

ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ  
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**天津市天大北洋化工设备有限公司**

Peiyang Chemical Equipment Co., Ltd.





# Company Overview

A. PCC Development

B. PCC Status

C. Certificates and Honor





**PCC is a state-own company**



# PCC Development

PCC was founded in 1998 and was restructured into “Peiyang Chemical Equipment Co., Ltd.” in 2003. Relying on the advantages of traditional chemical engineering specialty of Tianjin University and combining with the industry accumulation of enterprises for decades, PCC has explored and practiced the integration of production, teaching and research, and achieved rich results. PCC has more than 30 patents and expertise. In the fields of separation engineering, distillation technology, high efficiency packing and tray, it has been in the top rank in China, creating remarkable social and economic benefits.



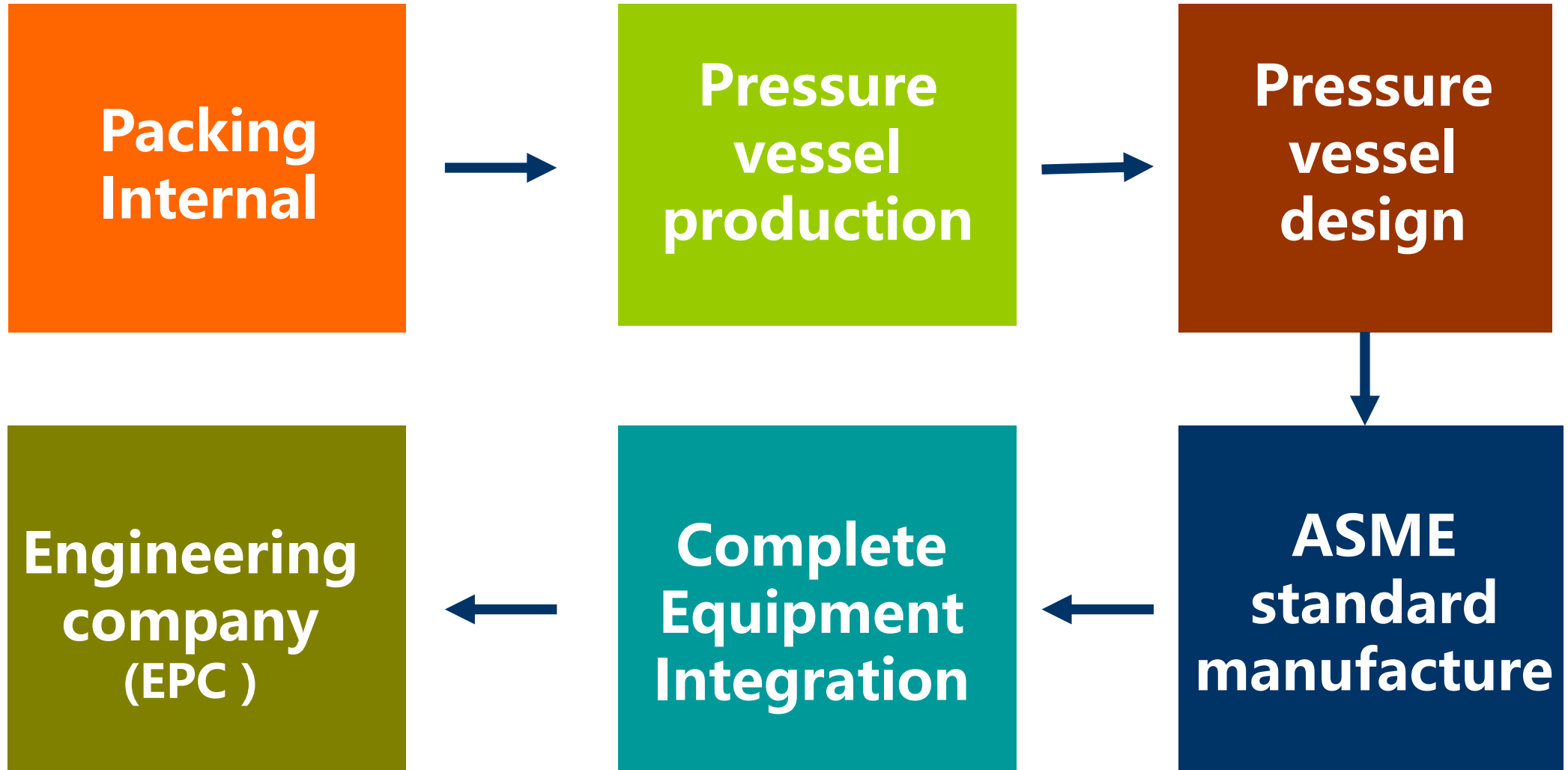




# PCC Production Base



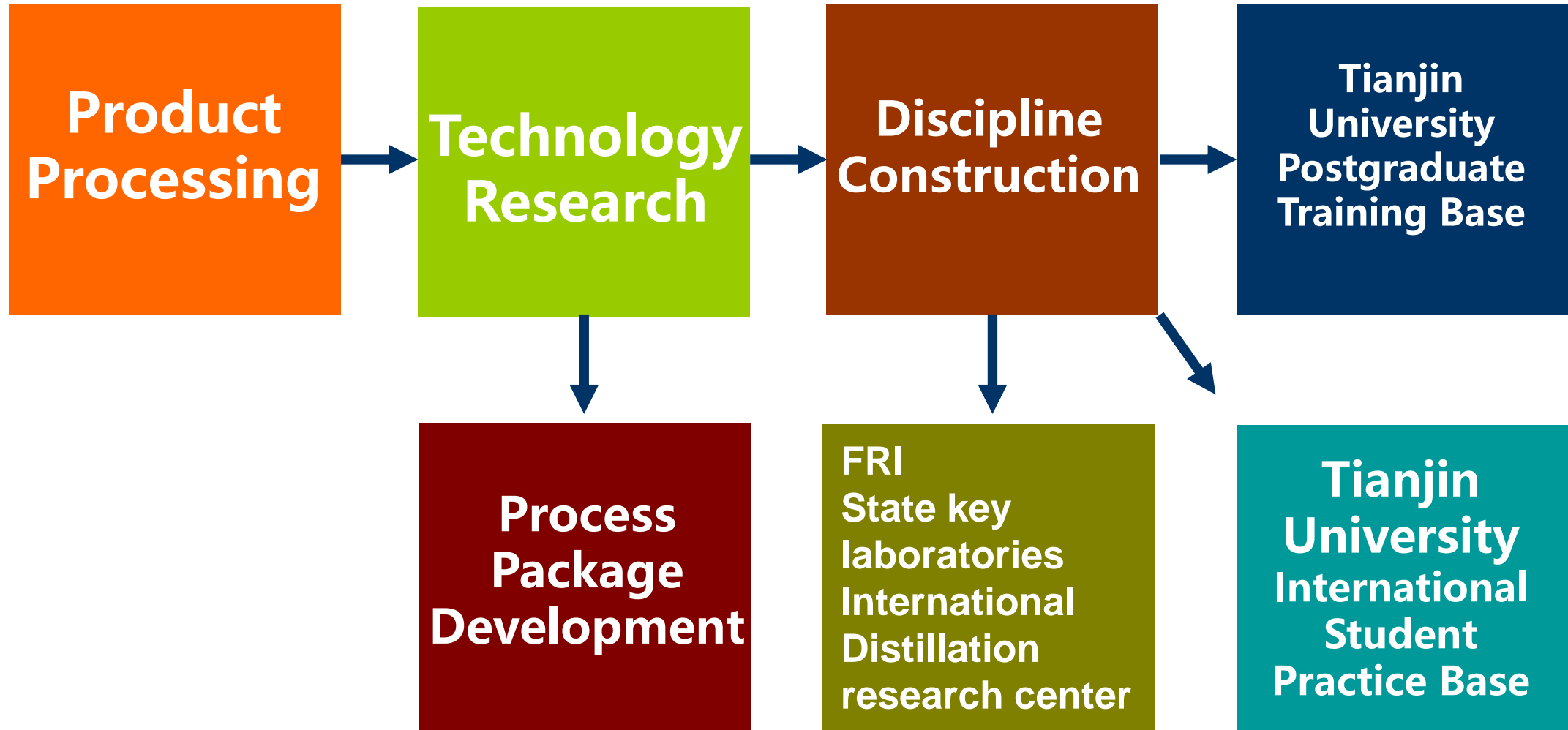
# PCC Products Structure Development







# PCC Technology Development



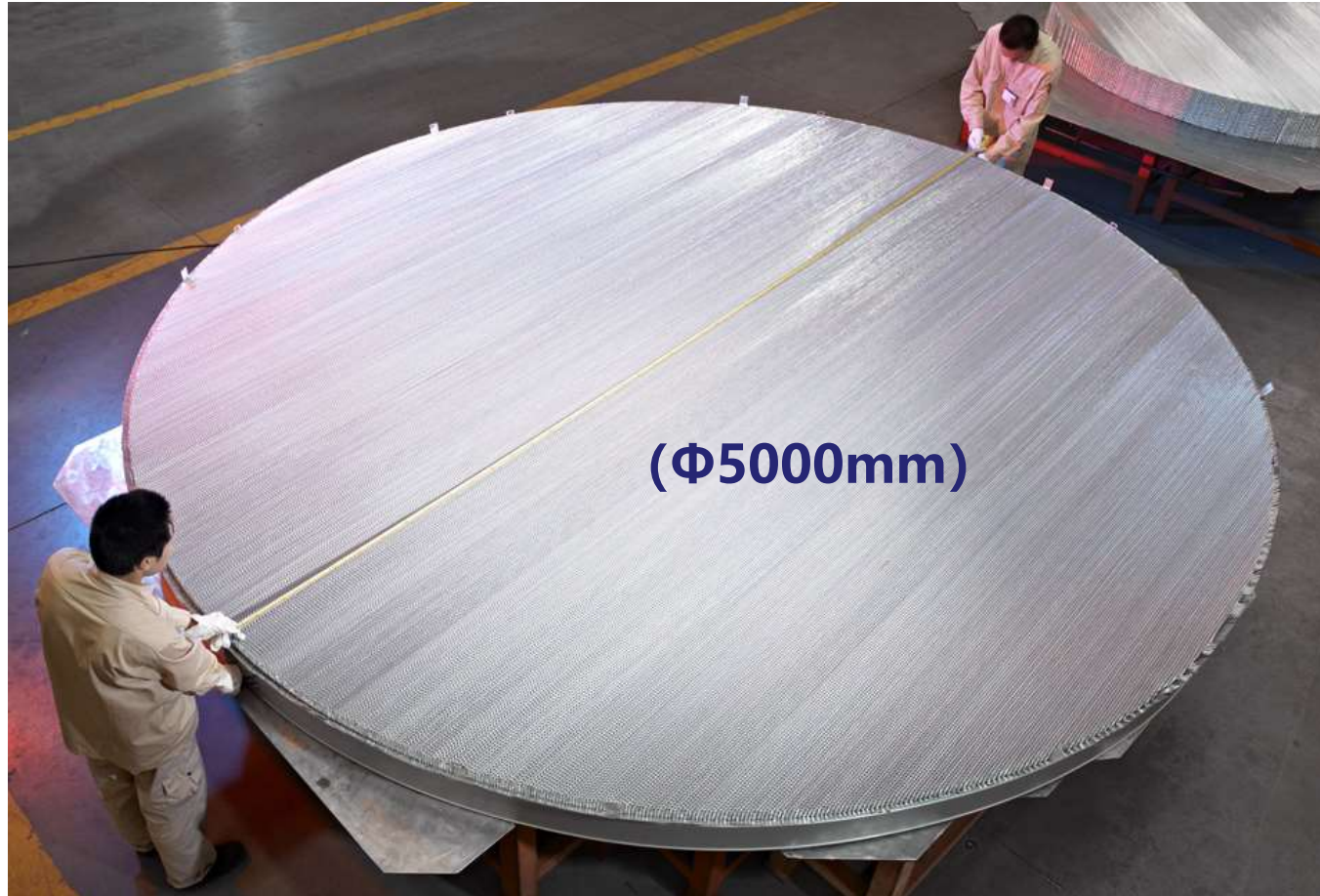
# PCC Status



**The largest packing workshop in the world**



# PCC Status



**The biggest diameter (mono) structure packing**



# PCC Status



**Column Internal Workshop**



# PCC Status



**Internal-Production site**



# PCC Status



**Column-Production site**

# PCC Status



**Distributor hydraulic testing**



**CNC Machine Processing**



# PCC Status



NC turret high speed punch press  
