

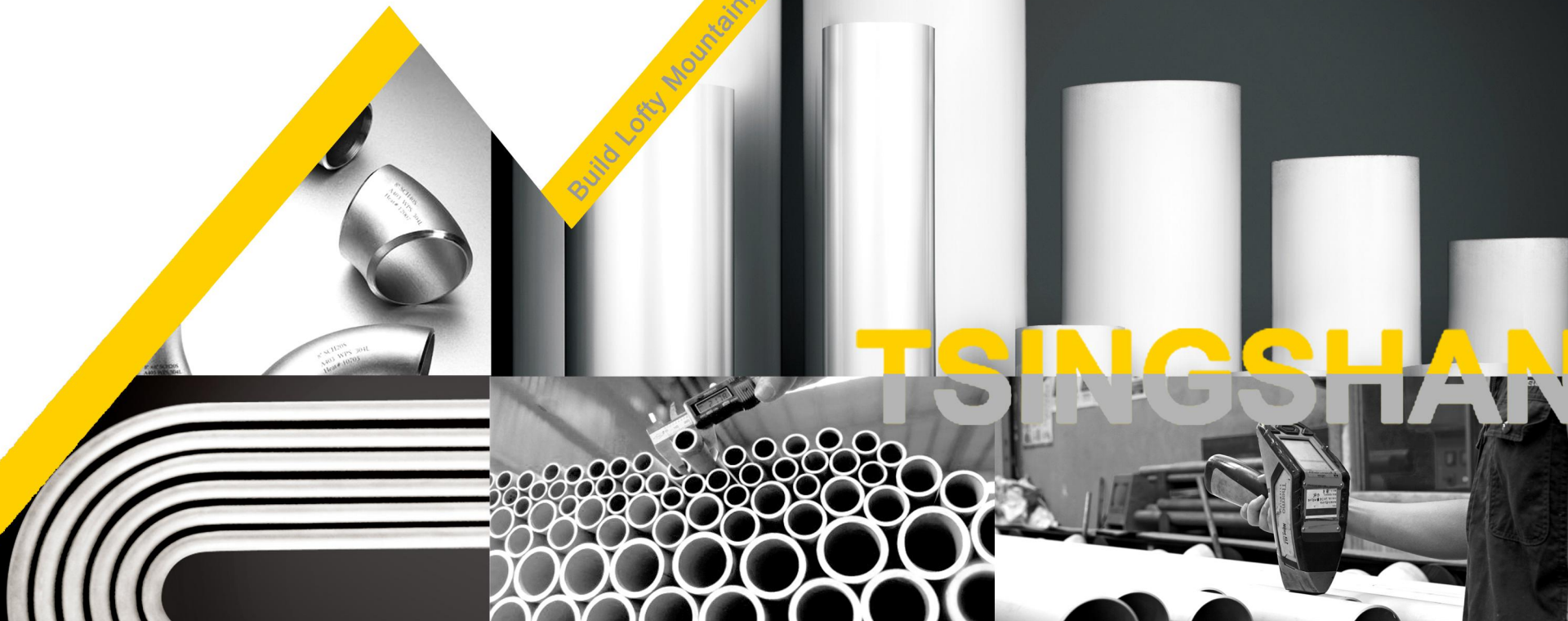


# 浙江青山钢管有限公司

Zhejiang Tsingshan Steel Pipe Co., Ltd.

