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## 环保工程T-EPC引领者



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## TI∧N'S 天俱时环保



Devoted To Overall Environmental Solutions For Industrial Enterprises

废气处理

危险废物处理

T-EPC 模式

精品项目

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# About Tianjushi

# 走进天俱时

始创于 1998 年,国内知名 大型环保、医药项目总承 包商。

# 50+ 百强

全国制药百强企业战略合 作伙伴,已为 50 多家制药 百强企业提供服务

200+客户

涉及环保、发酵原料药、 合成原料药、生物原料药、 生物制品、药物制剂、中 成药等工程科技领域

# 1000+

覆盖全国 20 多个省、市、 自治区,数十项国家级、 省级优质工程

Tianjushi Group was founded in 1998 and is the general contractor of large-scale medical and environmental protection projects in China.

It is the strategic partner of the top 100 pharmaceutical enterprises in China and has provided services to over fifty top 100 pharmaceutical enterprises.

Involving engineering technology fields such as environmental protection, fermentation APIs, synthetic APIs, biological APIs, biological products, pharmaceutical preparations, and Chinese patent medicines, etc.

The projects cover more than 20 provinces, cities and autonomous regions, and dozens of national and provincial quality projects.

#### 业务范围 成药工程总承包 技术与工程总承 学制药工程 ironmental Protection Chemical Pharmanese Medicines armaceutica ceutical EPC chnology and EPC · #10 自控工程 8械工程总承6 L 程 咨询 与 设 计 型连消设备 lical Equipments Engineering consult-Automation Engineering New Continuous ng and design erilization Equipment

# **Tianjushi Eenvironmental Protection** 天俱时环保



Environmental **Protection Experts** in Pharma

## 工业环保专家

专注于损	出工业企业环保整体解
决方案,	致力于工业污染物近零
排放。	

ISpecializes in integrated environmental solution and commits to near-zero emissions of pollutants in the industrial enterprises.

solution.

Customized **Solutions** 

## 定制化解决方案

掌握当前成熟、先进的废水、废 气处理单元技术及节能减排技 术,擅长根据客户需求合理组合 技术单元,形成最优解决方案。

Master the current mature and advanced wastewater and waste gas treatment unit technology and energy saving and emission reduction technology, and be good at combining technical units reasonably according to customer needs to form the optimal



**One Stop** Service

### 一站式服务

提供集技术研发、工程设计、施 工、服务于一体的环保示范工程。

Provide environmental protection demonstration project integrating technology research and development, engineering design, construction and service

# **Qualifications and Honors** 资质荣誉



- ■环境工程(大气污染防治工程、水污染防治工程、固体废物 处理处置工程) 专项乙级
- Environmental Engineering (air pollution prevention and control engineering, water pollution prevention and control engineering, solid waste treatment and disposal project) special grade B
- 化工石化医药行业甲级
- Grade A in chemical, petrochemical and pharmaceutical industries

- 建筑行业(建筑工程)甲级
- Construction industry (Construction Engineering) Grade A
- 特种设备压力管道设计 GC1、GC2 级 Design of pressure piping for special equipment GC1 and GC2-
- 固定式压力容器规则设计 Regular design of stationary pressure vessel

天俱时已授权专利 46 项,其中发明专利 7 项,软件著作权 6 项;

河北省建设行业科学技术成果证书7个。

Tianjushi has authorized 46 patents, including 7 invention patents and 6 software copyrights, and 7 science and Technology Achievement Certificates of Hebei construction industry.