Used for SS material punching

# PCC Status



**Tube type heat exchanger**



# PCC Status



**CNC bending machine**



# PCC Status



**CNC Laser Cutting Machine**



# PCC Status



**PCC Remote Control Center**



# PCC Status



**High Level of Precision  
Measuring Instrument**



**Handheld Spectrum material  
measuring instrument**





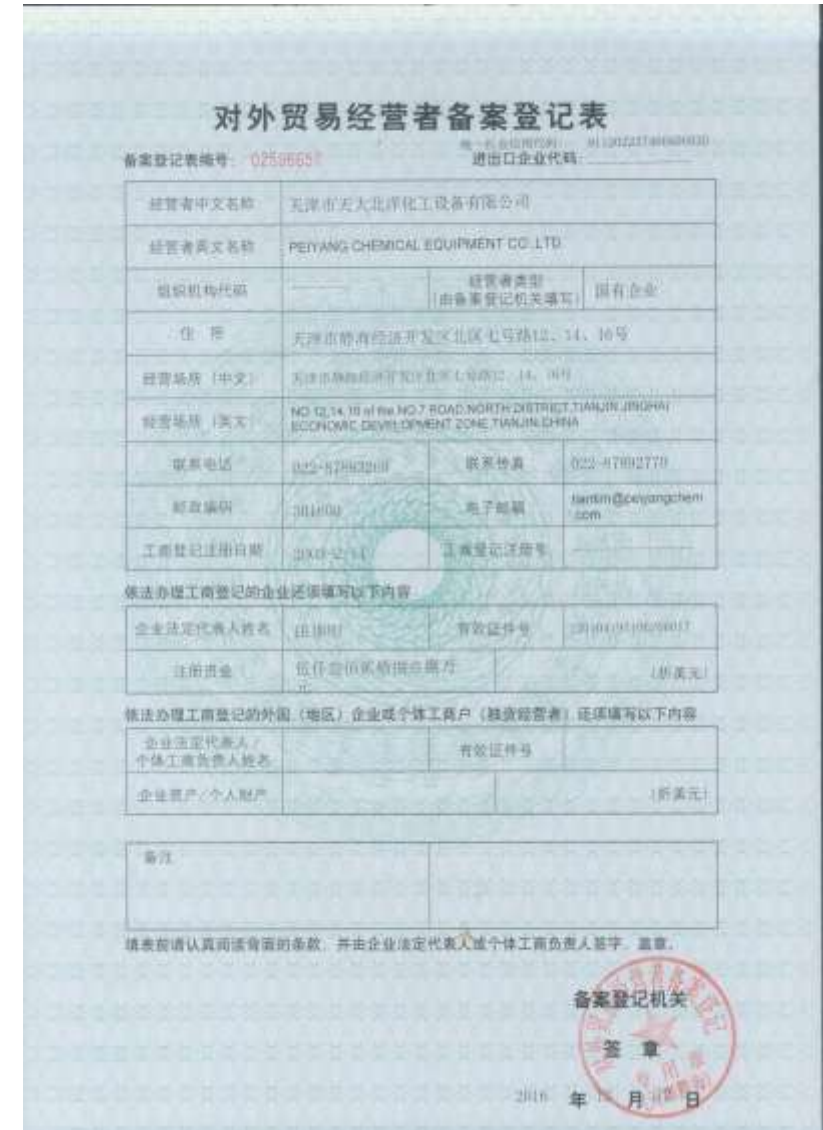
# PCC Status



The largest liquid distributor hydraulic experimental platform in China



# Certificates and honor







# Certificates and honor





# Certificates and honor

## National Science and Technology Progress Award :

It is issued by the state to commend technical and scientific workers who have made outstanding contributions to the motherland and the people. It is one of the top national science and technology awards. This award represents that the contribution made by Tianjin University and PCC in the field of chemical technology is highly affirmed by the government.

PCC President Tian Huaming won the national science and Technology Progress Award



# Certificates and honor



FRI is the world's most authoritative distillation mass transfer third-party research and testing institutions.

His members are all over the world and almost all well-known chemical companies or equipment manufacturers are his members. We are familiar with Shell, Mobil, Basf, Linde and other well-known companies.

In 2012, PCC became a member of FRI and launched a number of technical cooperation with it.

