统验证 Computerized System Validation
■制药工厂建设初期/改造升级规划数字化蓝图和实施路线	■全流程自动化发酵 ■合成工艺过程自动化 ■安全仪表系统SIS ■分离纯化过程自动化 ■生物制药、液体制剂	<ul><li>空调自控BMS</li><li>环境监测EMS</li><li>弱电系统</li><li>能源管理系统</li><li></li></ul>	<ul> <li>数据采集与监视控制系统SCADA</li> <li>生产可视化管理平台BI</li> <li>智能智造执行系统</li> </ul>	<ul><li>GMP/FDA/EMA</li><li>遵从ISPE GAMP5</li><li>V-Model</li></ul>
Digital blueprint and implementation route of initial construction /transformation and upgrading planning of pharmaceutical plant	自动化 Fully automated fermentation process Automation of synthesis process Safety Instrument System (SIS) Separation and Purification Process Automation Biopharmaceutical and Liquid Preparation Process Automation  自动见有演示动画 Identify code, watch the vedio	Air Conditioning System BMS, Environmental Monitoring System EMS Weak current system Energy Management System  扫码观看演示动画 Identify code, watch the vedio	T-MES  Supervisory Control and Data Acquisition(SCADA)  Production visualization  management platform BI Intelligent Manufacturing Execution System (T-MES)	GMP/FDA/EMA Comply ISPE GAMP5 V-Model

天俱时装备致力于为生物发酵、生物医药、食品健康、生物材料、精细化工等行业客户提供先进的节能环保一站式装备解决方案。

掌握生物发酵、灭菌、节能环保等多项核心技术,拥有数十项节能型连续灭菌系统及废水、废气治理相关专利,建有高标准、自动化的先进装备智造中心,产品远销国内外多个国家及地区,市场占有率稳居前列。

TIANS Equipment is committed to providing advanced energy-saving and environmentally friendly one-stop equipment solutions for customers in industries such as biological fermentation, biomedicine, food and health, biomaterials, and fine chemicals.

Mastering multiple core technologies such as biological fermentation, sterilization, energy conservation and environmental protection, possessing dozens of energy-saving continuous sterilization systems and related patents for wastewater and waste gas treatment, and establishing a high standard and automated advanced equipment intelligent manufacturing center, our products are exported to multiple countries and regions at home and abroad, with a stable market share among the top.



# 玉米干法分离制糖技术

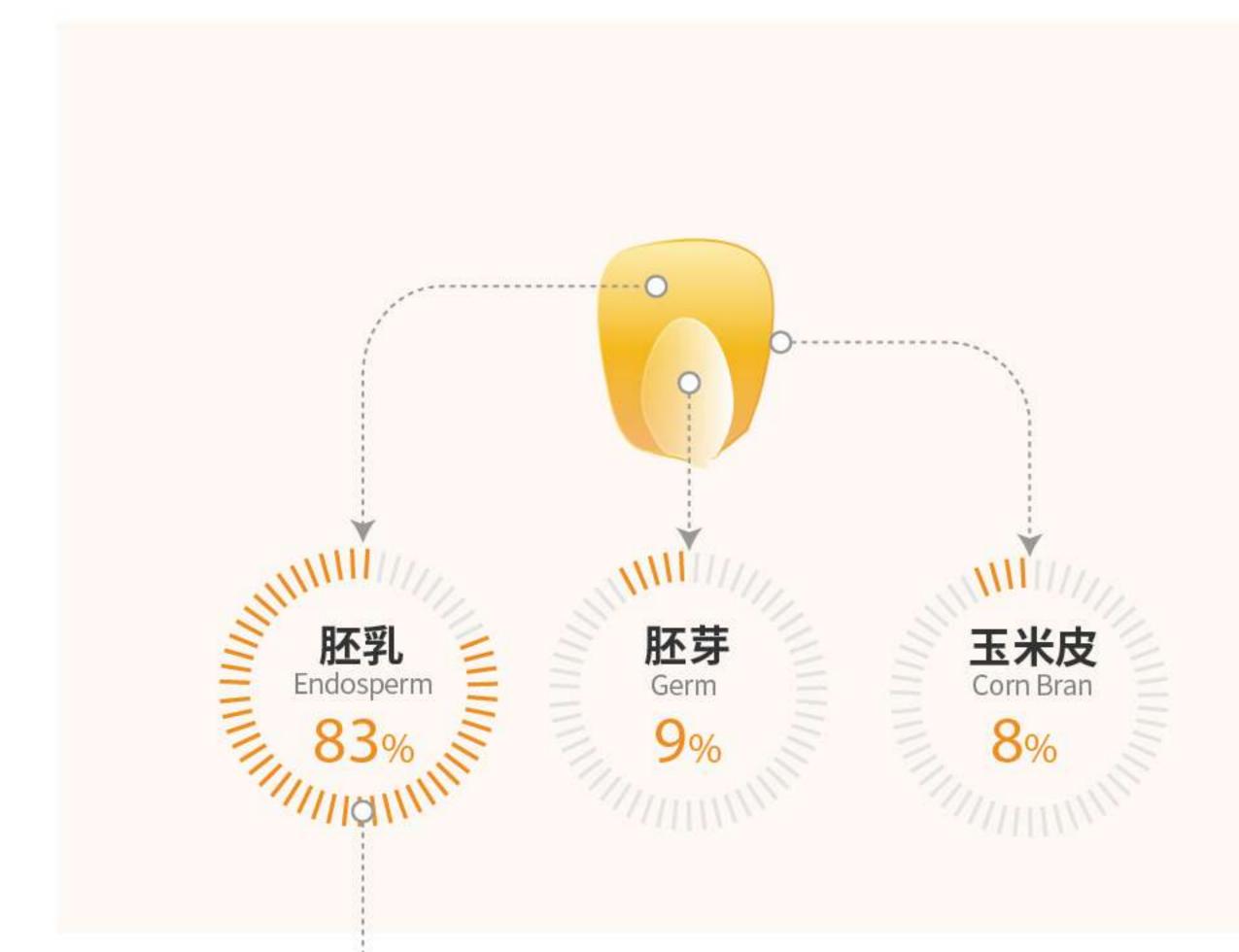
# THE TECHNOLOGY OF CORN DRY FRACTIONATION AND GLUCOSE PRODUCTION

玉米干法分离制糖技术是一种创新性的制糖方法,是玉米深加工行业新质生产力的代表。利用干法分离工艺将玉米脱脂转化为符合制糖标准的脱脂玉米粉,进而采用创新先进的液化技术和糖化技术,制得高质量的葡萄糖浆。该技术可以显著降低企业生产成本,提高糖液的质量和副产品的价值,是一项具有革命性、创新性和可持续性的技术。

The Technology of Corn Dry Fractionation and Glucose Production is an innovative glucose production method and a representation of new quality productive forces in the corn deep processing industry. This technology uses a dry fractionation process to degrease corn and convert it into degreased corn flour that meets the standards for glucose production. It then employs advanced liquefaction and saccharification techniques to produce high-quality glucose syrup. This technology significantly reduces production costs, improves the quality of glucose solutions, and enhances the value of by-products. It is a revolutionary, innovative, and sustainable technology.