Build Lofty Mountain, Manufacture Lifetime Stainless Steel

TSINGSHAN





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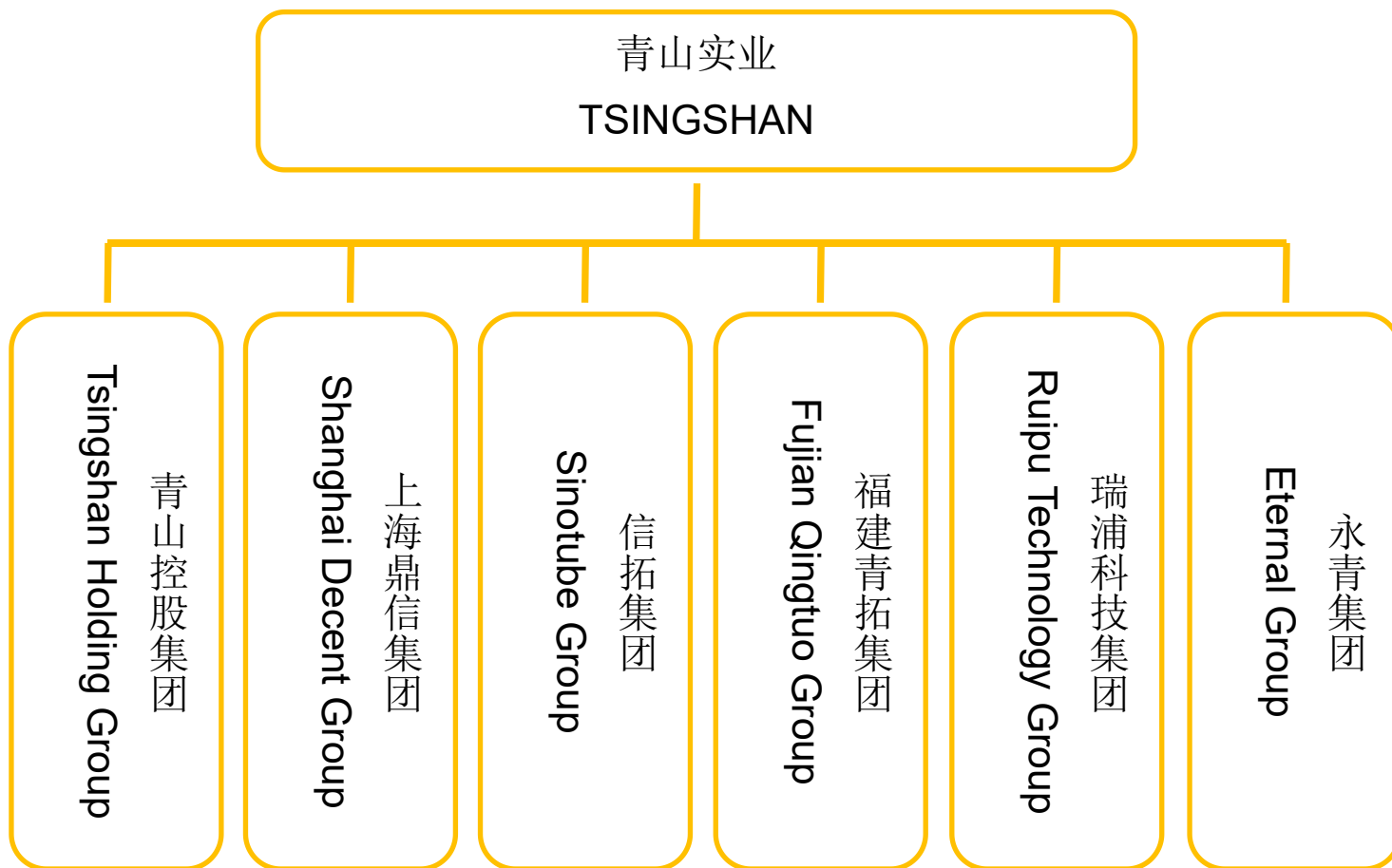
## Group Profile

## 集团概况



# 青山集团组织架构

## Organization Chart of Tsingshan Group



# 集团简介 —— 总体数据

## Group Profile — Total Data

2019年世界500强第361名  
Rank No. 361 in 2019 Fortune Global 500

2018年不锈钢总产值  
Stainless Steel total turnover in 2018 33.5 billion USD

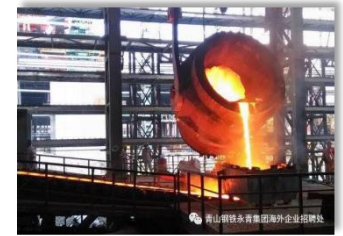
2018年不锈钢粗钢产量全球占比  
Global ratio of Stainless Steel output in 2018 17.82%