# **Business Area**

业务领域



# Waste Water Treatment 废水处理

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**S** 

**01 臭氧催化氧化** Ozone catalytic oxidation

**02 微电解芬顿** Micro electrolysis Fenton

**03 光催化氧化** Photocatalytic oxidation

04 电催化氧化 Electrocatalytic oxidation

**05 热水解** Thermal Hydrolysis

**01 厌氧反应器** Anaerobic reactor



07



Pretreatment scheme of sewage classification collection in pharmaceutical factory









微电解芬顿 Micro electrolysis fenton





用途:用于末端治理或改善生化性

关键:反应器的设计和催化剂

**案例:**齐鲁安舜制药、齐鲁绿色农药、以岭万洋 药业、天地药业

For terminal treatment or improvement of biochemical properties

Reactor design and catalyst

Qilu Anshun Pharmaceutical Co., Ltd., Qilu green pesticide Co., Ltd., Yiling Wanyang Pharmaceutical Co., Ltd., and Tiandi Pharmaceutical Co., Ltd



- 用途: 高浓度废水预处理
- 关键:反应器的设计和微电解填料
- **案例:**中节能万润股份、天地药业、天科制药 富祥药业

Pretreatment of High Concentration Wastewater Reactor Design and Micro Electrolysis Packing Valiant Co., Ltd., Tiandi Pharmaceutical Co., Ltd., Tianke Pharmaceutical Co., Ltd., Fushine Pharmaceutical Co., Ltd.



## 光催化氧化 Photocatalytic oxidation





用途: 高浓度废水解毒预处理

关键:反应器的设计和催化剂

**案例:**齐鲁安舜制药

Detoxification Pretreatment of High Concentration Wastewater

Reactor Design and Catalyst

Qilu Anshun Pharmaceutical



## 热水解 Thermal Hydrolysis





- 用途:制药废水灭活,高浓度、高毒性有机废水 处理
- 关键:反应器设计和催化剂

Pharmaceutical wastewater inactivation, high concentration, high toxicity organic wastewater treatment

reactor design and catalyst



## 电催化氧化 Electrocatalytic oxidation

用途: 经济有效降解高浓度有机废水

关键:反应器的设计与制造

案例:川宁生物、以岭万洋药业、天地药业、富祥药业

Economic and effective degradation of high concentration organic wastewater

Design and manufacture of reactor

Chuanning Biology, Yiling wanyang pharmaceutical, Tiandi pharmaceutical, Fushine pharmaceutical







针对高 COD、高氨氮制药废水特点,天俱时在常规 AO 曝 气池的基础上优化设计,形成多点进水多级 AO 曝气池工艺, 使曝气池进水 COD 和氨氮浓度分别可以达到 5000 mg/l 和 500mg/l,处理后水质可以达到 COD<300mg/l, 氨氮 <5mg/l。

According to the characteristics of pharmaceutical waste-water of high COD and high ammonia nitrogen, Tianjushi has optimized design on the basis of conventional AO aeration basin, has established multi-point influent two-grade AO aeration basin process, and has made influent COD concentration and ammonia nitrogen concentration in the aeration basin reach 5000 mg/l and 500mg/l respectively. After treatment, water quality can reach COD<300mg/l, and ammonia nitrogen<5mg/l.













# Waste Gas Treatment

蓄热式废气焚烧炉 RTO (Regenerative thermal oxidizer)



废气处理效率 99% 以上 废热回收率达 95% 以上 占地面积节约 40% 维护简单

The efficiency of waste gas treatment is more than 99% The recovery rate of waste heat is over 95% 40% less floor space Simple maintenance

分子筛转轮浓缩 Molecular sieve runner concentration



#### VOCs 去除率 90% 以上 废气浓缩比 10 倍以上

VOCs treatment rate is more than 90% The concentration ratio of waste gas is more than 10 times

#### 吸收与化学氧化 Absorption and chemical oxidation



现场照片

适用于多数废气治理的场合,可作为独立的处理 系统单独使用,也可与其他处理系统组合使用。

Chemical oxidation applies to the majority of waste gas treatment and can be used alone as independent treatment system and also can be used together with other treatment systems.

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# 活性炭吸附与再生

#### Absorption and regeneration of activated carbons



# Hazardous waste treatment 危险废物处理

Purification and utilization of waste salt

# **T-EPC Model** T−EPC模式

依托集团技术及人才优势,天俱时环保打造出一条集"污 染治理技术研发 - 工程设计 - 设备采购 - 建设实施 - 调 试运行"于一体的连续性产业链,并逐步形成了独具特 色的以技术为引领且技术贯穿全过程的工程总承包模式, 即 T-EPC 模式。

Depending on technology and talents advantage, Tianjushi Enviromental Protection created a continuous industry chain integrating "pollution treatment process research and development-engineering design-equipment procurement-construction inplementation-commission operation" and gradually formed distinctive technical EPC model of which the technology run through the whole process, namely, the T-EPC model.