### 工艺原理

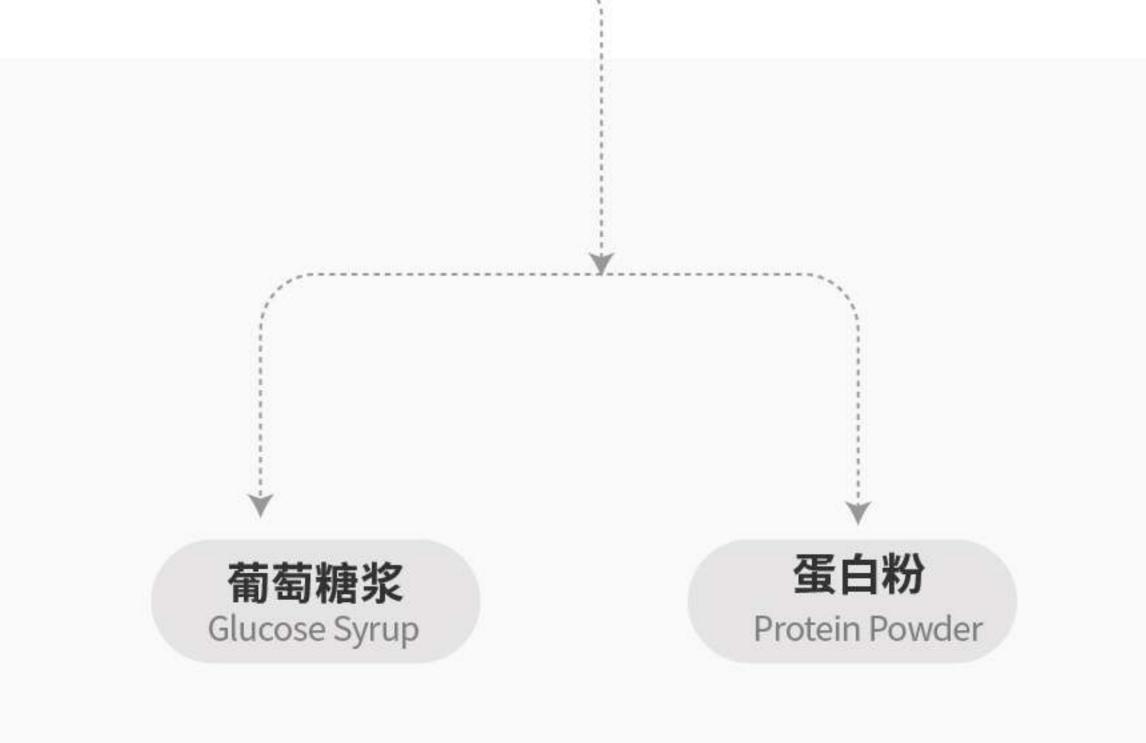
Technical Principle



#### 干法分离 Dry Fractionation

随着设备创新和光电自控水平的提高,通过蒸汽润粮、机械破碎、筛分、风选、压胚、重力分离、色选等先进工艺过程,高效分离出脱脂玉米粉(胚乳)、胚芽、玉米皮,分离效果优于湿法。

With advancements in equipment innovation and the enhancement of photoelectric automation, a series of advanced processes, including grain steam moistening, mechanical crushing, screening, air classification, germ pressing, gravity separation, and color sorting, are employed to efficiently separate degreased corn flour (endosperm), germ, and corn bran. The separation efficiency of this method exceeds that of the wet method.



#### 液化糖化 Liquefaction and Saccharification

创新先进的液化技术和糖化技术,使脱脂玉米粉(即胚乳)液化、糖化,高效分离出玉米蛋白粉,制得高质量的葡萄糖浆。

Through the application of innovative liquefaction and saccharification technologies, degreased corn flour (endosperm) is liquefied and saccharified, allowing for the efficient fractionation of corn protein powder and the production of high-quality glucose syrup.

### 单耗对比

Comparison of Resource Consumption

(\*单耗指标以32%糖浓度折干计)

(\*Consumption indicators are calculated based on a dry matter content equivalent to a 32% glucose concentration.)

项 目 Item	名 称 Name	单位 Unit	干法单耗 Dry Process Unit Consumption	湿法单耗 Wet Process Unit Consumption
原料 Raw Material	商品玉米   Commodity Corn	t/t	1.508	1.51
	特种酶   Special Enzyme	t/t	0.0002	0
辅料	液化酶   Liquefying Enzyme	t/t	0.0002	0.00021
Auxiliary Materials	糖化酶   Saccharifying Enzyme	t/t	0.0004	0.00039
	98%硫酸   98% Sulfuric Acid	t/t	0.001	0.0008
	水   Water	t/t	2.5	3.5
动力	电   Electric	kW⋅h/t	130	230
Power	蒸汽 Steam	t/t	0.55	1.10
	胚芽 Germ	t/t	0.121	0.102
副产品	纤维 Fibre	t/t	0.145	0.145
By-Product	蛋白粉   Protein Powder	t/t	0.129	0.081
	玉米浆   Corn Syrup	t/t	无 None	0.131
环保	废气   Waste Gas	t/t	无 None	大量酸废气   Large Amounts of Acidic Waste Gas
Environmental Protection	废水   Waste Water	t/t	无   None	1.2

#### 综合对比

		Comprehensive con
项 目 Category	玉米干法制糖 Corn Dry Method Glucose Production	玉米湿法制糖 Corn Wet Method Glucose Production
厂房占地面积 Factory Floor Area	与湿法相比减少40% Reduced by 40% compared to the wet method.	大 Large
工艺设备复杂性 Process Equipment Complexity	简单 Simple	复杂且多 Complex and numerous
生产时间 Production Time	生产周期短,效率高 Short production cycle, high efficiency	生产周期长,效率高 Long production cycle, high efficiency
总干物收率 Production Time	99.90%	98.70%
葡萄糖浆 Glucose Syrup	DE值高于湿法,即葡萄糖含量更高 The DE value is higher than that of the wet method, meaning higher glucose content.	
副产物 By-Products	无玉米浆; 蛋白粉的脂肪含量为6-8%为高油型产品; 没有经过浸泡的玉米胚芽,价值更高; 胚芽、蛋白粉的产量比湿法高,进一步提高了副产品的 价值。  No com slurry; the protein powder has an fat content of 6-8%, classified as a high-fat product. Corn germ that has not been soaked, with higher value. Additionally, the yield of germ and protein powder is higher than the wet method, further increasing the value of by-products.	有玉米浆(使高价值的蛋白粉成价值最低的产品) Contains corn slurry (which turns high-value powder into the least valuable product)
<b>环保</b> Environmental Protection	无污水、无异味,为绿色精益生产的典范 No wastewater, no odor, serving as a model of green and lean production.	大量污水和异味废气 Large amounts of wastewater and odorous exhaust gases
生产运营成本 Production Costs	每吨折干糖比湿法降低50% The dry method reduces the cost per ton of dried glucose by 50% compared to the wet method.	

## 科技人才

## SCIENTIFIC AND TECHNOLOGICAL TALENTS

### 打造产学研用联盟 赋能行业发展

Crafting an Industry-University-Research Collaboration Alliance to Power Industry Growth

#### 天俱时科技委员会

TIANS Science and Technology Committee

由精细化工、电子化学品、合成生物、生物医药、化学制药、食品健 康、冶金矿山等领域的国内外知名专家学者与天俱时集团优秀科 技工作者组成,搭建产学研交流互动平台、信息技术咨询平台和提 供专业解决方案的服务平台,加速行业著名专家最新科研成果与 企业科技精英丰富实践经验的融合。

The platform is made up of renowned experts and scholars from fields such as fine chemicals, electronic chemicals, synthetic biology, biopharmaceuticals, chemical pharmaceuticals, food and health, and metallurgy, both domestically and internationally. It also includes top technology professionals from TIANS Group. This platform fosters collaboration between industry, academia, and research, providing information technology consulting and professional solutions. It helps accelerate the integration of cutting-edge research achievements with the practical expertise of industry professionals.