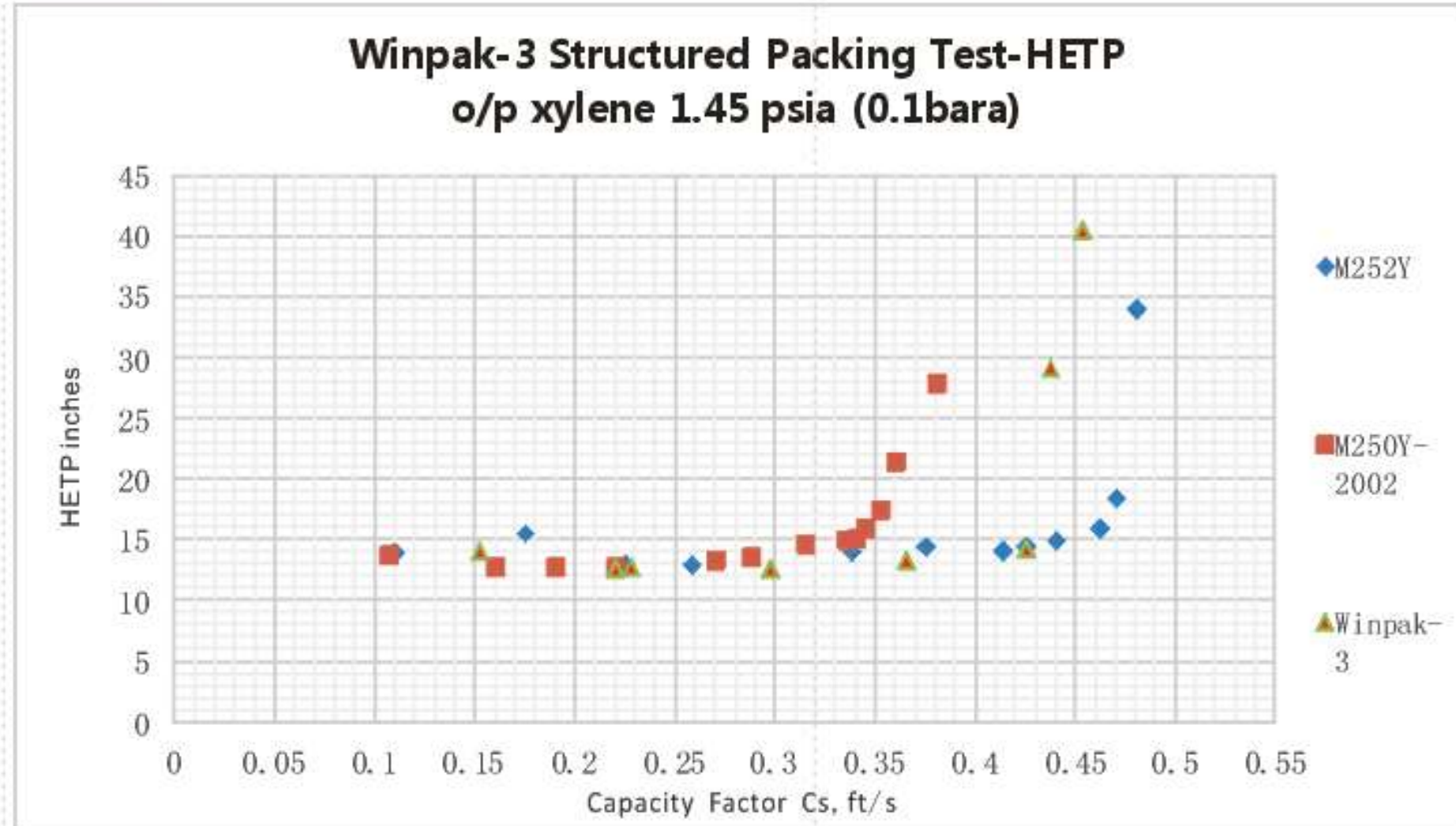




# Certificates and honor



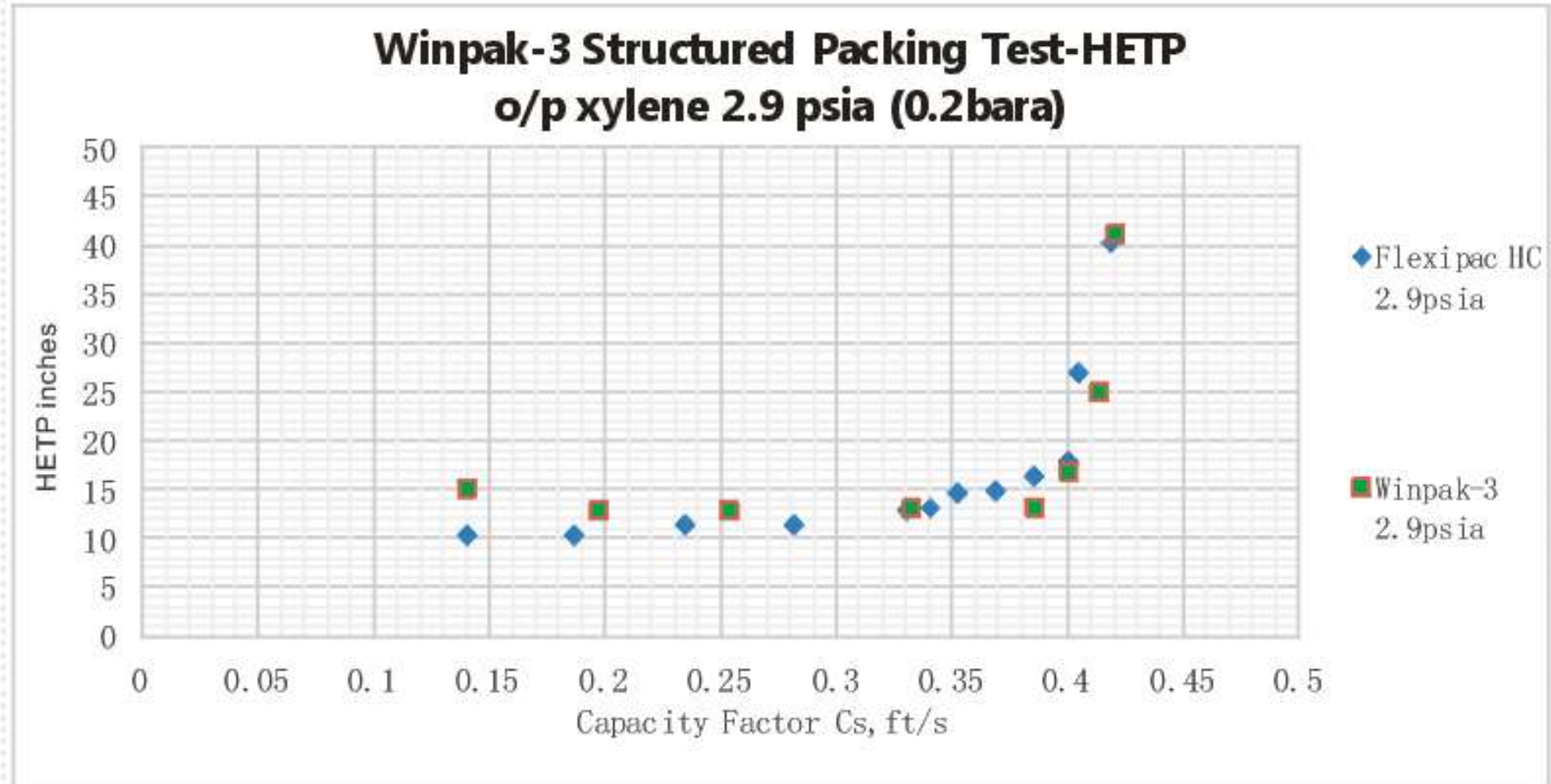
## Winpak Test Data by FRI:



# Certificates and honor



Winpak Test Data by FRI:







# Certificates and honor



# PCC



## CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the ASME Certification Mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with the ASME Certification Mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

**Peiyang Chemical Equipment Co., Ltd.**  
No.16 of the No.7 Road,  
North District, Tianjin Jinghai Economic Development Zone,  
Tianjin, 301617  
People's Republic of China

SCOPE:

Manufacture of pressure vessels at the above location and field sites controlled by the above location (This authorization does not cover impregnated graphite)