陈平实验室致力于打造国际领先的工业三废资源化利用实验 室,以国内知名环保专家陈平博士命名。设有废水治理技术实 验室、废气治理技术实验室、环境治理工艺研究室等多个实验 室,拥有国内先进的环保实验及监测设备 80 余台,包括 TSI 美国尘埃粒子计数器、美国 TSI9565-A 风速仪、智能数字校 验仪、COD 分析仪高效液相色谱仪、膜分离纯化设备等,为 集团开展实验室研究、小试、中试等科研工作奠定了坚实的硬 件基础,是天俱时环保实行 T-EPC 模式的核心。

Chenping Laboratoy aims to become a leading international laboratory utilizing waste water, waste gas and solid wastes as resources, which is named after Dr. Chen Ping, a domestic famous environmental protection expert. There are many laboratories such as waste water treatment technology laboratory, waste gas treatment technology laboratory and environmental treatment technology research laboratory. There are more than 80 domestic advanced environmental protection experiment and monitoring equipment.







# Outstanding Projects <sub>精品项目</sub>



伊犁川宁生物技术有限公司 Yili CHUANNING Biotechnology Co., Ltd



#### 污水生化处理 T-EPC 项目

- 废水处理采用"厌氧+AO好氧+MVR"主工艺,生化 部分废水34000吨/日,COD138吨/日,深度处理 MVR47000吨/日
- 处理后COD<30mg/L,工业废水、生活废水可全部循环使用

#### 发酵尾气处理 EPC 项目

- 废气处理采用"旋风洗涤+除尘除湿+分子筛浓缩+焚烧"主工艺,总处理气量100万NM<sup>9</sup>/h
- VOCS去除率≥95.7%,处理后废气浓度降低到1PPM
- 以下,浓缩倍数≈10倍
- 2019年度河北省工程勘察设计项目二等奖

 Wastewater treatment adopts the "anaerobic+AO aerobic+M– VR" main process, with 34,000 tons/day of biochemical waste– water, 138 t/day of COD and 47,000 t/day of advanced treat– ment MVR.

 COD after treatment is less than 30 mg/L, and industrial waste water and domestic waste water can be completely recycled.  Waste gas treatment adopts the main process of "cyclone washing+dust removal and dehumidification+molecular sieve concentration+incineration", with a total treatment volume of 1 million Nm<sup>3</sup>/h.

- VOCS removal rate ≥95.7%, the concentration of waste gas after treatment is reduced to below 1PPM, and the concentration multiple is about 10 times.
- The second prize of engineering survey and design project of Hebei Province in 2019.







#### C10 污水处理 EPC 总承包项目

- 废水处理采用"高浓水+预处理+混合其他废水+综合调
   节池+A/O氧化+二沉池+絮凝沉淀"处理工艺
- ■项目规模:4000 m³/d(24小时运行)
- 环保新材料生产废水

### C10 sewage treatment project EPC

- The wastewater is treated by "high concentration water + pretreatment + mixed other wastewater + comprehensive regulating tank + A / O oxidation + secondary sedimentation tank + flocculation sedimentation".
- Project scale: 4000 m³ / d (24-hour operation).
- Environmental protection new material production wastewater.