10十 国内外知名科学家

24 十 行业产学研专家

天俱时资深技术专家



#### 国内知名工程设计专家 天俱时集团首席设计师

正高级工程师 注册咨询/化工/动力工程师 中国勘察设计协会专家 中国医药工程设计协会专家委员会专家

## **Domestic Famous Engineering Design Expert**

Senior Engineer

**Chief Designer of TIANS** 

Registered Consulting/Chemical/Power Engineer Expert from China Survey and Design Association Expert Committee of China Medical Engineering Design Association



#### 国内知名化工医药专家 天俱时集团首席科学家

正高级工程师 注册化工工程师 国家科学技术奖评审专家

#### Domestic Famous Chemical Pharmaceutical Expert **Chief Scientist of TIANS**

Senior Engineer Registered Chemical Engineer National Science and Technology Award Evaluation Expert



#### 国内知名医药、化工产业化专家 天俱时集团首席技术官

正高级工程师 国家环境保护制药废水污染控制工程技术中心 委员会委员

#### Domestic Famous Expert of Pharmaceutical and Chemical Industrialization Chief Technology Officer of TIANS

Senior Engineer

Member of The Committee of National Engineering and Technology Center for Environmental Protection and Pharmaceutical Waste Water Pollution Control





#### 国内知名工程设计专家

正高级工程师 注册化工、消防工程师 国际制药项目管理协会中国区制药工程 技术专家委员会副主任

中国医药工程设计协会专家委员会专家 Domestic Famous Pharmaceutical and Chemical **Process Design Expert** 

Senior Engineer

Registered Chemical and Fire Engineer Committee of International Pharmaceutical Project Management Association

Expert of China Pharmaceutical Engineering Design Association



#### 国内知名化工医药工艺设计专家

高级工程师 注册化工工程师

Domestic Famous Expert in Chemical and Pharmaceutical Process Design

Senior Engineer Registered Chemical Engineer

#### 国际知名生物医药设计规划专家 天俱时集团生物医药首席技术官

CB Consultancy AG创始人兼首席设计师 International Famous Biopharmaceutical Design Planner Chief Technology Officer of Biopharmaceutical of TIANS

Founder and Chief Designer of CB Consultancy AG



#### 国内知名自动化与信息化技术专家 天俱时集团自动化与信息化首席技术官

高级工程师

制药智能制造产业联盟创始副会长 中国医药设备工程协会专家委员会委员

Domestic Famous Expert in Automation and Informatization technology.

Chief Technology Officer of Automation and Informatization of TIANS Senior Engineer

Founding Vice President of Pharmaceutical Intelligent Manufacturing Industry Alliance Member of the Expert Committee of China Medical

**Equipment Engineering Association** 



#### 国内知名精细化工工艺设计专家

正高级工程师 注册安全工程师 河北省建筑业优秀总工程师

#### Domestic Famous Fine Chemical Process Design Expert

Senior Engineer Registered Safety Engineer Excellent Chief Engineer of Hebei Construction Industry



#### 国内知名化工医药设计安全专家 天俱时集团首席安全官

高级工程师 注册安全工程师 中国化学品安全协会外聘专家

Domestic Famous Chemical and Pharmaceutical **Design Safety Expert** Chief Security Officer of TIANS

Senior Engineer Registered safety engineer External expert hired by China Chemical Safety Association



#### 国内知名化工工艺专家

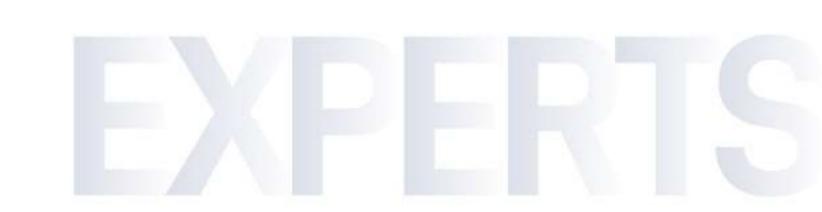
正高级工程师 河北省市场监督管理局特设局专家 河北省特种设备学会专家 河北省特检院压力管道专家

Domestic Famous Expert in Chemical Engineering **Processes** 

Senior Engineer

Hebei Provincial Market Supervision Administration Special Equipment Bureau Expert

Hebei Provincial Special Equipment Association Expert Hebei Special Inspection Institute Pressure Pipeline Expert





赵 志 / Zhao Zhi

国内知名精细化工工艺设计专家

高级工程师 注册化工、动力工程师

**Domestic Famous Fine Chemical Process** 

Senior Engineer Registered Chemical and Power Engineer



国内知名工艺技术与工程化专家

正高级工程师 注册设备工程师

Domestic Famous Expert in Process Technology and Engineering

Senior Engineer Registered Equipment Engineer



国内知名发酵工艺开发与应用技术

正高级工程师 中国化工学会生物化工专业委 员会委员

Domestic Famous Fermentation Process Development and Application Technology Expert

Senior Engineer

国务院特殊津贴专家

Member of the Biochemical Engineering Professional Committee of the Chinese Chemical Society State Council Special Allowance Expert

国内知名控制发酵染菌技术专家



高级工程师

中国生物发酵产业协会理事

Domestic Famous Controlling Fermentation & **Contamination Technology Expert** 

Senior Engineer Director of China Biotech Fermentation Industry Association



姚振永 / Yao Zhenyong

国内知名医药工艺专家

正高级工程师 注册化工工程师 国际制药项目管理协会中国区 制药工程技术专家委员会专家

Domestic Famous Pharmaceutical Technology Expert

Senior Engineer Registered Chemical Engineer Expert of China Pharmaceutical Engineering Technical Expert Committee of International Pharmaceutical Project Management Association



#### 国内知名生物医药工艺设计专家

高级工程师 注册化工工程师

Domestic Famous Biomedical Process Design Expert

Senior Engineer Registered Chemical Engineer



国内知名合成生物工程设计专家

正高级工程师 注册化工工程师

Domestic Famous Expert in Synthetic Bioengineering Design

Senior Engineer Registered Chemical Engineer



国内知名精细化工设备设计专家

教授级高级工程师 国家市场监管总局压力容器设计 许可鉴定评审专家

**Domestic Famous Expert in Fine Chemical Equipment Design** 

Professor of Engineering Expert in Pressure Vessel Design License Appraisal and Review, State Administration for Market Regulation



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李红路/Lih

国内知名化工医药工艺设计数字 化专家

高级工程师

Domestic Famous Expert in Digital Design of Chemical and Pharmaceutical Process Engineering

Senior Engineer



国内知名化工工艺技术专家

高级工程师

中国化工企业管理协会医药化工 专业委员会特聘专家

Domestic Famous Chemical Process Technology Expert

Senior Engineer Specialist Consultant for Pharmaceutical Chemicals at CCEAMA



国内知名化工工艺技术专家

正高级工程师 中国化工企业管理协会医药化 工专业委员会特聘专家

Domestic Famous Chemical Process Technology Expert

Senior Engineer Specialist Consultant for Pharmaceutical Chemicals at CCEAMA



国内知名园区规划、总体规划技术 专家

高级工程师

Domestic Famous Industrial Park Designer and Master Planning Technical Expert

Senior Engineer



国内知名生物发酵工艺专家 高级工程师

**Domestic Famous Biological Fermentation Process Expert** 

Senior Engineer



#### 国内知名化工医药信息化技术专家

全栈软件工程师 系统架构师

Domestic Famous Chemical Pharmaceutical Digitalization Expert

Full Stack Software Engineer System Architect



国内知名化工医药咨询与设计专家

研究员级高级工程师 注册化工工程师 全国优秀工程勘察设计大师 中国医药工程设计协会理事 **Domestic Famous Chemical Pharmaceutical Consulting And Design Expert** 

Fellow-Level Senior Engineer Registered Chemical Engineer National Excellent Engineering Investigation and Design Expert Director of China Pharmaceutical Association of Engineering Design



国内知名化学制药工艺设计专家

研究员级高级工程师 注册化工工程师 咨询工程师(投资)、造价工程师 国家工程咨询协会专家库专家

Domestic Famous Chemical And Pharmaceutical Process Design Expert

Fellow-Level Senior Engineer Registered Chemical Engineer Consulting Engineer (Investment), Cost Engineer Expert of the Expert Pool of China National Association of Engineering Consultants

# 科技创新

## TECHNOLOGICAL INNOVATION

## 传播前沿技术与先进理念,为产业可持续发展蓄力共创

Transfering Advanced Technologies and Conceps Empowering the Industrial Sustainable Development

### 天俱时科技论坛

TIANS Technology Forum

Consecutive Sessions 连续举办17届

100+ Speakers 演讲嘉宾

10000+ Participants 参会人员

中国高科技行业高端技术交流平台,聚焦科技创新,服务行业 发展,促进社会进步,加速科学技术和生产实践深度融合,助 推企业转型升级和可持续发展。

#### 青年设计师50人论坛

Youth Designers 50 Forum

天俱时青年设计师50人论坛旨在为专业设计、技术人员提供 交流平台,传播前沿科技信息,提升技术水平,加强合作,促进 行业发展。会议针对行业政策、设计理念、前沿技术等专业热 点难点问题进行深入研讨和交流。

The high-end technology exchange platform of China's high-tec hindustry focuses on scientific and technological innovation, serves the development of the industry, promotes social progress, accelerates the deep integration of science and technology and production practice, and promotes the transformation, upgrading and sustainable development of enterprises.