AUTHORIZED: January 11, 2020

EXPIRES: January 11, 2023

CERTIFICATE NUMBER: 54250

Board Chair, Conformity Assessment

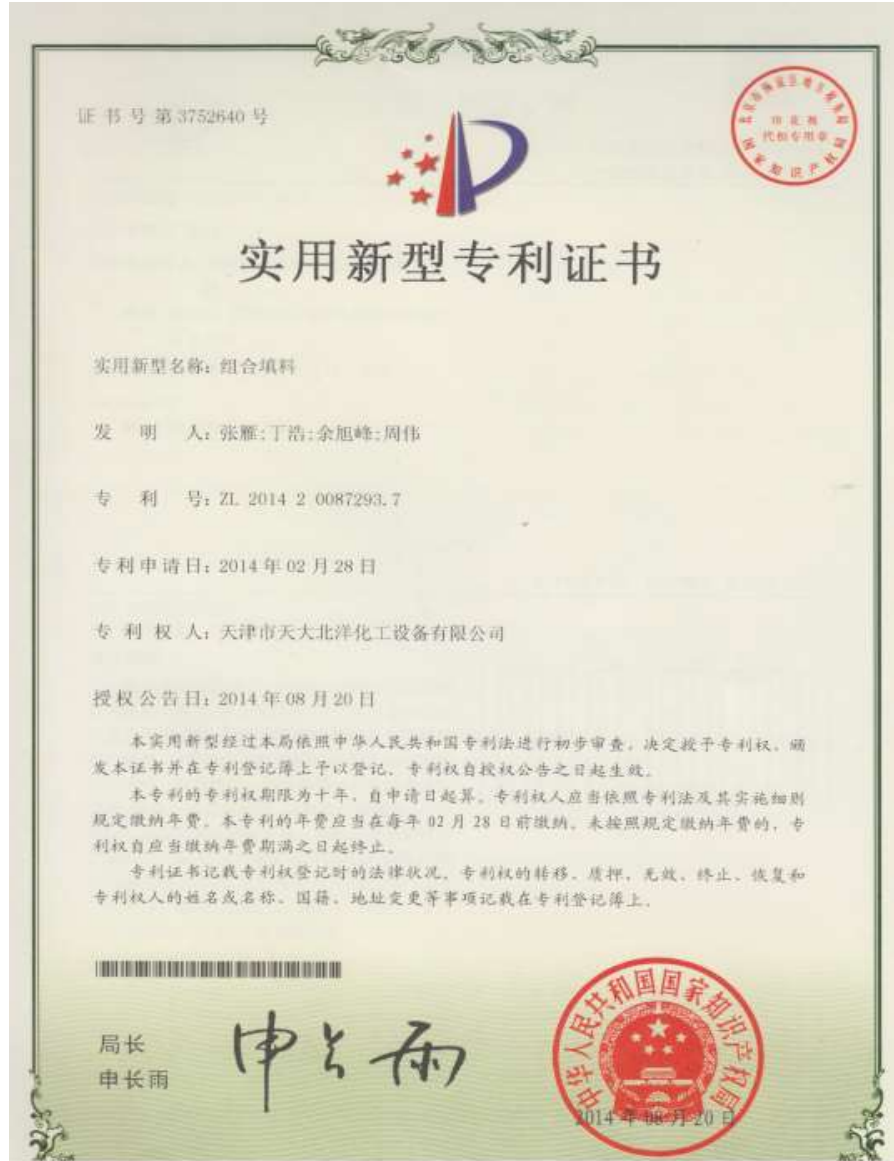
Managing Director, Conformity Assessment

The American Society of Mechanical Engineers

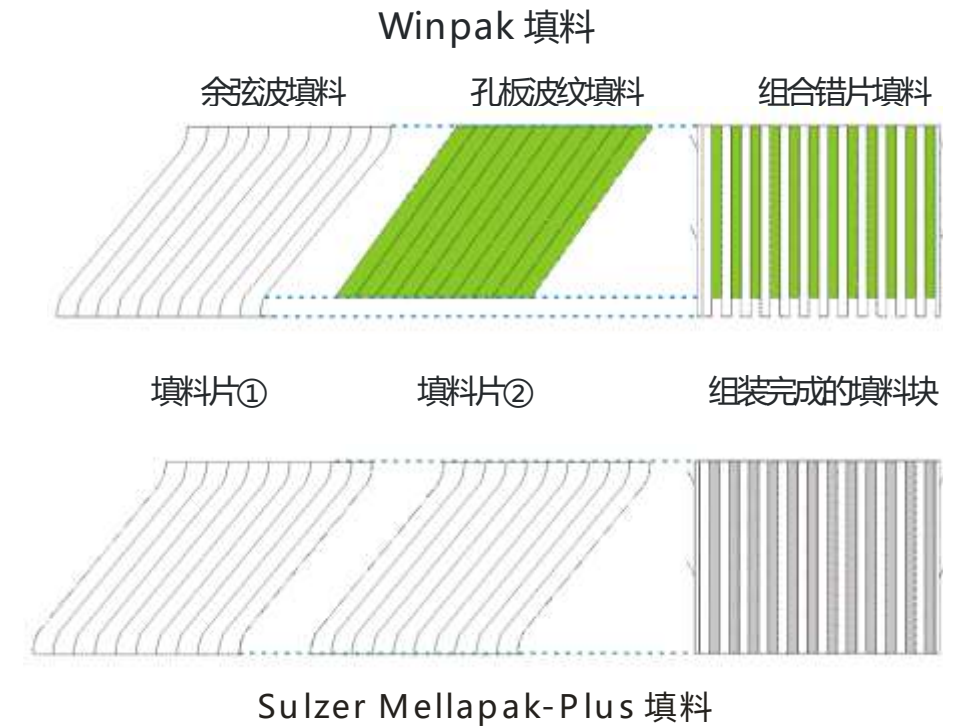




# Certificates and honor



## Winpak填料和Sulzer Mellapak-Plus 填料的区别



## High-performance Winpak packing





# Certificates and honor

**中华人民共和国**  
**特种设备制造许可证**  
Manufacture License of Special Equipment  
People's Republic of China  
(压力容器)

编号: TS2212055-2023

单位名称: 天津市天大北洋化工设备有限公司  
单位地址: 天津市静海经济开发区北区七号路12、14、16号

经审查, 获准从事下列压力容器的制造:

级别	品种范围	备注
D1	第一类压力容器	—————
D2	第二类低、中压容器	—————

审批机关: 天津市市场监督管理委员会  
发证机关:   
有效期至: 2023年5月26日  
发证日期: 2019年5月31日

国家市场监督管理总局制

**中华人民共和国**  
**特种设备设计许可证**  
Design License of Special Equipment  
People's Republic of China  
(压力容器)

编号: TS1212060-2022

单位名称: 天津市天大北洋化工设备有限公司  
注册地址: 天津市静海经济开发区北区七号路12、14、16号  
单位地址: 天津市静海经济开发区北区七号路12、14、16号

经审查, 获准从事下列压力容器的设计:

级别	品种范围	备注
D1	第一类压力容器	
D2	第二类压力容器	

审批机关: 天津市市场监督管理委员会  
发证机关:   
有效期至: 2022年10月23日  
发证日期: 2019年11月15日

国家市场监督管理总局制

Pressure vessel manufacture certificates



# Certificates and honor



ISO9001:2008



质量管理体系认证证书



国家科学进步奖证书



压力容器资质



展览会银奖



高新技术企业证书



中石化物资资源市场成员证书



中国石油天然气集团公司一级供应网络证书



空分填料奖状



炼油奖状



克拉玛依石化公司优秀供应商



# [2] PCC

# Main Achievements

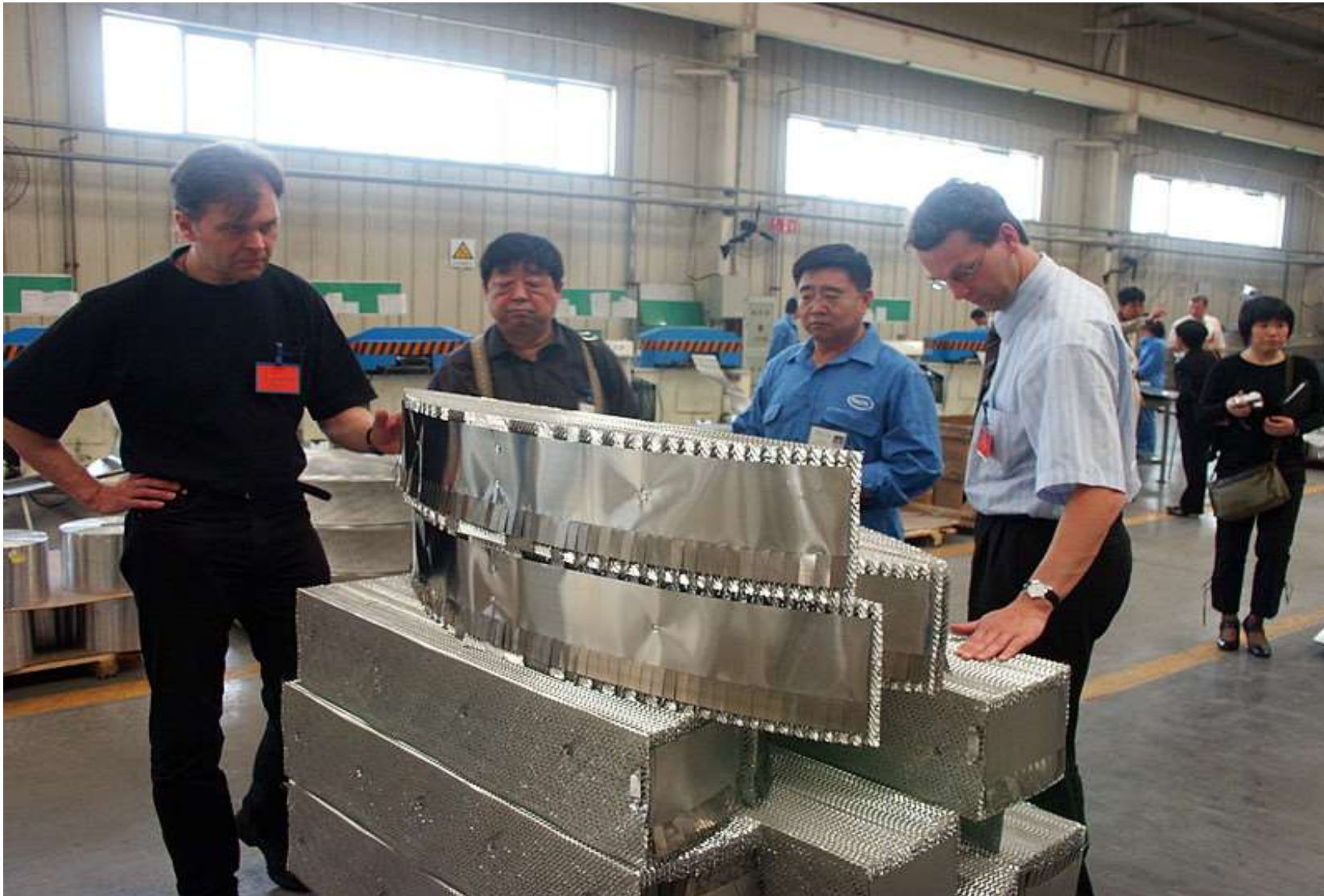
# Main Achievements



**Dow Chemical Project (USA)**

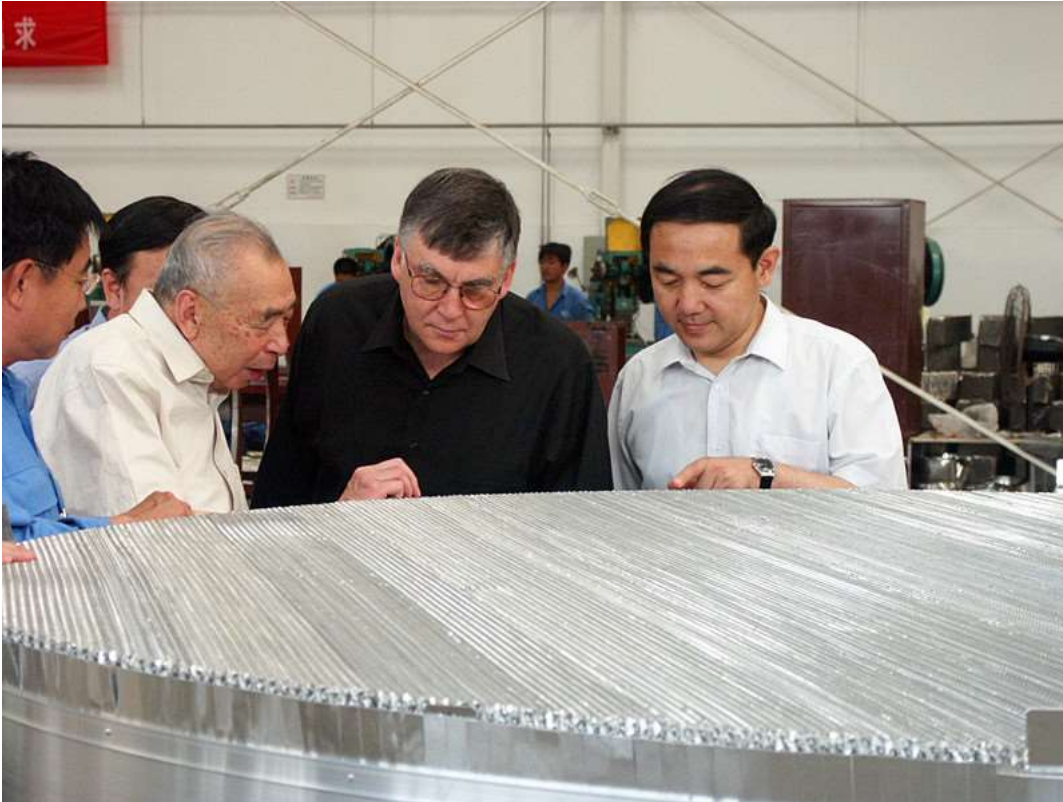


# Main Achievements



**Linde Air-separation Project (Germany)**

# Main Achievements



**Foreign Experts Visiting & Inspecting**



# Main Achievements



**Sultan Trinity Energy Visiting**

# Main Achievements



**Hangzhou Hangyang Group Project**



# Main Achievements



**SINOPEC - Beijing Yanshan Co., Ltd. Project**

# Main Achievements



Xinjiang refinery project  
 **$\Phi 1600/\Phi 1000\text{mm}$**



# Main Achievements



**Xinjiang refinery project  $\Phi 800 \times 30000$ mm**

# Main Achievements



150,000T/Y styrene and 600,000T/Y Propylene project



# Main Achievements



Bontoux SAS (France) Project  
**Φ 1500 / Φ 710 mm**

# Main Achievements



**Mitsui Chemical Project, Chiba Prefecture  
Installation Site, Japan**



# Main Achievements



**Tail gas containing acid recovery project for Maadaniyah iron and steel plant (Daman, Saudi Arabia)**

# Main Achievements



Henan Kaiyuan Air  
Separation Group Co., Ltd.  
Jilin Xinda Project  
Air cooling tower with  
 $\Phi 2800\text{mm}$



# Main Achievements



SIAD MI (Italy) Project

# Main Achievements



Pyridine project  
Shandong Hongda Biological Technology Co., Ltd.  
Benzene distillation column with  $\phi 2200 \times 68000$ mm



# Main Achievements



Chongqing Hua Ge biochemistry Co., Ltd.

3 set distillation column with  $\Phi 1400 \times 29200$ , Vertical distillation kettle with  $\Phi 3500 \times 6250$ , condenser with  $\Phi 1200 \times 2600$

# Main Achievements



**Shangdong Kunda Pyridine refining project**  
**Φ1300\*48000mm**





# Main Achievements



Organic tail gas recovery project  
(Qilu Anti Biotics Pharmaceutical Co., Ltd.)

# Main Achievements



**The Reaction Device (Coil Heating)**  
CE Certification (Export to Italy)



# Main Achievements



China Oil HBP Group  
Oil and gas water sand separator  $\Phi 3000 \times \delta 14000 \times L12$

# Main Achievements



**Reabsorption water coolers( $\Phi 1400 \times 9500$ )**  
SINOPEC million tons ethylene project



# Main Achievements



**Reactor/reboiler**  
**Nanjing Red Sun Glyphosate project**

# Main Achievements



HCP Aviation fuel  
filter project

Ball Corporation



# Main Achievements



- ◆ 1000,000T/Y Ethylene and supporting projects (SINOPEC Tianjinshihua)
- ◆ The first (Φ10m) ethylene project PO/SM unit in China (SINOPEC Zhenhai Refining & Chemical Company)



# Main Achievements



- ◆ MTO Unit project  
(Shangdong YangMeiHengTong Chemical Co., Ltd.)
- ◆ 300,000T/Y Transformation of PVC raw material route &  
200,000T/Y Hydrogen peroxide propylene oxide cleaner production  
(Shangdong YangMeiHengTong Chemical Co., Ltd.)
- ◆ C4 Separation, semi water gas desulfurization tower, coking benzene tower  
(Shangdong ASiDe Chemical Co., Ltd.)



# Main Achievements



◆ **600,000T/Y Methanol Unit (The biggest single set in China)**

**The products up to American AA Class standard**

**(Yanzhou Coal YuLin Energy Chemical Co., Ltd.)**

◆ **600,000T/Y Methanol distillation system**

**(Henan Coal Group Hebi Coal and Electricity Chemical Industry Co., Ltd.)**



# Main Achievements



◆ 8000,000T/Y Refinery projects  
(SINOPEC Shanghai GaoQiao Petrochemical Co., Ltd.)



# Main Achievements



◆ KPC Refinery Unit in the Kyrgyz Republic



# Main Achievements



**PCC is a pioneer in the application of high efficient structured packing in the production of polysilicon. PCC is also the largest single set of polysilicon purifier unit designer and column manufacturer.**

- ◆ **2\*6000T/Y Polysilicon project (TBEA Xinjiang Silicon Industry Co.,Ltd)**
- ◆ **5000T/Y Polysilicon distillation project (SINOSICO)**





# Main Achievements



**East Hope ( 3000,000T/Y)**



**DUNAN Polysilicon project**



**Yichang CSG Polysilicon Project**



**TBEA Polysilicon project**



**SINOSICO Polysilicon unit**



**YONGXIANG Polysilicon unit**



# Main Achievements



- ◆ 80000 m<sup>3</sup>/h single set air separation unit (Air Investment Fangchenggang)
- ◆ 4000,000T/Y Air separation of Coal-to-Oil Project  
6\*101,500Nm<sup>3</sup>/h Air separation unit ( Oxygen purity 99.6%, Nitrogen purity 99.999%). It is the biggest single set in Asia. (SHENHUA GROUP)