#### 污水处理项目

#### Sewage treatment project

■废水处理采用"光催化氧化预处理+厌氧+两级AO+M-BR+臭氧催化氧化+曝气生物滤池"主工艺;处理量:	<ul> <li>The main process of wastewater treatment is "photocatalytic oxidation pretreatment + Anaerobic + two-stage AO + MBR + ozone catalytic oxidation + biological aerated filter";Processing capacity: 2000m<sup>3</sup>/d.</li> </ul>
2000m³/d	<ul> <li>The COD of the wastewater treated by the main process is less than 120mg / L, and the indicators of ammonia nitrogen, total phosphorus,</li> </ul>
■ 主工艺处理后废水COD小于120mg/L,氨氮、总磷、总	total nitrogen, etc. reach the first level a standard.
氮等各项指标达到一级A标准	• The first-class a standard direct discharge and zero discharge recy- ding of chemical synthetic pharmaceutical wastewater were realized.
■ 实现了化学合成类制药废水一级A标准直排和零排放回用	Third prize of engineering survey and design project of Hebei Province ■ in 2019.
■ 2019年度河北省工程勘察设计项目三等奖	





# 10000吨/日污水处理回用及雨污分流工程项目

- 废水处理采用"高效沉淀器+纤维球过滤+多介质过滤
   +超滤+反渗透"主工艺
- 处理量: 10000 m³/d
- 污水处理站淡水占总水量60%,用于净环水补水和结晶器循环水补水,反渗透浓水,占总水量的40%,送
   往高炉冲渣池用于高炉冲渣
- 实现厂区雨污分流和污水回用零排放

# 10000 t / d sewage treatment and reuse and rainwater sewage diversion project

- The main process of wastewater treatment is "high efficiency precipitator + fiber ball filtration + multi-media filtration + ultrafiltration + reverse osmosis".
- Processing capacity: 10000m<sup>3</sup>/d.
- The fresh water in the sewage treatment station accounts for 60% of the total water volume, which is used for the make-up of clean circulating water and mould circulating water, and the concentrated reverse osmosis water, which accounts for 40% of the total water volume, is sent to the blast furnace slag washing pool for slag washing.
- Realize the separation of rainwater and sewage and zero discharge of sewage reuse in the plant area.







乌杨医药产业园项目	T-EPC proje	
污水处理中心 T-EPC 工程	center of Wu	
	Industrial Pa	
■采用主体工艺为:"水解酸化+厌氧+AO +MBR+臭氧催	The main process is	
化氧化+生物接触氧化+絮凝沉淀"	AO + MBR + ozone oxidation + flocculatio	
■ 处理量为4000 m³/d	<ul> <li>The treatment capac</li> </ul>	
	<ul> <li>The COD of wastew</li> </ul>	
■废水经主工艺处理后COD小于200mg/L,氨氮、总	than 200mg / L, and total phosphorus are	
氮、总磷均达到园区污水外排接管标准	connection in the par	

T-EPC project of sewage treatment
center of Wuyang Pharmaceutical
Industrial Park Project

- is: "hydrolysis acidification + Anaerobic + ne catalytic oxidation + biological contact tion and sedimentation".
- acity is 4000 m³ / d.
- ewater treated by the main process is less nd the ammonia nitrogen, total nitrogen and are all up to the standard of sewage outfall ark.



#### 污水处理 T-EPC 项目

- ■采用主工艺为:"多效蒸发+水解酸化+厌氧+两级AO生 化+MBR+臭氧催化氧化"
- ■深度处理采用UF+RO+DTRO
- ■处理量为2000m³/d
- ■废水经主工艺处理后COD小于300mg/L, TDS<2000mg/L氨氮、总氮、总磷均达到园区污水外 排接管标准

### Sewage treatment T-EPC project

- The main process is: "multi effect evaporation + hydrolysis acidification + Anaerobic + two-stage AO biochemical + MBR + ozone catalytic oxidation".
- UF + RO + DTRO are used for advanced treatment.
- The treatment capacity is 2000m<sup>3</sup> / d.
- After the wastewater is treated by the main process, COD is less than 300mg / L, TDS < 2000mg / L, ammonia nitrogen, total nitrogen and total phosphorus are all up to the standard of wastewater discharge and connection in the park.