The TIANS Youth Designer Forum provides a platform for professional design and technical personnel to communicate, disseminate cutting-edge technological information, enhance technical level, strengthen cooperation, and promote industry development. The conference conducted in-depth discussions and exchanges on professional hot and difficult issues such as industry policies, design concepts, and cutting-edge technologies.

### 科技平台

Technology Platform

\*\*\*\*\*

- 国家高新技术企业 National High-Tech Enterprise
- 中国产学研合作创新示范企业 China Industry-University-Research Cooperative Innovation Demonstration Enterprise
- 国家专精特新小巨人企业 National-level Specialization, Special New Small Giant Enterprise
- 河北省企业技术中心 Hebei Enterprise Technology Center
- 国家知识产权优势企业 National Intellectual Property Advantage Enterprises
- 博士后创新实践基地 Post Doctoral Innovation Practice Base

专 利

160 Authorized more than 160 patents 项授权专利

24 invention patents 项发明专利

35 software copyrights 项软件著作

天俱时专利涉及工程设计、自动化、洁净工程、机电安装、废 水治理等方面。

TIANS patents cover engineering design, automation, clean room engineering, electromechanical installation, wastewater treatment and other aspects.

#### 国内领先技术认定

Identification of Domestic Leading Technology

一种制药废水的分类处理与回用技术 臭氧催化氧化耦合高效生物膜深度处理制药废水集成技术 制药行业VOCs废气处理技术及装备 全自动节能型连消系统成套装备

A classification treatment and reuse technology of pharmaceutical wastewater Integrated technology of ozone catalytic oxidation coupled with high efficiency biofilm for advanced treatment of pharmaceutical wastewater VOCs waste gas treatment technology and equipment in pharmaceutical industry

Complete set of equipment for fully automatic energy-saving continuous consumption system

Standard Construction

《洁净室及相关受控环境第1部分:根据粒子浓度划分 空气洁净等级》

《洁净室及相关受控环境第2部分:用粒子浓度监测提 供洁净室空气洁净度的证据》 《细胞制备洁净室运行规范》 《医药工业洁净厂房施工与验收标准》 《医药工业工程术语标准》

<Cleanrooms and associated controlled environments Part 1:Classification of</p> air cleanliness by particle concentration>

<Cleanrooms and associated controlled environments Part 2:Monitoring to provide evidence of cleanroom performance related to air cleanliness by particle concentration>

<Cell preparation standard for cleanroom operation>

<Standard for construction and acceptance of pharmaceutical industry cleanroom>

<Terminology Standard for Pharmaceutical Engineering>

Create An Alliance

制药智能智造产业联盟(PIMA)创始副会长单位 口服固体制剂产业联盟(OSIA)创始副会长单位 Founding vice president unit of Pharmaceutical Intelligent Manufacturing Industry Alliance (PIMA)

Founding vice president unit of Oral solid preparations Industry Alliance (OSIA)



# 典型案例 CLASSIC CASES

## 中节能万润股份有限公司

Valiant Co., Ltd.

## 中国精细化工百强前十

Top 10 of Top 100 Enterprises in Fine Chemical Engineering Industry in China

中节能万润股份有限公司在高端显示材料、高端沸石系列环 保材料以及生命科学样品制备三个世界前沿领域处于行业 前列。天俱时集团为万润股份提供全方位服务,包括工程设 计、机电工程、自控工程、环保工程等专业领域。聚合智慧,创 生无限,我们将用科技助力万润股份成为世界一流的节能环 保健康产业集团。

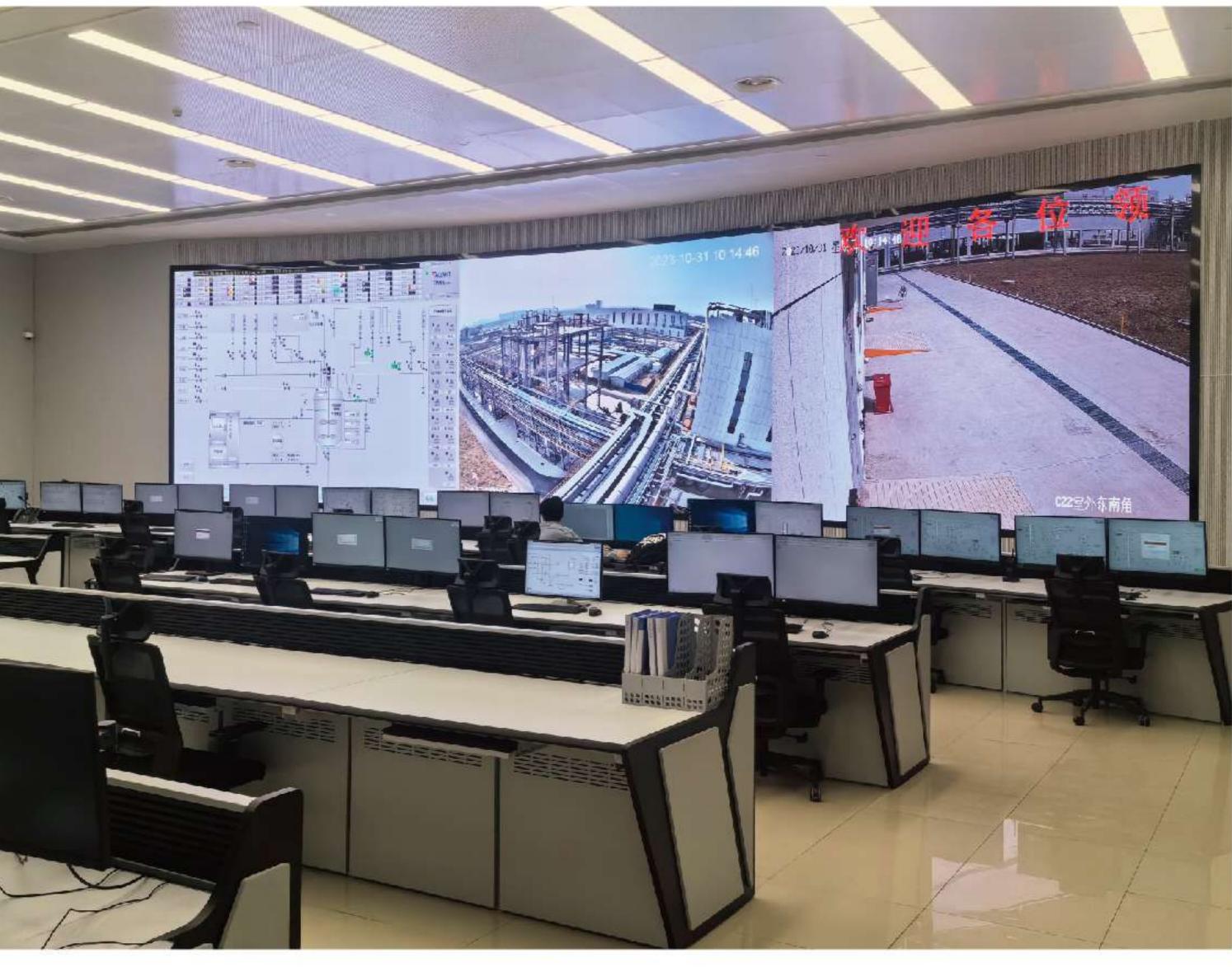
Valiant Co., Ltd. is at the forefront in the three world frontier fields of high-end display materials, high-end zeolite series environmental materials and life science sample preparation. TIANS Group provides all-round services for Valiant, including engineering design, electromechanical engineering, automatic control engineering, environmental engineering and other fields. We will use science and technology to help Valiant become a world-class industrial group focusing on energy conservation, environmental protection and health care.

### 中节能万润股份有限公司万润化工园区一期项目自动化工程

Automation Engineering of Phase I Project of Valiant Industrial Park of Valiant Co., Ltd.

**Fine Chemicals** 







#### 中节能万润股份有限公司C10污水处理项目EPC总承包

EPC General contracting of C10 Waste Water Treatment Project of Valiant Co., Ltd.