# Main Achievements



**The largest domestic carbon dioxide capture and purification system designed and built by PCC.**

**The tail gas recovery unit of coal-to-methanol(200,000T/Y coke grade carbon dioxide)**



# Partial clients







## Modular operating unit (Skid equipment)

A. Solution

B. Skid equipment

# Skid equipment

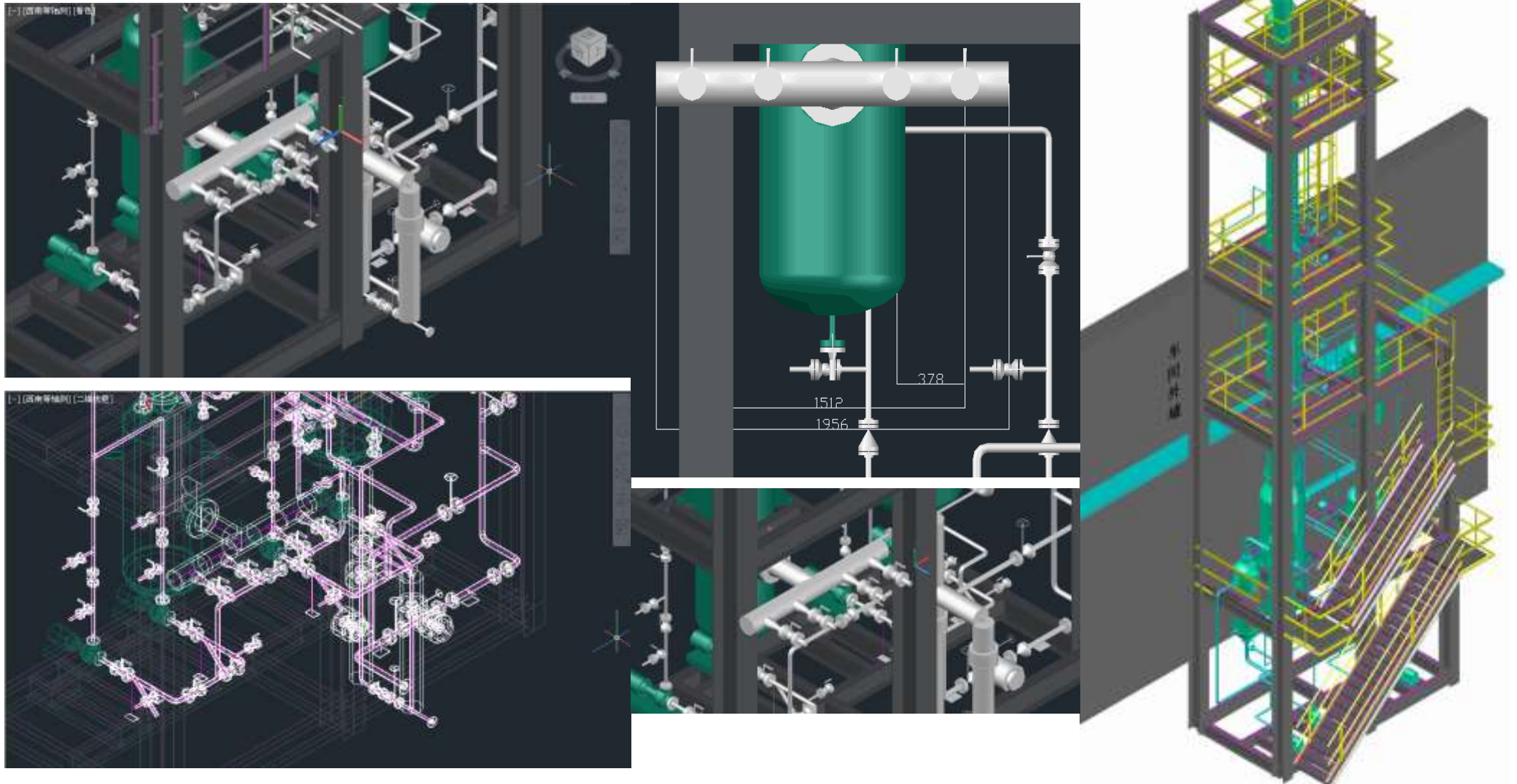
## Sketch of Skid equipment





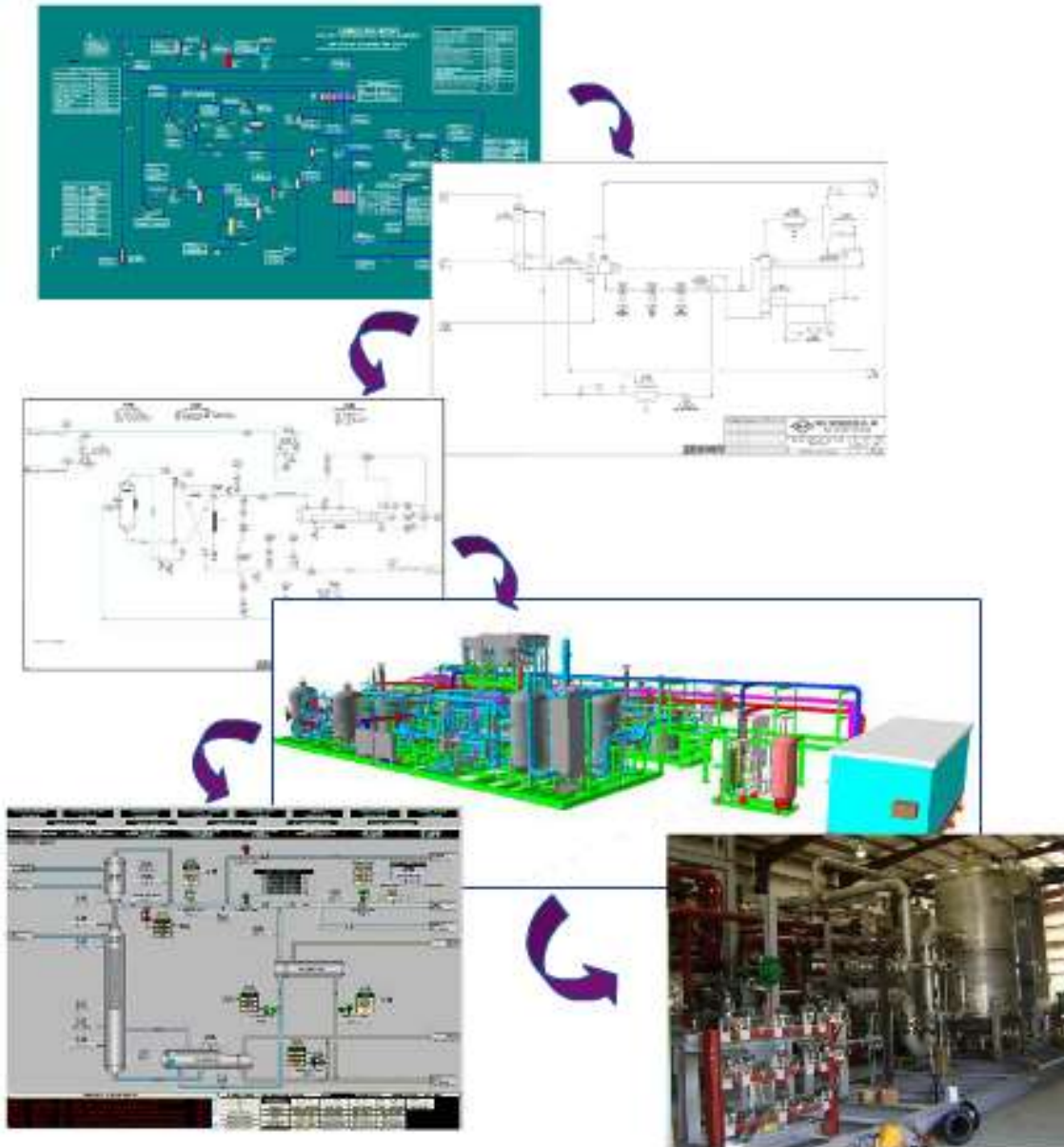
# Skid equipment

## Engineering design-3D model design (VOC Recovery system)



# Skid equipment

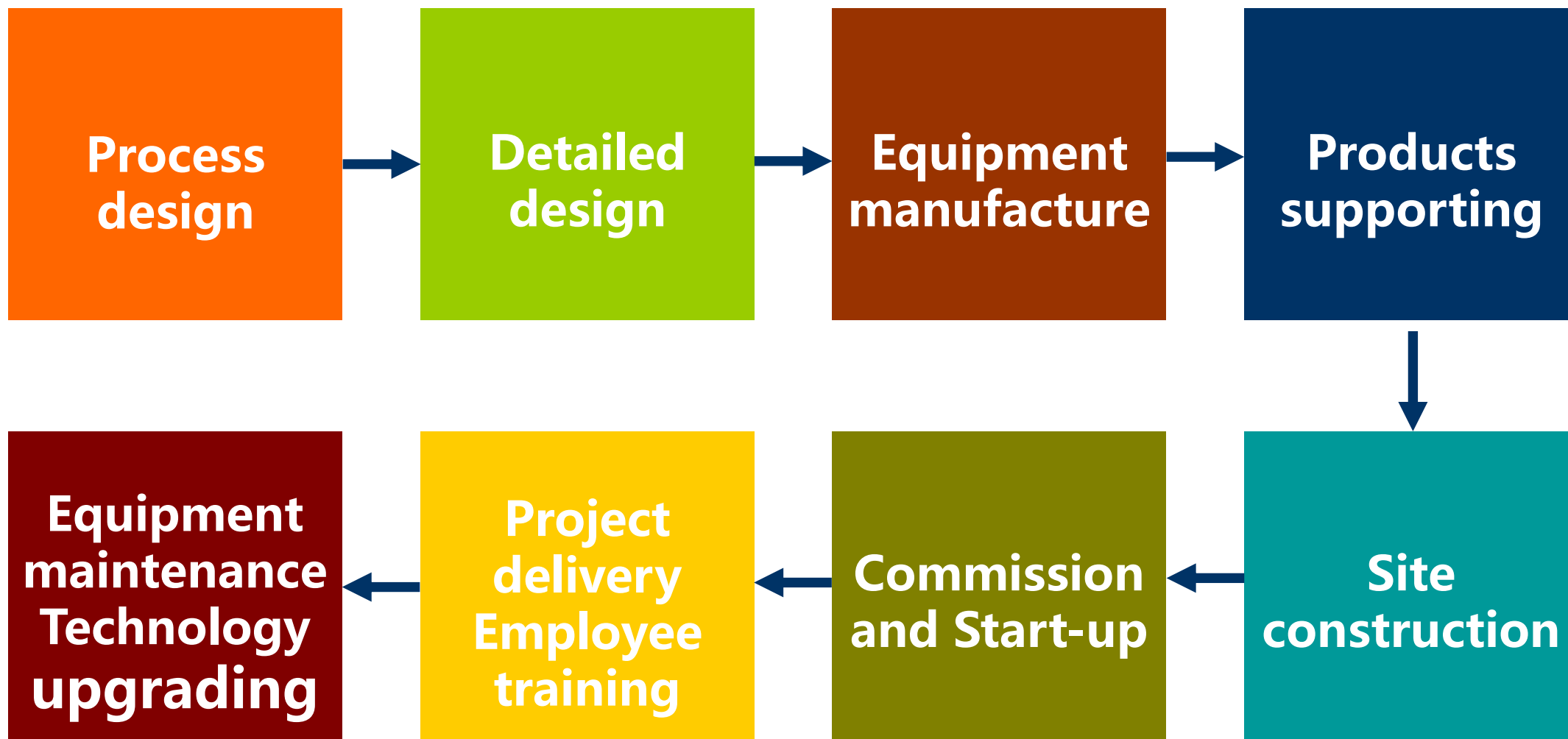
## Overall services



- Process simulation PDF
- Intelligent P&ID
- Equipment selection specification
- 3D model design
- Single equipment manufacture and purchasing
- Module manufacture and assemble
- FAT
- On-site installation guidance and supervision
- Production / maintenance training
- On-site commissioning & trial operation
- After-sale service (maintenance/operation)