2018年不锈钢总产量  
Stainless Steel total output in 2018 9.29 million tons

2018年不锈钢长材产量  
Stainless Steel long products output in 2018 1.4 million tons

2020年总产能  
Target capacity in 2020 10 million

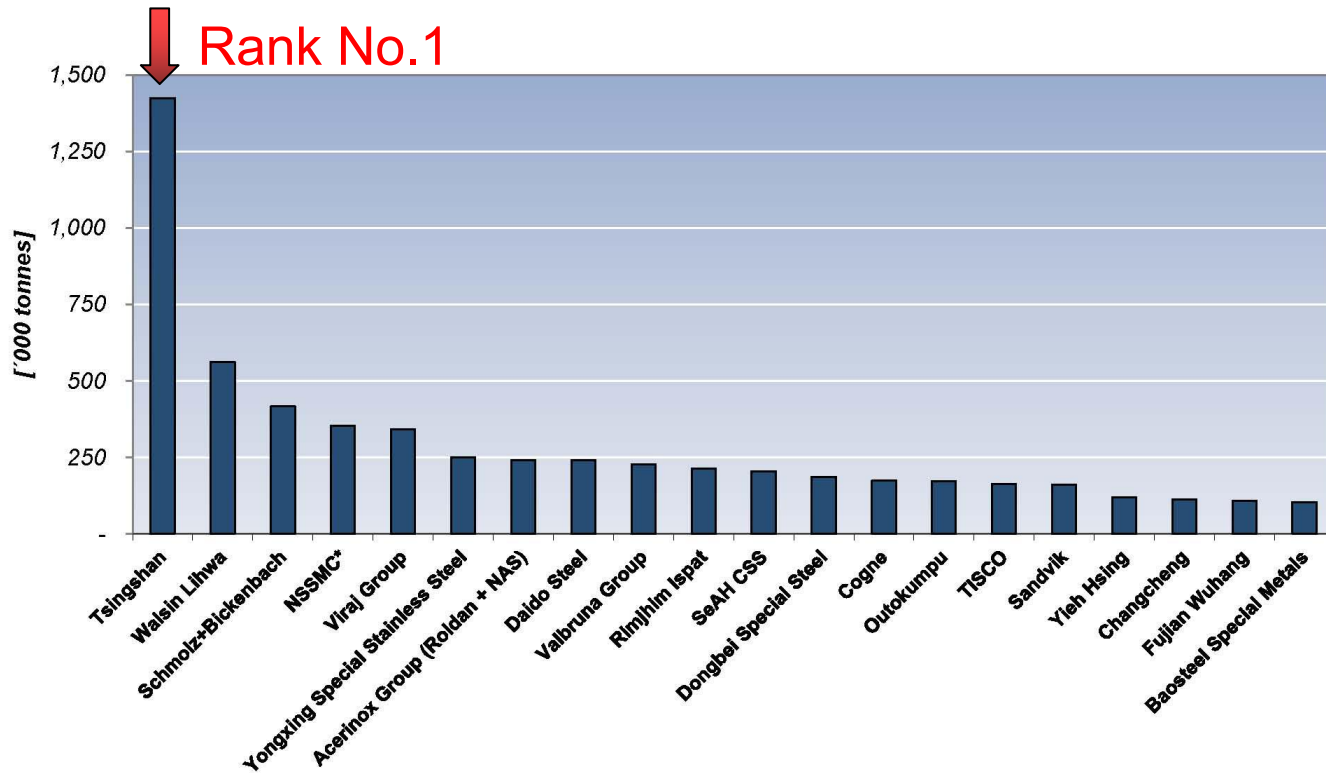
总员工数  
Total Staff 59,500 (29,300 foreign employees)



# 全球不锈钢长材制造商排名第一

## No.1 Global SS Long Product Manufacturer

'Top 20' Global Stainless Steel Long Product Producers 2017 (estimate)  
 Based on billet equivalent 2017年不锈钢长材全球前20位排名