#### 环保新材料

**New Environmental Materials** 





Zhejiang Juhua Co., Ltd

中国氟硅行业领军企业

Leading Enterprise in China's Fluorosilicon Industry



巨化集团作为氟化工行业的领军企业,凭借其在氟化工、氯碱化工、煤化工等领域的全面布局,形成了从基础化工原料到高端氟材料的完整产业链。天俱时集团为其提供了工艺技术服务、工程咨询与设计、工程总承包、自动化与信息化工程等专业服务。集智聚力,激发创新,天俱时集团以科技助力巨化集团巩固其在高性能氟材料领域的领先地位,向着成为全球知名的化工产业集团的目标不断迈进。

As a leading enterprise in the fluorine chemical industry, Juhua Group has formed a complete industrial chain from basic chemical raw materials to high-end fluorine materials with its comprehensive layout in fluorine chemical, chlor alkali chemical, coal chemical and other fields. TIANS Group provides professional services such as Process technology services, engineering consulting and design, engineering general contracting, automation and information technology engineering, etc. By gathering wisdom and strength, and stimulating innovation, TIANS Group uses technology to assist Juhua Group in consolidating its leading position in the field of high-performance fluorine materials, continuously advancing towards the goal of becoming a globally renowned chemical industry group.

### 湖北宜化新能源有限公司



### 新能源材料行业领军企业

One of the Leading Enterprises in the New Energy Materials Industry

宜化新能源是一家专注于新能源领域的企业,致力于高品质电池添加剂的研发与生产。天俱时为其提供全过程专业的工程服务。开放共享,绿色发展,我们将助力宜化为市场提供高效的电池添加剂解决方案,推动社会可持续发展。

Yihua New Energy is an enterprise focusing on the field of new energy, and is committed to the research and development and production of high-quality battery additives. TIANS provides professional engineering services for the whole process. Keeping in mind open sharing and green development, we will help Yihua to provide efficient battery additive solutions for the market and promote social sustainable development.



## 浙江研一新能源科技有限公司

Zhejiang Yanyi New Energy Technology Co., Ltd.

### 全球锂电池粘结剂细分行业的领先企业

Leading Enterprise in the Global Lithium Battery Binder Sub Industry

浙江研一新能源科技有限公司,作为新能源材料领域的先行者,专注于锂电新材料的研发与制造。天俱时集团为其提供全面的工程技术服务,涵盖从规划、设计到项目管理的每个环节,以专业的T-EPC模式确保项目高效、精准落地。通过集智聚力,天俱时集团助力研一新能源在新能源材料领域实现创新突破,迈向行业领军地位。

Zhejiang Yanyi New Energy Technology Co., Ltd., as a pioneer in the field of new energy materials, focuses on the research and manufacturing of lithium battery new materials. Tianjushi Group provides comprehensive engineering and technical services, covering every aspect from planning, design to project management, ensuring efficient and accurate project implementation through a professional T-EPC model. By gathering wisdom and strength, Tianjushi Group helps R&D New Energy achieve innovative breakthroughs in the field of new energy materials and move towards a leading position in the industry.

## 武汉尚赛光电科技有限公司

Wuhan Sunshine Optoelectronic Technology Co., Ltd.

#### 全球专业新型OLED材料供应商

Global Professional New OLED Material Supplier

武汉尚赛光电科技有限公司专注为新型显示及半导体产业链提供关键有机电子材料和相关配套服务,其自主研发的先进功能材料性能领先,是国内头部面板企业核心供应商。天俱时集团为其提供机电工程总承包服务。行之千里,日日自新,未来我们将助力尚赛光电构建更有竞争力的产业格局,力争成为全球领先的显示材料核心供应商。

Wuhan Sunshine Optoelectronic Technology Co., Ltd., which focuses on providing key organic electronic materials and related supporting services for new display and semiconductor industry chain, is a core supplier for domestic head panel enterprises with its self-developed advanced functional materials with leading performance. TIANS Group provides general contracting services for electromechanical engineering to Sunshine (Huanggang) new photoelectric. We will help Sunshine Optoelectronic to build a more competitive industrial pattern to become a global leading core supplier of display materials.





### 江西富祥药业股份有限公司



#### 国内中间体和原料药领军企业

Leading Intermediate and API Enterprise in China

富祥药业以特色抗菌原料药及其中间体的研发、生产及销售为主业,并积极布局新业态。天俱时集团与富祥药业展开全方位合作,提供了EPC、工程设计、自控工程、环保工程等数十项专业服务。新益求新,我们将一起携手,打造阳光未来。

Fushine Pharmaceutical takes the research, development, production and sales of characteristic antibacterial APIs and intermediates as its main business, and actively plans new business forms. TIANS group has carried out all-round cooperation with Fushine Pharmaceutical, providing dozens of professional services such as EPC, engineering design, automatic control engineering, environmental protection engineering, etc. Seeking innovation constantly, we will worktogether to create a sunny future.



## 科伦集团·伊犁川宁生物技术有限公司

KELUN Pharmaceutical·Yili Chuanning Biotechnology Co., Ltd.

## 全球最大抗生素中间体制造基地

创精品·超越客户预期 PROJECTS·EXCEED CLIENT EXPE

The World's Largest Antibiotic Intermediate Manufacturing Base

川宁生物是中国医药工业百强企业之一的科伦集团的抗生素中间体项目的实施主体,占地1219亩,总投资超100亿元,年产硫氰酸红霉素3000吨、头孢系列中间体10000吨。自川宁生物基地投建起,天俱时与川宁生物连续合作十余年,是川宁生物项目的建设者、见证者和开创者。在环保项目中,全球首次将分子筛技术应用于制药废气治理领域;总承包项目荣获中国安装工程优质奖(中国安装之星)。未来我们将继续携手同行,推动医药科技的进步。

CHUANNING biology is the main body of the antibiotic intermediate project of Kelun group, one of the top 100 enterprises in China's pharmaceutical industry. It covers an area of 1219 mu, with a total investment of more than 10 billion yuan, and has an annual output of 3000 tons of erythromycin thiocyanate and 10000 tons of cephalosporin series intermediates. Since the establishment of CHUANNING biological base, TIANS has been cooperating with CHUANNING biology for more than ten years, and is the builder, witness and founder of CHUANNING biology project. In environmental protection projects, molecular sieve technology is applied to the field of pharmaceutical waste gas treatment for the first time in the world; The EPC project won the China Installation Engineering Quality Award (China installation star). In the future, we will continue to work together to promote the progress of medical science and technology.



伊犁川宁生物技术有限公司二期废水治理EPC项目

EPC Project for Second-phase Waste Water Treatment of Yili Chuanning Biotechnology Co., Ltd.

发酵原料药

Fermentation APIs

伊犁川宁生物技术有限公司二期发酵尾气治理EPC项目

EPC Project for Second-phase Fermentation Wastegas Treatment of Yili Chuanning Biotechnology Co., Ltd.

发酵原料药

Fermentation APIs



## 蓝晶微生物·江苏蓝素生物材料有限公司

Jiangsu Lansu Biomaterials Co., Ltd.

### 合成生物学领导者

Leader in Synthetic Biology

蓝晶微生物是全球第三、中国第一家显著降低PHA成本达到 可规模化销售水平的公司。其全资子公司江苏蓝素生物材料 有限公司年产25000吨PHA产业化项目由天俱时集团总承 包,占地130亩,总投资12.5亿元,计划PHA年产能25000吨。 天俱时愿与蓝晶一起,共同为人类创造一个可持续的、活力四 射的美好未来。

Bluepha is the third company in the world and the first company in China that has significantly reduced the cost of PHA and made the large-scale sale of PHA possible. Jiangsu Lansu Biomaterials Co., Ltd., a wholly-owned subsidiary of Bluephalt, launched the PHA industrialization project (annual output of 25,000 tons), which is undertaken by TIANS Group. It covers an area of 130 mu, with a total investment of 1.25 billion yuan. It is planned that the annual output of PHA could reach 25,000 tons. TIANS is willing to, together with Bluepha, create a sustainable and vibrant future for mankind.



## 巴彦淖尔华恒生物科技有限公司、秦皇岛华恒生物工程有限公司



Bayannur AHB Biotechnology Co., Ltd. / Qinhuangdao AHB Biotechnology Co.Ltd.