# Skid equipment



The working procedure of complete plant

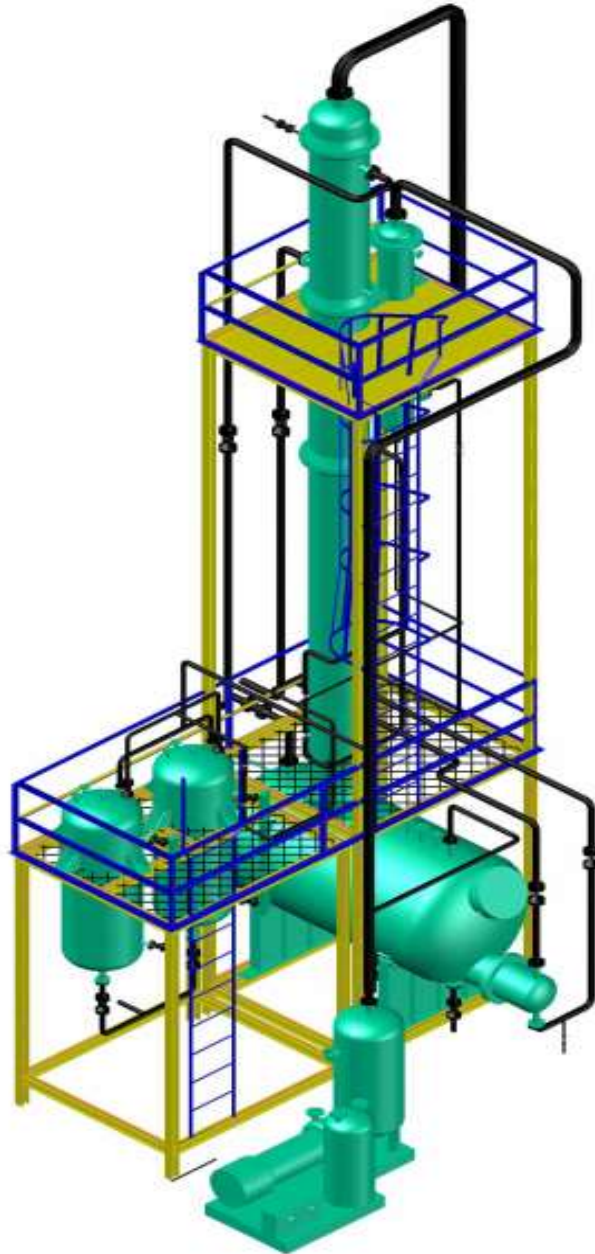
# Skid equipment

## Skid equipment installation site



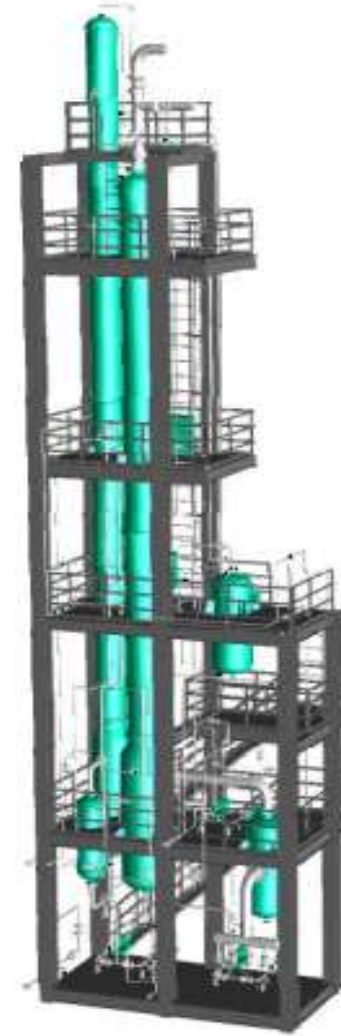


# Skid equipment



**Malaysian oil-water separating plant  
(Batch distillation system)**

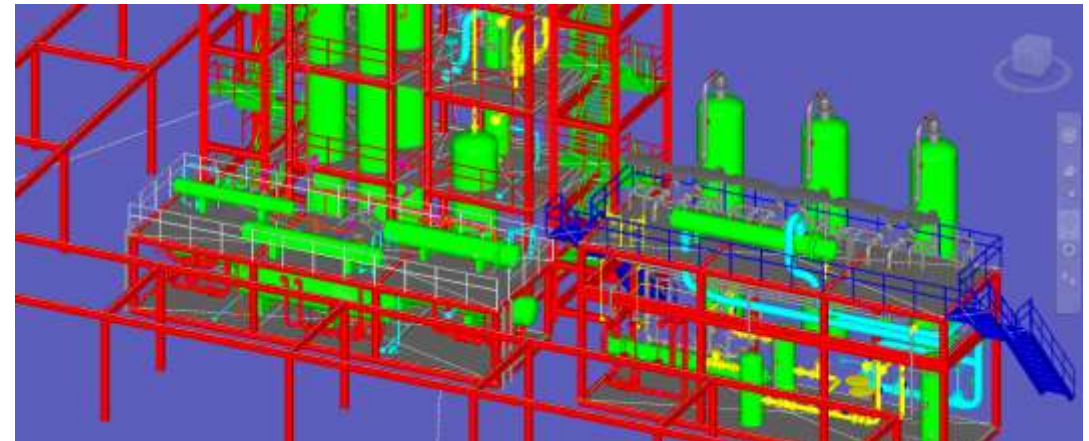
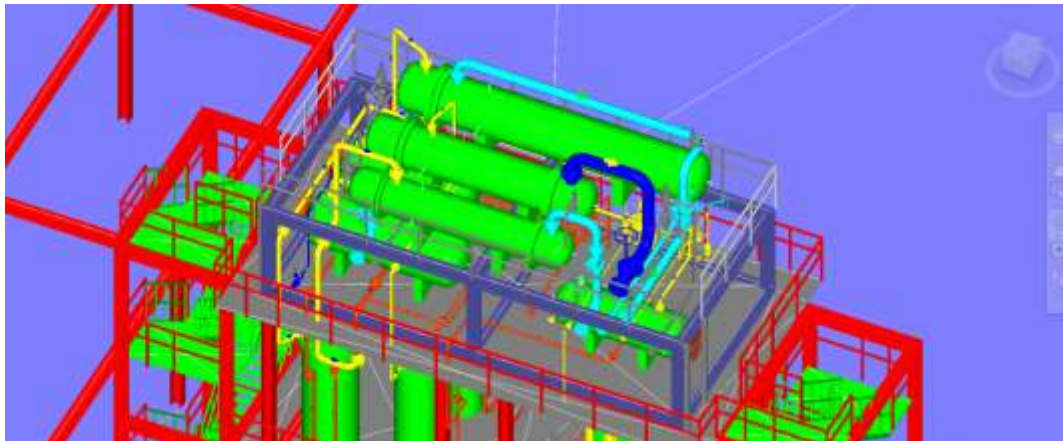
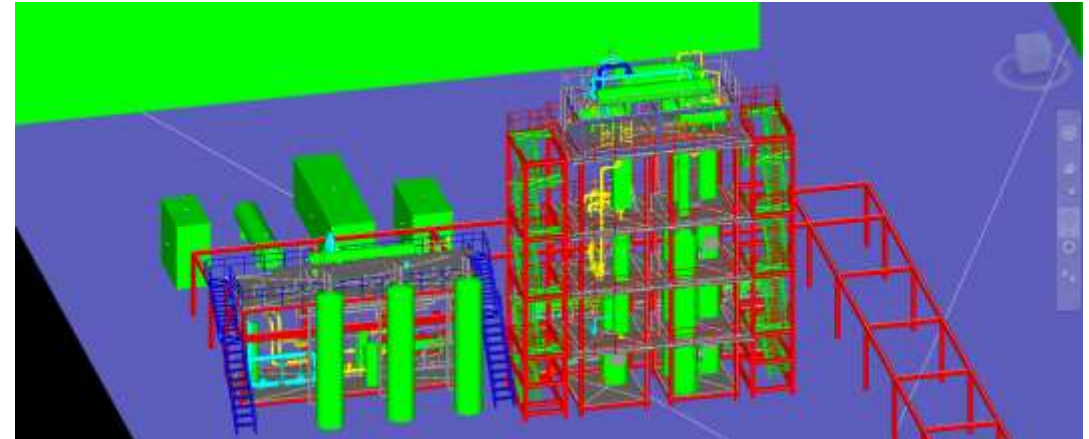
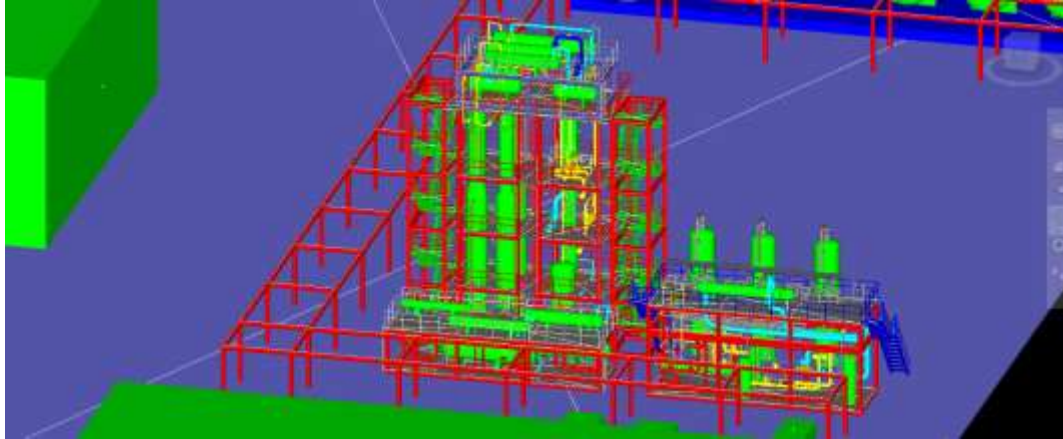
# Skid equipment



**Acetone solvent recovery plant  
(VOC Recovery system)  
(Qilu Antibiotics Pharmaceutical Co., Ltd.)**



# Skid equipment



**Nigeria  
12MMSCFD LPG Extraction project**

# Skid equipment



**100,000T/Y Methanol recovery project  
(Pressure coupled double effect alcohol  
distillation tower project)  
(Netherlands DSM)**





## **“The Belt and Road” and the countries along the route Market Exploitation (African Project)**



# PCC Africa Project Promotion Site







**Nigerian Petroleum Resources Agency Visiting (DPR Visit)**



**Governor of EDO State of Nigeria Visited Tianjin University**





**Signing Ceremony among Tianjin University, PCC  
and Governor of EDO**