景德镇富祥生命科技股份有限公司 生物医药项目	Biomedical project of Jingdezhen Fushine life science and Technology Co., Ltd	
■ 采用主体工艺为: "水解酸化+厌氧+两级AO+絮凝沉淀"	<ul> <li>The main process is as follows: "hydrolytic acidification + Anaerobic + two-stage AO + flocculation sedimentation".</li> </ul>	
■ 处理量为5000 m³/d	■ The treatment capacity is 5000 m³/d.	
■废水经主工艺处理后COD小于300mg/L,氨氮、总磷均达 到园区污水外排接管标准	<ul> <li>After treated by main process, COD of wastewater is less than 300mg / L, ammonia nitrogen and total phosphorus meet the standard of wastewater discharge and connection.</li> </ul>	



#### ∝酮酸钙原料药 RTO EPC 项目

- VOCs废气处理采用"单筒式多阀门RTO+活性炭吸附辅助 系统+碱洗循环辅助系统+烟囱"主工艺
- 废气处理量30000 Nm³/h
- 废气浓度3000mg/m³, 废气去除效率99%以上,最终实现 30mg/m³超低排放标准



## RTO EPC project of calcium α ketate API

- VOCs waste gas treatment adopts the main process of "single cylinder multi valve RTO + activated carbon adsorption auxiliary system + alkali washing circulation auxiliary system + chimney".
- Waste gas treatment capacity 30000 Nm<sup>3</sup> / h.

• The concentration of waste gas is 3000 mg / m<sup>3</sup>, and the removal efficiency of waste gas is more than 99%. Finally, the ultra-low emission standard of 30mg / m<sup>3</sup> is achieved.





#### 发酵废气处理 EPC 总承包项目

	EPC project
■ 废气处理采用"酸、碱喷淋洗涤+预处理除尘、除湿、增温+ 分子筛浓缩+焚烧"主工艺	<ul> <li>The waste gas treatment adopts the main process of "acid and alkali spray washing + pretreatment dedusting, dehumidifica- tion, temperature increase + molecular sieve concentration + incineration".</li> </ul>
■ 总处理气量36万Nm <sup>3</sup> h	The total gas treatment capacity is 360000 Nm <sup>3</sup> /h.
■ VOCs去除率≥90%,处理后臭气浓度<500(无量纲), 浓缩倍数≈10倍	<ul> <li>VOCs removal rate ≥ 90%, odor concentration after treatment</li> <li>&lt; 500 (dimensionless), concentration multiple ≈ 10 times.</li> </ul>

Fermentation waste gas treatment

# **Outstanding Projects List** 精品项目列表

伊犁川宁生物技术有限公司万吨抗生素中间体建设(二
Yili CHUANNING Biotechnology Co., Ltd. 10000 tons antibiotic ir general contract project
伊犁川宁生物技术有限公司二期发酵尾气处理工程 EPC
EPC project of fermentation tail gas treatment project of Yili CHU
伊犁川宁生物技术有限公司 GCLE 提炼车间、回收车间
Butyl butanol tail gas recovery project of GCLE refining workshop
伊犁川宁生物技术有限公司叠螺式污泥脱水机和三厢式
Procurement project of stacked screw sludge dehydrator and three char
伊犁川宁生物技术有限公司硫红发酵尾气补强处理系统
Sulfur red fermentation tail gas reinforcement treatment system
伊犁川宁生物技术有限公司污泥脱水总承包项目
Sludge dewatering general contracting project of Yili CHUANNIN
伊犁川宁生物技术有限公司青霉素菌丝体干化项目
Penicillin mycelium drying project of Yili CHUANNING Biotechnol
伊犁川宁生物技术有限公司环保生化污泥脱水新增板框
Yili CHUANNING Biotechnology Co., Ltd. environmental protection
伊犁川宁生物技术有限公司生化处理车间一级好氧池射
Reconstruction project of jet aeration system of primary aerobic tar
伊犁川宁生物技术有限公司喷雾干燥车间菌渣低温干燥
Low temperature drying of bacteria residue in spray drying works
伊犁川宁生物技术有限公司 RO 污泥浓缩项目
RO sludge concentration project of Yili CHUANNING Biotechnol
中节能万润股份有限公司沸石系列环保材料污水站四期
EPC of zeolite series environmental protection material sewage
中节能万润股份有限公司 C10 污水处理 T-EPC 总承包
C10 sewage treatment T-EPC general contracting project of CE
中节能万润股份有限公司 C53 污水处理 T-EPC 总承包
C53 sewage treatment T-EPC project of CECEP Valiant Co., Lt
中节能万润股份有限公司污水站四期及母液压滤自控仪
Procurement project of sewage station phase $\ensuremath{\mathbb{N}}$ and automatic
中节能万润股份有限公司沸石系列环保材料 16# 车间余
Zeolites series environmental protection material 16 workshop a