#### 全球最大丙氨酸生产基地

Globally Recognized as the Largest Alanine Production Hub

华恒生物是一家以合成生物为核心的高新技术企业,主要产 品包括氨基酸、维生素和生物基材料单体等,是全球最大的丙 氨酸生产基地,其中发酵法生产的L-丙氨酸技术被中国科学院 誉为"中国生物制造一个里程碑的创新"。天俱时集团为华恒 生物秦皇岛及巴彦淖尔生产基地发酵、提取、动力车间提供二 次优化设计、机电安装工程、自动化工程、连消装备等专业服 务。

AHB Bioengineering stands as a high-tech enterprise with synthetic biology as its linchpin. The company's flagship products include amino acids, vitamins, and bio-based material monomers. Holding the designation of being the global leader in Alanine production, its L-Alanine using fermentation process has garnered accolades from the Chinese Academy of Sciences, describing it as a "milestone in China's biomanufacturing evolution." TIANS Group provides professional services such as secondary optimization design, mechanical and electrical installation engineering, automation engineering, and continuous consumption equipment for the fermentation, extraction, and power workshops of AHB Biotechnology's Qinhuangdao and Bayannur production bases.

## 齐鲁制药集团有限公司

Qilu Pharmaceutical Group

### 蝉联中国医药工业百强榜前十

Won the Top Ten of the National Top 100 Pharmaceutical Enterprises

齐鲁制药是中国大型综合性现代制药企业,连续多年荣获中国医药工业百强企业TOP10榜、中国化学制药工业企业综合实力百强、中国医药工业最具投资价值等荣誉。从齐鲁大地到内蒙草原,天俱时已累计承建了齐鲁制药的工程设计、机电工程、自控工程及环保工程等数十个项目,其中多个项目荣获国家级、省级勘察设计类奖项。荣耀比肩、互相成就,未来我们愿继续携手,用科技表达我们的爱。

Qilu Pharmaceutical is a large comprehensive modern pharmaceutical enterprise in China. It is one of the top 10 of China's top 100 pharmaceutical enterprises, one of China's top 100 chemical pharmaceutical enterprises in comprehensive strength, and one of the enterprises with the most investment value in China's pharmaceutical industry for many consecutive years. From Shandong Province to Inner Mongolia, TIANS has undertaken dozens of projects of Qilu Pharmaceutical, including engineering design, electromechanical engineering, automatic control engineering and environmental protection engineering, many of which have won national and provincial level survey and design awards. Glory is equal to each other and mutual achievements. We both have won honors and achieved achievements. In the future, we are willing to continue to work together to express our love with technology.













Chengdu Chipscreen Pharmaceutical Co., Ltd.

#### 国内最早实践First-in-class模式的创新药企

The First Innovative Pharmaceutical Enterprise in China to Practice the First in Class Model

成都微芯药业是微芯生物——"中国原创新药领域的先行者"的全资子公司,项目占地100亩,分三期建设符合美国、欧盟和中国GMP标准的小分子原创化学新药生产基地(一、二期)以及大分子类创新药中试基地(三期)。一、二、三期项目均由天俱时集团承建,并荣获2020年度示范洁净工程表彰项目。恒者行远,思者常新,我们将始终用科技守护健康。

Chengdu Chipscreen Pharmaceutical Co., Ltd is a wholly-owned subsidiary of Chipscreen Biosciences, a pioneer in the field of innovative new drugs in China. The project covers an area of 100 mu and is divided into three phases. The company plans to a small molecule innovative chemical new drug production base (phase I and II) and a large molecule innovative drug pilot test base (phase III) that meet the GMP standards of the United States, the European Union and China. The first, second and third phases of the project were undertaken by TIANS group, and won the honor of 2020 Demonstration Clean Engineering Project. We will always protect our health with science and technology.



### 联邦制药国际控股有限公司

United Laboratories International Holdings Limited

#### 中国医药工业百强

Top 100 Pharmaceutical Industry Companies in China



联邦制药凭借其在抗生素中间体领域的卓越生产和创新技术,稳居行业前列。天俱时集团为其提供了全方位的专业服务,涵盖工程设计、机电工程、自控工程等关键环节,推动联邦制药在技术革新与产业升级的道路上稳步前行。汇聚专业,激发潜能,我们将携手推动中国医药卫生事业的发展,为社会提供更多优质高效的医药产品。

Thanks to its outstanding production and innovative technology in the field of antibiotic intermediates, United Laboratories is firmly at the forefront of the industry.

TIANS Group provides comprehensive professional services, covering key aspects such as engineering design, mechanical and electrical engineering, and self-control engineering, to promote the steady progress of United Laboratories on the path of technological innovation and industrial upgrading. By gathering expertise and unleashing potential, we will work together to promote the development of China's healthcare industry and provide society with more high-quality and efficient pharmaceutical products.







## 康龙化成(绍兴)药业有限公司

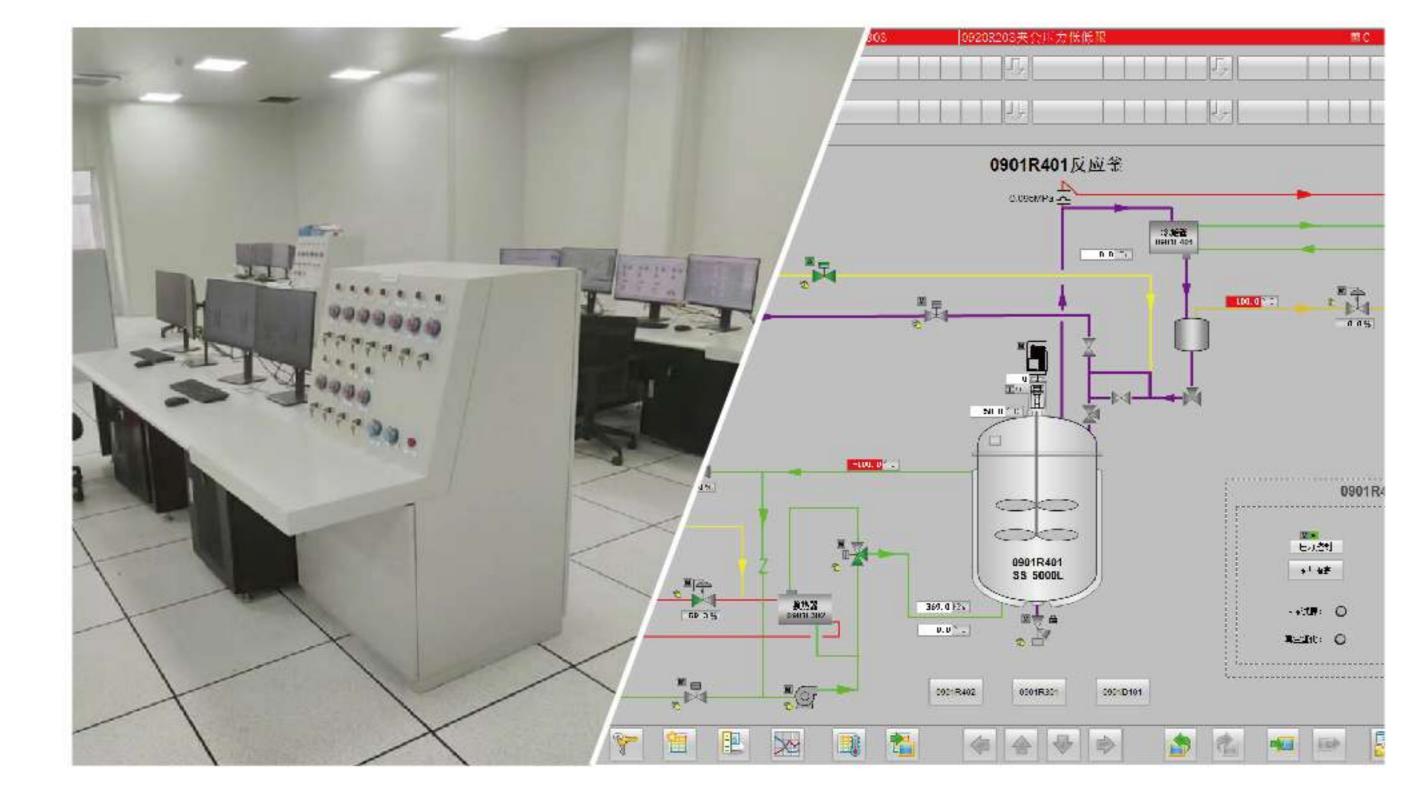
Pharmaron (Shaoxing) Pharmaceutical Co.,Ltd.