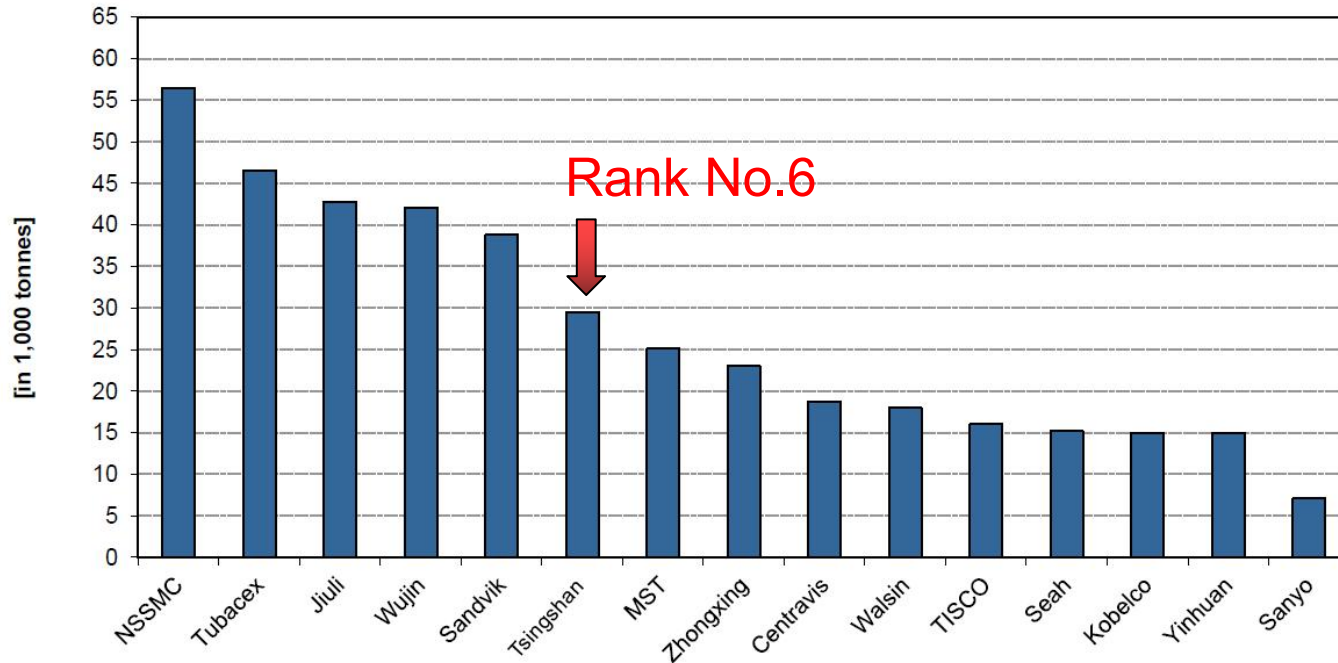
\* incl. 13CrOCTG

# 在全球无缝管制造企业名列前茅

## Leading Global Seamless Tube & Pipe Manufacturer

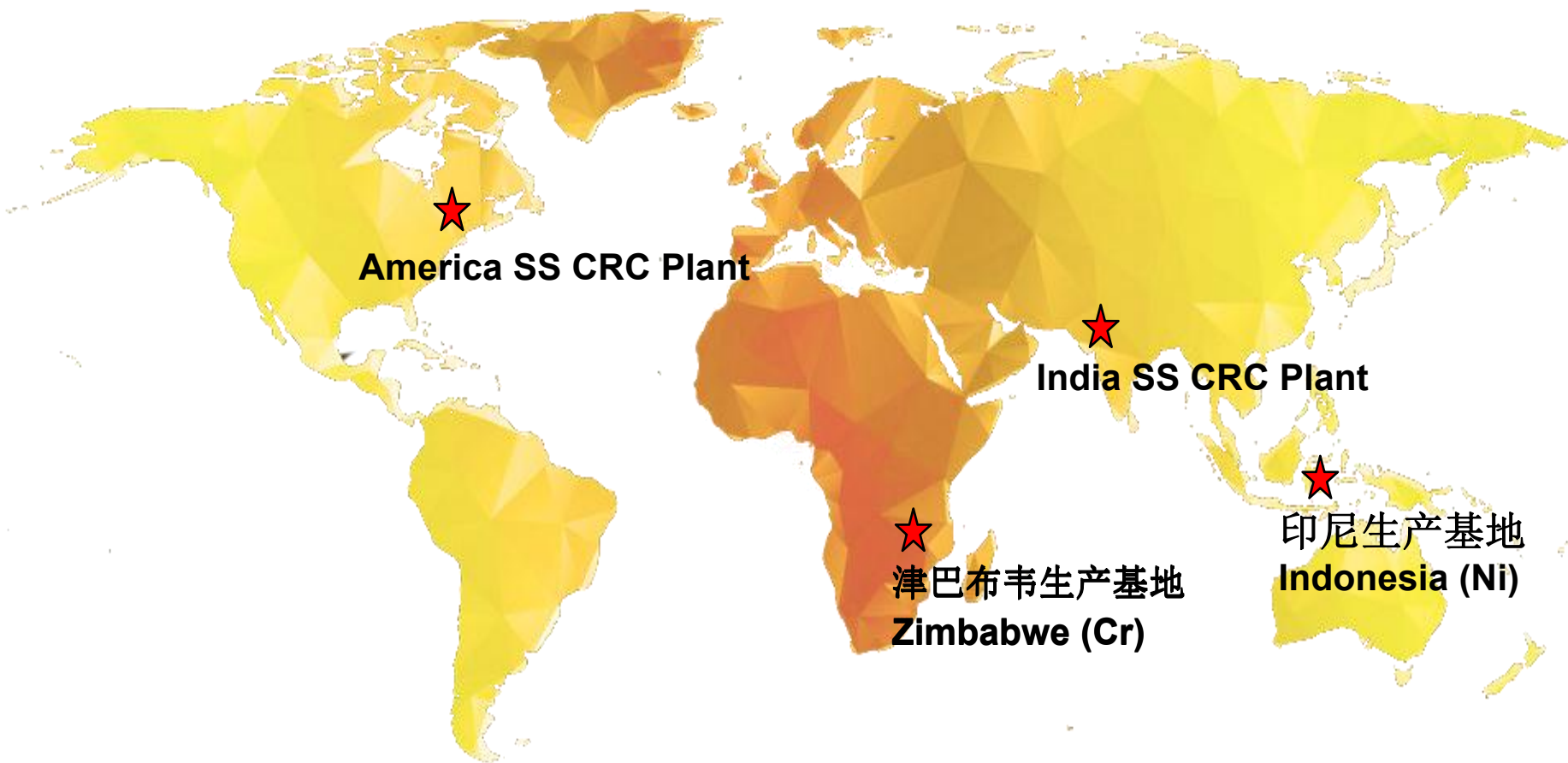
Most Chinese mills increased tonnage significantly in 2017.