#### L期)污水生化处理 T-EPC 总承包项目

intermediate construction (phase II) sewage biochemical treatment T-EPC

#### C 总承包项目

UANNING Biotechnology Co., Ltd

#### 间丁酯丁醇尾气回收项目

op and Recovery Workshop of Yili CHUANNING Biotechnology Co., Ltd

#### (自动加药机设备采购项目

amber automatic dosing machine equipment of Yili CHUANNING Biotechnology Co., Ltd

#### 项目

project of Yili CHUANNING Biotechnology Co., Ltd

NG Biotechnology Co., Ltd

ology Co., Ltd

#### 起承包项目

n biochemical sludge dehydration new board and frame general contracting project

#### 抗曝气系统改造项目

nk in biochemical treatment workshop of Yili CHUANNING Biotechnology Co., Ltd

#### 國項目

kshop of Yili channin Biotechnology Co., Ltd.

ology Co., Ltd

#### 期工程 EPC 总承包

e station phase IV Project of CECEP Valiant Co., Ltd

#### 包项目

ECEP Valiant Co., Ltd

#### 包项目

td

#### 2表采购项目

control instrument for mother liquor pressure filtration of CECEP Valiant Co., Ltd

#### 余味吸收项目

aftertaste absorption project of CECEP Valiant Co., Ltd

中节能万润股份有限公司基地污水站喷雾干燥系统改造项目	齐鲁制药(内蒙古)有限公司呼伦贝尔分公司绿色生
Reconstruction project of spray drying system for base sewage station of CECEP Valiant Co.,Ltd	Hulunbuir branch of Qilu Pharmaceutical (Inner Mongolia) Co project sewage treatment plant general contracting project
中节能万润股份有限公司 11# 车间余味吸收改造项目	
11 workshop aftertaste absorption and transformation project of CECEP Valiant Co., Ltd	山东安舜制药有限公司齐鲁制药乐陵医药产业园二期 Sewage treatment project of Qilu pharmaceutical Leling Phar
中节能万润股份有限公司基地环保车间 MBR 膜池集气改造项目	
MBR membrane pool gas gathering transformation project of base environmental protection workshop of CECEP Valiant Co., Ltd	山西高义钢铁有限公司山西高义钢铁有限公司 1000
中节能万润股份有限公司基地环保站自控系统改造项目	10000 t / d sewage treatment and reuse and rainwater sewa
Automatic control system transformation project of base environmental protection station of CECEP Valiant Co., Ltd	北京福元医药股份有限公司废水处理项目
中节能万润股份有限公司环保车间沸石后处理区域项目	Wastewater treatment project of Beijing Front Pharmaceutic
Zeolite post treatment area project of environmental protection workshop of CECEP Valiant Co., Ltd	北京福元医药股份有限公司沧州分公司原料药项目 F
中节能万润股份有限公司 A01、A02、A03 车间余味吸收装置项目	EPC project of RTO waste gas purification and treatment sy
Aftertaste absorption device project of A01, A02 and A03 workshops of CECEP Valiant Co., Ltd	北京福元医药股份有限公司沧州分公司高端原料药及
中节能万润股份有限公司沸石系列环保材料 11#、16# 车间余味吸收项目	Beijing Front Pharmaceutical Co., Ltd. Cangzhou Branch hig EPC project
Zeolites series environmental protection materials 11 and 16 workshop aftertaste absorption project of CECEP Valiant Co., Ltd	新疆合源正达生物化学有限公司发酵尾气处理系统
浙江海正药业股份有限公司发酵废气处理 EPC 总承包项目	Fermentation tail gas treatment system of Xinjiang Heyuan 2