#### 药物发现领域全球前三的商业化企业

The World's Top Three Commercial Enterprises in Drug Discovery

康龙化成是国际领先的生命科学研发服务企业,为包括小分子、大分子和细胞与基因治疗药物在内的多疗法药物研发打造了一个贯穿药物发现,临床前及临床开发全流程的研发生产服务体系。天俱时集团为康龙化成提供机电工程、自动化等专业服务。探索未知,价值赋能,我们愿一起为人类健康贡献智慧。

Pharmaron is an international leading life science R & D service enterprise, which has created a R & D and production service system throughout the whole process of drug discovery, preclinical and clinical development for the research and development of multi therapeutic drugs, including small molecules, macromolecules, cells and gene therapy drugs. TIANS Group provides professional services such as electromechanical engineering and automation for Pharmaron. Exploring the unknown and value empowering, we are willing to contribute wisdom to human health together.



#### 康龙化成(绍兴) 药业有限公司年产47吨医药中间体 高端创新原料药多功能车间自动化项目

Pharmaron (Shaoxing) Pharmaceutical Co., Ltd. Annual Output of 47 Tons of Pharmaceutical Intermediates, High-end Innovative API Multi-function Workshop Automation Project

#### 高端创新合成原料药

High End Innovative Synthetic API

### 人福医药集团股份公司

Humanwell Healthcare (Group) Co., Ltd.

中国医药工业30强

Top 30 Pharmaceutical Industry in China

人福医药集团股份公司坚持做医药领域"细分市场领导者"的战略,在神经系统用药、甾体激素类药物、维吾尔民族药等细分领域占据领导或领先地位,并积极培育生物制品、基因工程药等业务的竞争力。天俱时集团与黄冈、宜昌人福在机电工程、洁净工程、自动化与信息化工程等方面展开全方面合作,全面助力人福医药成为卓越的医药健康产品及服务供应商。

Humanwell Healthcare (Group) Co., Ltd. positions itself as a "niche market frontrunner" in the pharmaceutical sector. With a stronghold in specific areas such as neurosystem drugs, steroid hormones, and Uyghur traditional medicines, Humanwell continuously enhances its stance in bioproducts and genetic engineering medicines. TIANS has formed a robust partnership with Huanggang Humanwell and Yichang Humanwell, covering areas like electromechanical engineering, cleanroom construction, automation, and information engineering, they envision turning Humanwell Healthcare into a top-tier pharmaceutical health products and services provider.



## 广州百济神州生物制药有限公司



### 全球首家"A+H+N"三地上市的生物医药企业

The World's First Biopharmaceutical Enterprise Listed in 'A+H+N' Three Stock Exchangess

百济神州是一家全球性的、商业阶段的、以研发为基础的生物科技公司,专注于分子靶向和免疫肿瘤疗法的研发,处于中国生物医药企业TOP10。天俱时集团与百济神州在咨询设计、自动化、洁净工程等方面开展了合作。塑造价值,共赴星辰,我们将一起为业界创造又一个生物医药项目的卓越案例。

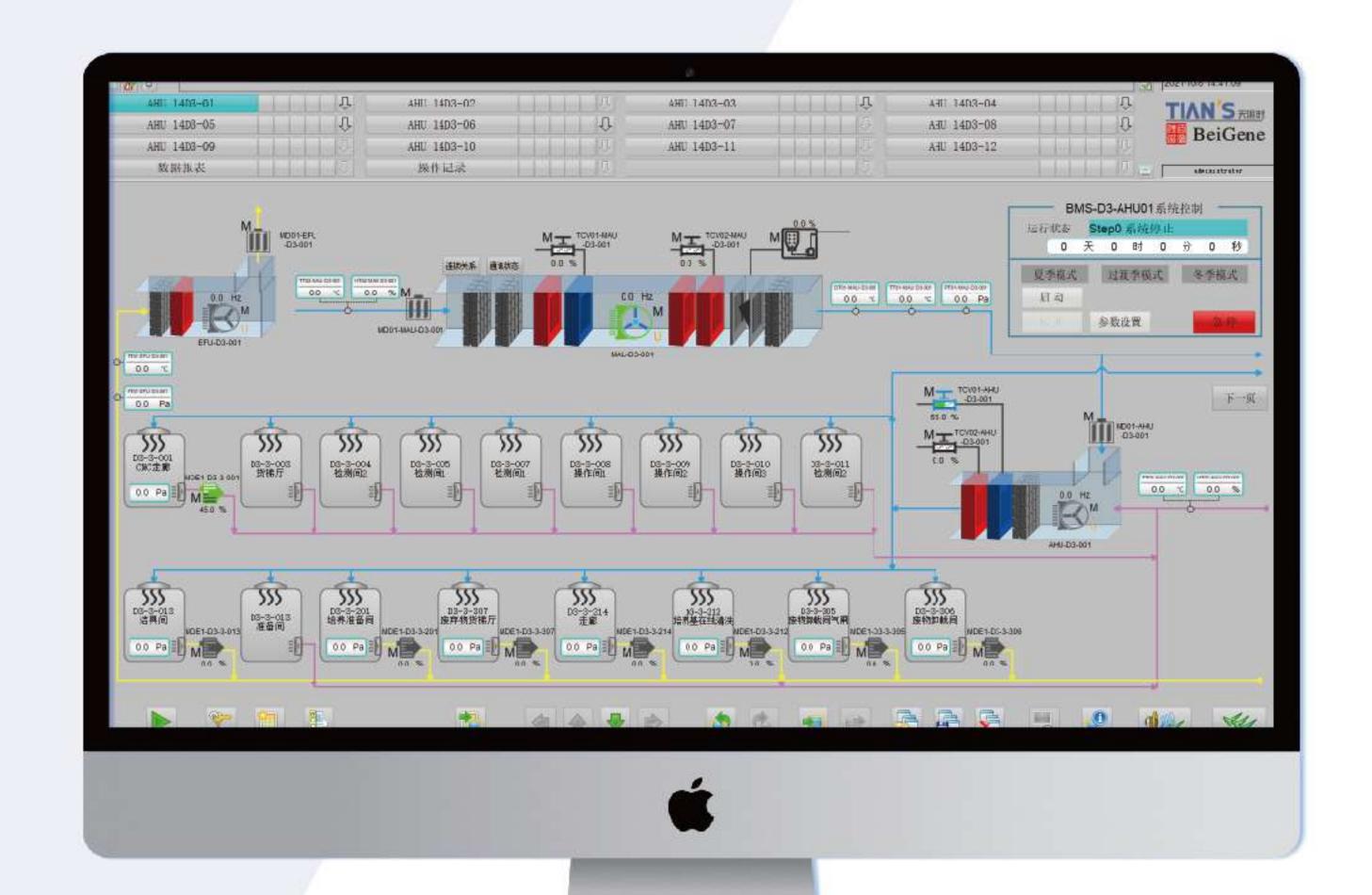
BeiGene Biopharmaceutical is a global, commercial and R & D-based biotechnology company, focusing on the research and development of molecular targeting and immune tumor therapy. It is in the top10 of Chinese Biomedical enterprises. TIANS Group and BeiGene Biopharmaceutical have carried out cooperation in consulting design, automation, cleaning engineering, etc. We are committed to creating value and embracing a brighter future along with BeiGene. Together, we will create another outstanding case of biomedical projects for the industry.

## 广州百济神州生物制药有限公司三期 & 四期项目 BMS&EMS系统

BMS&EMS System in Workshop III &IV Project of Guangzhou BeiGene Biopharmaceutical Co., Ltd.