2017年全球不锈钢及镍铁合金无缝管生产制造企业前15位排名  
*Top 15 Producers of STS and Nickel Alloy Seamless Tube & Pipe (2017)*



## 集团概况 — 海外生产基地

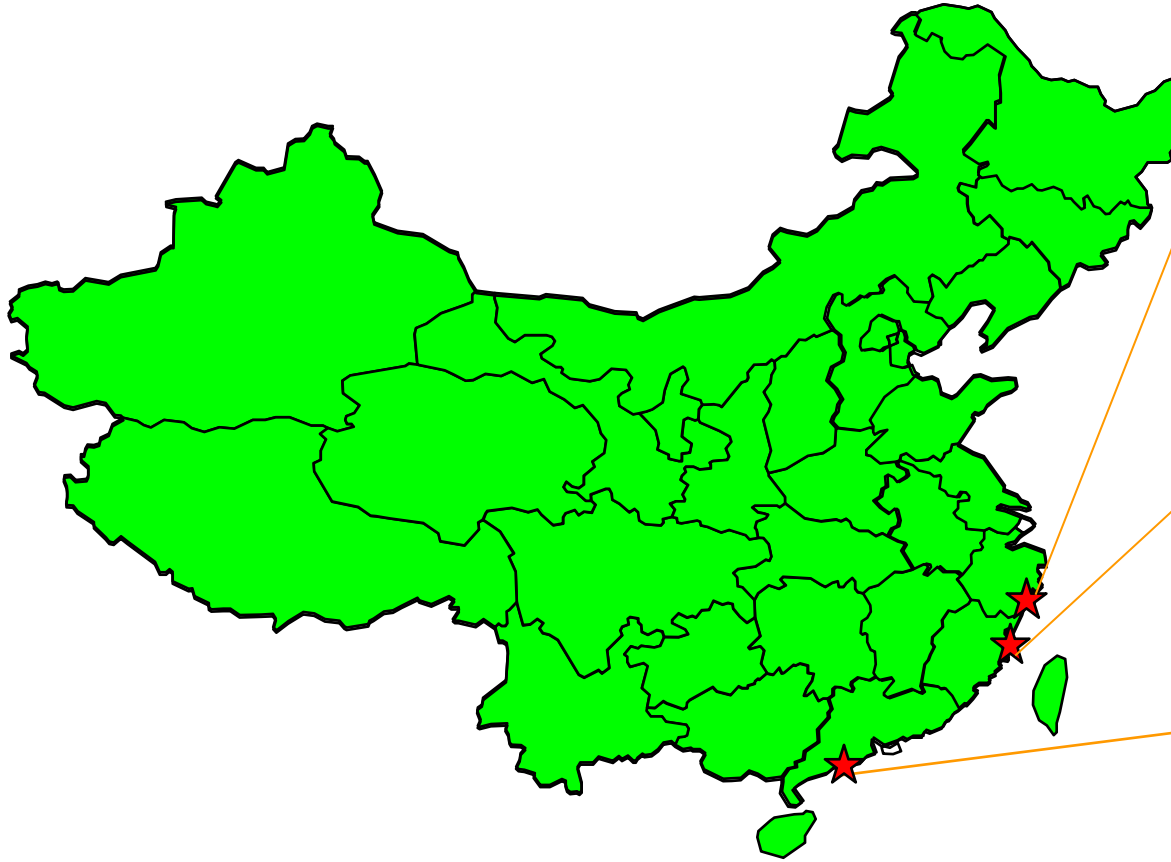
### Group Profile - Production Bases Abroad





# 集团概况 — 国内生产基地

## Group Profile - Domestic Production Bases



### 浙江（丽水） Zhejiang (Lishui)

不锈钢无缝管，焊管及管件  
棒材，线材

**Stainless steel seamless/welded  
pipes & tubes, fittings.  
Bars and wire rods.**

### 福建（福安） Fujian (Fuan)

镍铁不锈钢一体化工厂  
板材

**Integrated Stainless steel plant  
producing stainless steel from  
nickel Ore.  
Slabs and coil.**

### 广东阳江 Guangdong Yangjiang

镍铁不锈钢一体化工厂，板材

**Integrated Stainless steel plant  
producing stainless steel from nickel  
Ore, slabs.**

# 青山优势

## Tsingshan Strength

- I. 从上游原材料到下游成品的完整不锈钢产业链 P9-P10  
Complete stainless steel industry chain from upstream to downstream
- II. 无缝管/焊管/管件产品一站式服务 P14-P16  
One-stop solution manufacturer with SS seamless/welded tubes/pipes and fittings
- III. 先进的生产设备和检验设备 P19-P25  
Advanced production and test facilities
- IV. 众多终端用户认证，如美孚、英国石油、马石油等 P26-P29  
Approved by end users such as Exxon, BP and Petronas etc.
- V. 在相关领域有成熟的项目供货业绩 P30-P32  
Highly experienced supplier for projects in various fields