EPC project of fermentation waste gas treatment of Zhejiang Hisun Pharmaceutical Co., Ltd	常州齐晖药业有限公司全场尾气焚烧处理装置(RTG
景德镇富祥生命科技股份有限公司生物医药项目	Changzhou Qihui Pharmaceutical Co., Ltd. complete system
Biomedical project of Jingdezhen Fushine life science and Technology Co., Ltd	石家庄市桥西污水处理厂一期升级改造工程电气控制
湖北一科制药有限公司废水处理项目	Shijiazhuang Qiaoxi sewage treatment plant phase I upgrad
Wastewater treatment project of Hubei Yike Pharmaceutical Co., Ltd	石家庄经济技术开发区供水公司良村开发区地表水厂
天科(荆州)制药有限公司废水处理项目	Shijiazhuang Economic and Technological Development Zone
Wastewater treatment project of Tianke (Jingzhou) Pharmaceutical Co., Ltd	
重庆天地药业有限责任公司乌杨医药产业园项目污水处理中心 T-EPC 项目	
T-EPC project of sewage treatment center of Wuyang Pharmaceutical Industrial Park project of Chongqing Tiandi Pharmaceutical Co., Ltd	
万洋衡水制药有限公司污水处理 T-EPC 项目	
Sewage treatment T-EPC project of wanyang Hengshui Pharmaceutical Co., Ltd	
河北一品制药股份有限公司氨酸钙车间废气治理项目	
Waste gas treatment project of calcium ammonia workshop of Hebei Yipin Pharmaceutical Co., Ltd	
河北一品制药股份有限公司 103 车间氯化氢废气吸收装置项目	
Hydrogen chloride waste gas absorption unit project of workshop 103 of Hebei Yipin Pharmaceutical Co., Ltd	
河北一品制药股份有限公司 VOCs 吸附回收及恶臭异味处理项目 EPC 总承包项目	
EPC project of VOCs adsorption recovery and odor treatment project of Hebei Yipin Pharmaceutical Co., Ltd	
河北一品制药股份有限公司 102 车间含氨废气治理项目	
Ammonia containing waste gas treatment project of workshop 102 of Hebei Yipin Pharmaceutical Co., Ltd	
齐鲁天和惠世(乐陵)制药有限公司——期项目污水处理 T-EPC 项目	
Qilu Tianhe Huishi (Leling) Pharmaceutical Co., Ltd. phase I sewage treatment T-EPC project	

#### 尔分公司绿色生物农兽药扶贫产业项目污水处理厂总承包项目

Inner Mongolia) Co., Ltd. green biological agricultural and veterinary medicine poverty alleviation industry

#### 医药产业园二期项目污水处理项目

eutical Leling Pharmaceutical Industrial Park Phase II project of Shandong Anshun Pharmaceutical Co., Ltd

#### 有限公司 10000 吨 / 日污水处理回用及雨污分流项目

and rainwater sewage diversion project of Shanxi Gaoyi iron and Steel Co., Ltd

#### ront Pharmaceutical Co., Ltd

#### 司原料药项目 RTO 废气净化处理系统 EPC 总承包项目

n and treatment system for API project of Cangzhou Branch of Beijing Front Pharmaceutical Co., Ltd

#### 司高端原料药及中间体项目污水处理站改扩建 EPC 总承包项目

ngzhou Branch high end API and intermediate project sewage treatment station reconstruction and expansion

Xinjiang Heyuan Zhengda Biochemical Co., Ltd

#### 处理装置(RTO+前后处理)全套系统 EPC 总承包项目

. complete system EPC project of tail gas incineration treatment plant (RTO + pre and post treatment)

#### 造工程电气控制系统项目

ant phase I upgrading project electrical control system project

#### |开发区地表水厂安装项目

Development Zone water supply company Liangcun Development Zone surface water plant installationproject