生物到

Biopharmaceutical





#### 广州百济神州生物制药有限公司ADC及 DS4 生产车间机电安装及洁净装修工程

ADC and DS4 Production Workshop Mechanical and Electrical Installation and Clean Decoration Worksof Guangzhou BeiGene Biopharmaceutical Co., Ltd.

#### 抗体偶联药物

Antibody-drug Conjugate

### 上海君实生物工程有限公司

Top Alliance Biosciences Co., Ltd.

Shanghai Top Alliance Biosciences CO., LTD.

上海君实生物工程有限公司临港基地中试车间新建项目

Project of New Pilot plant of Lingang Manufacturing Base of Shanghai

#### 中国首家获得PD-1单克隆抗体NMPA上市批准

单克隆抗体

Monoclonal Antibody

China's First PD-1 Monoclonal Antibody Approved by NMPA

君实生物是一家创新驱动型生物制药公司,处于中国生物医药企业 TOP10,致力于创新药物的发现和开发。天俱时集团为其临港中试车 间及苏州产业化项目提供设计、机电安装、自动化等专业服务。未来 已至,创新为先,我们将携手为生物医药行业交出满意答卷。

Top Alliance Biosciences is an innovation driven biopharmaceutical company, one of China's Top 10 Biopharmaceutical Enterprises, committed to the discovery and development of innovative drugs. TIANS Group provides design, mechanical and electrical installation, automation and other professional services for its pilot plant in Lingang Base and Suzhou industrialization. We will take innovation as our priority and work together with Top Alliance to deliver a satisfactory answer for the biomedical industry.



## 上海君实生物工程有限公司

临港基地中试车间新建项目自控工程

Automatic control engineering of newly built pilot plant in Lingang Base of Shanghai Top Alliance Biosciences Co., Ltd.

#### 单克隆抗体

Monoclonal Antibody



Jiaao Pharmaceutical (Shijiazhuang) Co., Ltd

Base Area A Project E+PC

嘉奥制药(石家庄)有限公司一期工程CNS重组及药物研发生产基地A区项目E+PC

绿叶制药·嘉奥制药(石家庄)有限公司,作为CNS治疗领域

的佼佼者,专注于中枢神经系统药物的研发与生产。天俱时

集团为其提供工程咨询与设计、工程总承包、自动化与信息

化等专业服务。我们以创新为驱动,以科技为支撑,助力绿

叶制药在CNS领域的持续发展和创新,共同为患者带来更

优质的健康解决方案和经济实惠的医药资源。

Jiaao Pharmaceutical (Shijiazhuang) Co., Ltd. Phase I CNS Restructuring and Drug R&D Production

### 中国医药工业百强

CNS药物

CNS Drugs

Top 100 Pharmaceutical Industry Companies in China

Luye Pharma· Jiaao Pharmaceutical (Shijiazhuang) Co., Ltd., as a leader in the field of CNS therapy, focuses on the research and production of central nervous system drugs. TIANS Group provides professional services such as engineering consulting and design, engineering general contracting, automation and informatization. We are driven by innovation and supported by technology to assist Luye Pharma in the continuous development and innovation of CNS field, jointly bringing better health solutions and affordable medical resources to patients.



## 正大天晴药业集团股份有限公司

Chia Tai-Tianqing Pharmaceutical Holdings Co., Ltd.

正大天晴药业集团是一家从事医药创新和高品质药品的研发、生产与销售的创新型医药集团,是国内知名的抗肿瘤、肝病药物研发和生产基地,位列2021年度中国医药工业百强企业榜第15位。天俱时集团先后为正大天晴连云港、江苏普润项目提供工程咨询与设计、机电工程、洁净工程等专业服务。以创新为载体,以科技为动力,我们将与正大天晴一同竭力为患者提供更佳的健康解决方案和优质可负担的医药资源。

Chia Tai-Tianqing is a trailblazer, dedicated to innovating, producing, and distributing top-tier medicines. As a distinguished hub for cancer and liver disease research and manufacturing in China, Chia Tai-Tianqing clinched the 15th spot on China's Top 100 Pharmaceutical Industries in 2021. TIANS has been a consistent partner, offering tailored services like engineering consultation, electromechanical solutions, and cleanroom setups for Chia Tai-Tianqing 's endeavors in Lianyungang and Jiangsu Purun. Driven by innovation and empowered by technology, we stand side by side with Chia Tai-Tianqing, relentlessly working to present patients with advanced health alternatives and affordable pharma resources.

### 中国抗肿瘤、肝病领域知名企业

China's Esteemed Player in Oncology and Liver Disease Solutions



## 深圳市海普瑞药业集团股份有限公司

Shenzhen Hepalink Pharmaceutical Group Co., Ltd.

### 国内肝素领域影响力前五

Top 5 in China's Domestic Heparin Market

tion Line at Pingshan Factory

海普瑞药业是拥有A+H双融资平台的领先跨国制药企业,主要业务覆盖肝素全产业链、生物大分子CDMO和创新药物的投资、开发及商业化,是目前中国少有的在肝素全产业链各环节均完成跨国闭环布局的生物医药企业。天俱时集团承建海普瑞坪山工厂新建制剂线EPC项目,涵盖制剂生产线及配套的仓储、检验、信息化等系统。科技为本,共启新程,我们将助力海普瑞生产更多高质量的安全有效药物,护佑健康。

Hepalink Pharmaceutical stands as a premier multinational pharma entity, boasting both A+H financing channels. The core operations span the complete heparin industry chain, biomacromolecule CDMO, and the full cycle of innovative drug investment, development, and commercialization. Hepalink is a rare pharmaceutical company in China that has successfully established a closed-loop, cross-border layout across all segments of the heparin industry chain. TIANS spearheads the EPC initiative for Hepalink's new prefilled syringe in Pingshan, overseeing production, supporting warehousing, quality checks, and information engineering. United by innovation and a shared future vision, we're driven to bolster Hepalink's mission of delivering broader, safer, and more impactful health solutions.



## 江苏诺泰澳赛诺生物制药股份有限公司

Sinopep Allsino Bio Pharmaceutical Co., Ltd.

## 国内多肽行业引领者

Domestic Polypeptide Industry Leader

## 成都社泰医疗科技有限公司

Chengdu Shetai Medical Technology Co., Ltd.

## 国内放射性药物抗肿瘤诊疗领域领军者

Leader of Domestic Antitumor Diagnosis and Treatment by Radiopharmaceuticals

成都社泰医疗科技有限公司,作为远大医药集团旗下的核药研发生产基地,致力于放射性药物的研发与生产。天俱时提供核药车间和大分子车间的楼宇管理系统(BMS)和环境监控系统(EMS),助力社泰打造数字化、智能化公用工程管理平台,保证药品生产的质量和安全。数智转型,敢为人先,我们愿意共同为患者提供更安全、更有效的健康解决方案。

Chengdu Shetai Medical Technology Co., Ltd., the Radiopharmaceuticals R&D Production Base under the control of Grand Pharmaceutical Group, specialises in Radiopharmaceuticals R&D and Production. TIANS Group provides the building management system (BMS) and environment management system (EMS) for radiopharmaceuticals workshop and macromolecule workshop, helping Shetai build a digital and intellectual public engineering management platform, and ensuring the quality and safety of medicine production. Daring to be the first in transition into digitization and intelligence, we are willing to jointly provide safer, and more effective healthcare solutions for patients.

诺泰澳赛诺生物作为国内多肽药物领域的领先企业,致力于通过技术创新突破药物研发及生产的技术瓶颈。天俱时为其多肽原料药、原料药制造与绿色生产提升项目提供包括工程设计、机电工程、自控工程等全方位的专业服务。以创新为载体,以科技为动力,我们希望共同推动绿色、低成本、优质、高效的医药产品的研发与生产,守护人类健康。

As one ofthe leading enterprises in the field of polypeptide drugs in China, Jiangsu Sinopep-Allsino Biopharmaceutical Co.,Ltd. is committed to breaking through the technical bottleneck of drug research and development and production through technological innovation. TIANS provides all-round professional services including engineering design, electromechanical engineering and automatic control engineering for its polypeptide API, API manufacturing and green production promotion projects. With innovation as the carrier and science and technology as the driving force, we hope to jointly promote the research and development and production of green, low-cost, high-quality and efficient pharmaceutical products to protect human health.





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