# 完整的产业链

## Complete Industry Chain

从上游至下游

From upstream to downstream



镍矿, 铬矿  
Laterite Ore  
Chrome Mine



铬铁和镍铁  
FeCr & FeNi



电炉冶炼  
Smelting in  
electric furnace



镍铁红送AOD炉  
Liquid FeNi  
charged into AOD



LF 精炼  
LF refining



不锈钢无缝管、焊管、管件  
SS seamless/welded  
pipes/tubes/fittings



冷加工  
Cold work



圆棒, 板卷  
Round bars  
coils



热轧  
Hot rolling



连铸  
Continuous  
casting

# 完整的产业链

## Complete Industry Chain

从上游至下游

From upstream to downstream

### 品质优良

### High Quality

- I. 47,040 hectare Laterite Ore with high reserve in Sulawesi Island, Indonesia;
- II. over 5,000 hectares Chrome Mine in Zimbabwe
- III. High quality of raw material:  
(FeNi + FeCr) VS (Recycled scraps)  
Tsingshan VS other manufacturers

### 节约成本

### Cost Saving

- I. Initiated RKEF process for nickle smelting;
- II. Liquid FeNi directly charging into AOD furnace;
- III. Production of high output with high efficiency and energy saving.

### 交货迅速

### Quick Delivery

- I. Set up own ocean fleets to open logistics routes for own mining business;
- II. Built 50,000 DWT dock to realize direct shipment between oversea mines and domestic production bases.