**During the China-Africa Summit in 2018, PCC signed contracts with the Governor of EDO the Financing Bank.**





**PCC introduced skid equipment to the Governor of EDO, Nigeria**



**PCC introduced the Nigerian project to the head of Nigeria's National Petroleum Ministry.**





**Gas & Oil RI Visiting (Swaziland, South Africa)**





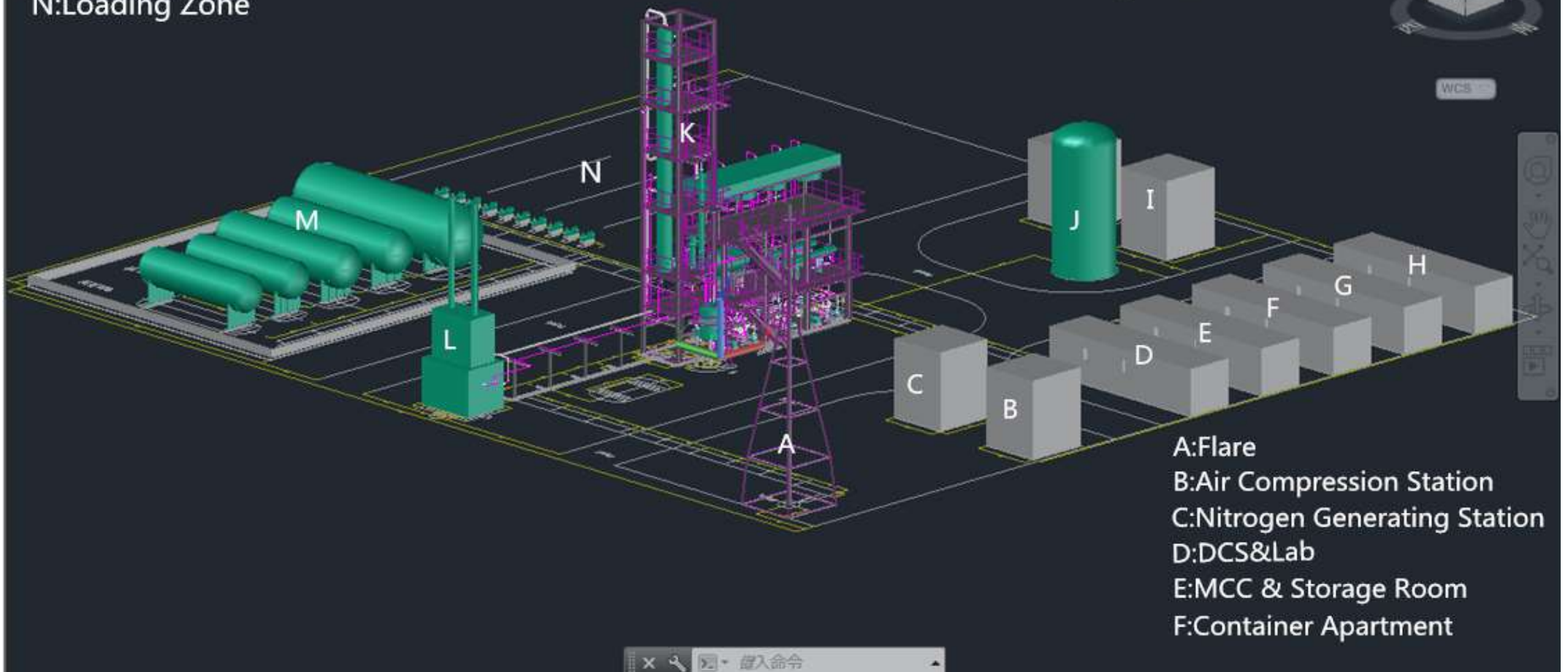
**6000BPD Modular Refinery in EDO State, Nigeria**



[自定义视图] 真实

K:Unit Area  
L:Furnace  
M:Tank Farm  
N:Loading Zone

G:Container Apartment  
H:Storage Room  
I:Power Generator  
J:Oily Water Tank



A:Flare  
B:Air Compression Station  
C:Nitrogen Generating Station  
D:DCS&Lab  
E:MCC & Storage Room  
F:Container Apartment

# Nigeria Project Production Pictures





# Nigeria Project Production Pictures





ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ

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# Pictures of Nigeria project site





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Телефоны: +7 (495) 7774788, 7489626, (925) 5007155, 54, 65 Эл. почта: [info@tisys.ru](mailto:info@tisys.ru) [info@tisys.kz](mailto:info@tisys.kz) [info@tisys.by](mailto:info@tisys.by)

*Thank You!*

РСС-БАНК