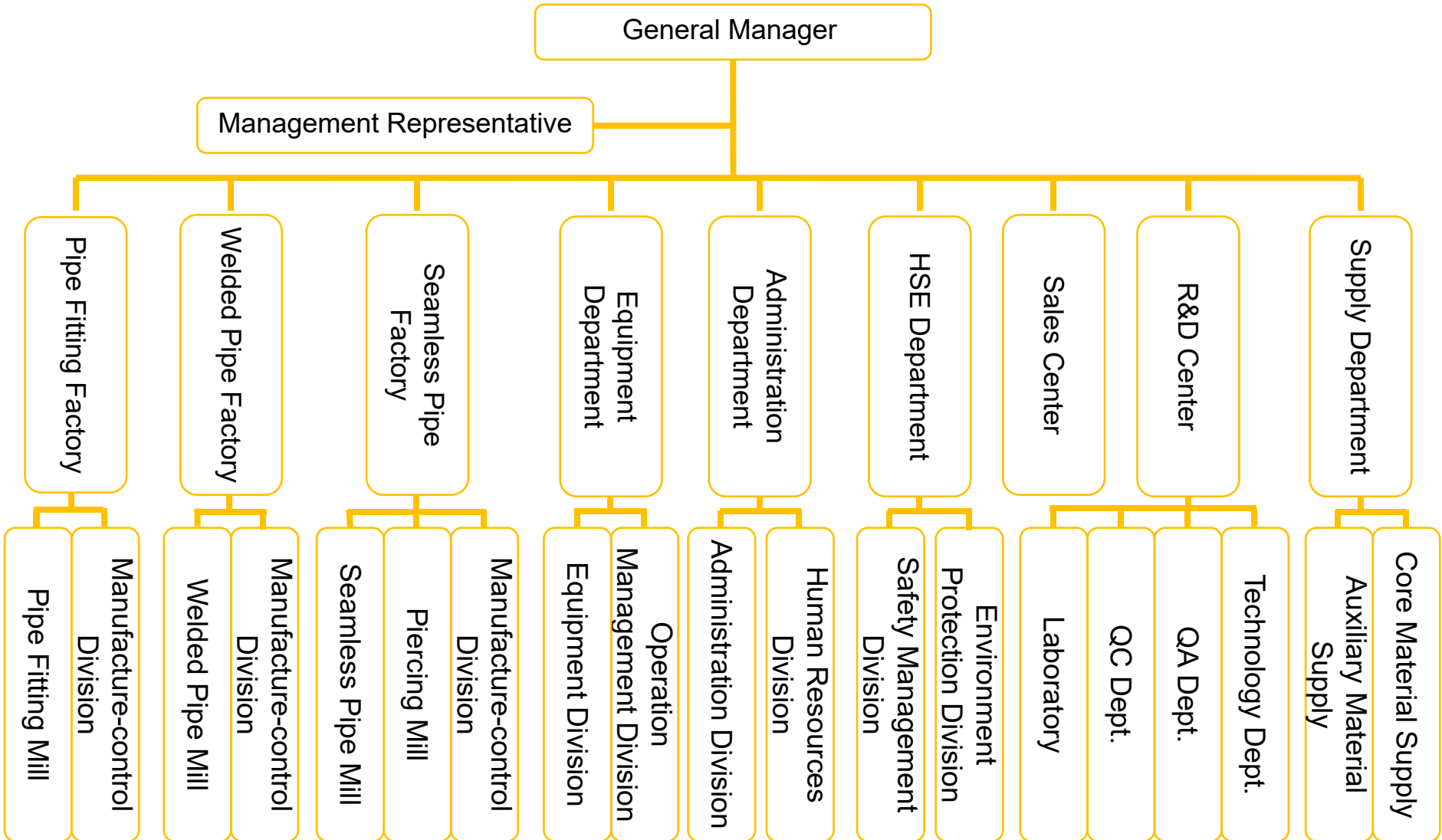
## Tsingshan Overview

# 公司简介

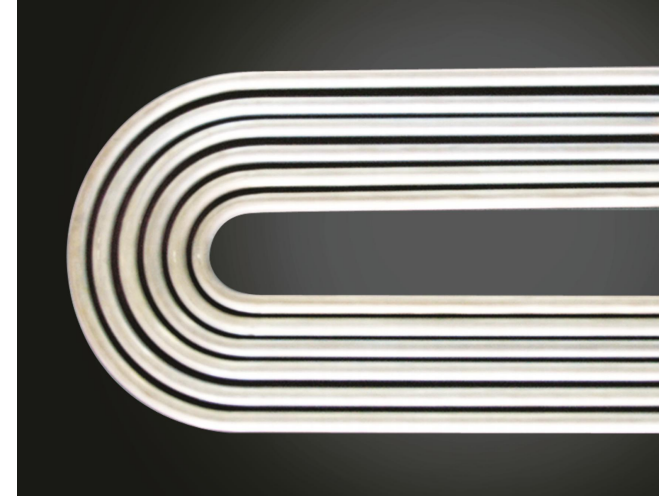


<b>Date of Established</b>	17 Nov., 2003
<b>Registered Capital</b>	320 million Yuan
<b>Employees</b>	1086
<b>Quality Management System</b>	ISO9001:2015
<b>Environment Management System</b>	ISO14001:2015
<b>Occupational safety and health management system</b>	OHSAS18001:2007
<b>Major Products</b>	SS Seamless Pipes & Tubes SS Welded Pipes & Tubes Pipe Fittings
<b>Capacity</b>	Seamless Pipes & Tubes: 35000 Tons
	Welded Pipes & Tubes: 20000 Tons
	Fittings: 3000 Tons





## 产品一站式服务 One-stop Solution for Projects



### Seamless tube & pipe:

OD:6~813mm WT:0.65~40mm

Length:Max:24,000mm

### U Bent Tube:

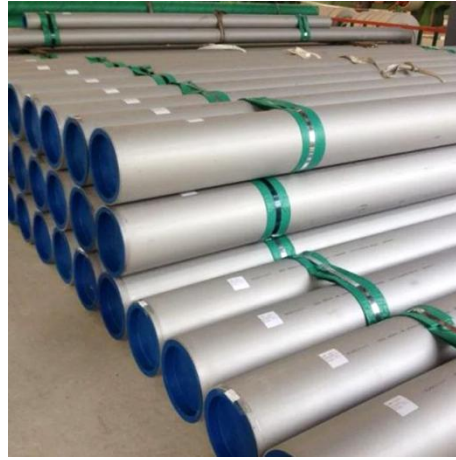
OD:6~32mm WT:0.35~3.5mm

Length: 24M for BA

26M for PA



## 产品一站式服务 One-stop Solution for Projects



### Welded tube & pipe

Continuous online: OD: 3/8"~16"

WT: 1.24~9.53mm Length: 3,000~12,000mm

Single bending: OD: 10"~56"

WT: 3~40mm Length: 1,000~12,000mm

## 产品一站式服务 One-stop Solution for Projects



Butt Weld Fittings: Elbow, Reducer, Equal/reducing Tee, Equal cross, Cap,  
Stub end short pattern type A, Butt-welding branch outlet

Seamless Fittings: OD: 1/2"~14" WT: 1.5~33mm

Welded Fittings: OD: 1/2"~40" WT: 5S~40S

# 国际生产标准

## International Production Standards

- International standard: ASTM standard, EN standard, DIN standard, GOST standard, JIS standard, GB standard, Norsok standard and API standard.
- When project comes, our engineer team will review project specifications and prepare production procedure as per project requirements.

Standard	Production standard
ASTM	ASTM A 312; A376; A213; A269; A511; A789; A790; A358; A928
EN	EN10216-5; EN10216-2
DIN	DIN 17456; DIN 17458
GOST	GOST 9941; GOST 5632
JIS	JIS G3459; G3463
GB	GB/T14975; T14976; GB13296; GB5310; GB/T21833
API	API5LC
NORSOK	NORSOK M-650

# 牌号种类

## Wide Range of Steel Grade

- Steel grades : Austenite, Super Austenite, Duplex, Super Duplex, Ni-Alloy, API Corrosion Resistant Alloy.

Steel Type	Typical Steel Codes
Austenite	304/304H/304L/304LN;316/316L/316LN/316Ti/316H/316MO; 321/321H;310S/310H/310HCBN;317/317L;347/347H/347HFG
Super Austenite	N08904;N08367;S31254
Duplex	S31803;S32205
Super Duplex	S32750,S32760;LC65-2506;LC80-2507
Ni-Alloy	N08800;N08810;N08811;N08020;N08825;N08828;N06600;N06601;N06625
API Corrosion Resistant Alloy	LC30-1812; LC65-2205; LC65-2506; LC80-2507; LC30-2242

# 先进的生产设施

## Advanced Manufacturing Facilities

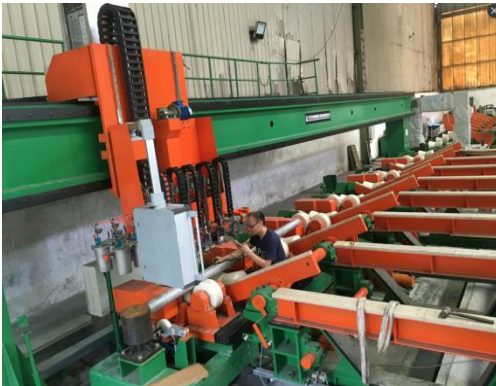
- Main facilities: peeling lines, piercing lines, cold drawn lines, cold rolling lines, continuous forming lines, bending machines, natural gas annealing furnace, pickling pools system;
- Equipment Division for management & maintenance.



# 先进的无损检测设施

## Advanced NDT Facilities

- Automatic Ultrasonic Eddy Current Testing Equipment for longitudinal imperfection, transverse imperfection, laminar imperfection, wall thickness measurement & laser OD measurement.
- Good traceability with test results and graphs. Marking system and scale bars available to locate the defects and segregate products with suspected defects.



## R&D Center

## 研发中心



# CNAS认可的实验室

## CNAS Approved Laboratory

- CNAS accredited laboratory. (CNAS is equivalent to ISO 17025);
- Professional trained lab team.





# 实验室设备

## Lab Facilities

### —化学成分 Chemical Composition

Item	Qty	Parameters	Remark
OBLF 直读光谱仪 OBLF Direct Reading Machine	2	OBLFGS1000	Chemical element analysis
伊斯诺便携式合金分析仪 INNOV Portable Alloy Analyzer	3	INNOV-X	100% PMI test



# 实验室设备

## Lab Facilities

### —力学性能 Mechanical Property

Item	Qty	Parameters
万能试验机 Universal Testing Machine	2	SHT4106, 0-1000kN
硬度试验机 Hardness Tester	3	Brinell, Rockwell, Vickers
冲击试验机 Impact Test Machine	1 set	-196°C

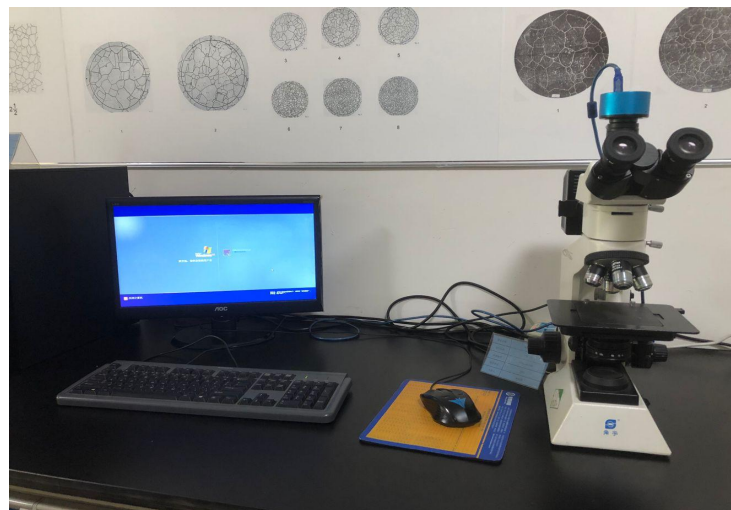


# 实验室设备

## Lab Facilities

### — 晶间腐蚀 Intergranular Corrosion Test

Item	Qty	Parameters
金相显微镜 Metallographic Microscope	2	适用各种标准对腐蚀试验的要求 Applicable to all standards of the corrosion test requirement
晶间腐蚀装置 Intergranular Corrosion Test Machine	2	



## Cerificates & Reference

## 证书与业绩



# 青山证书 Certificates

- **ISO 9001:2015, ISO 14001, OHSAS 18001**
- **NORSOK Approval**
- **CNAS, ASME**
- **PED+AD2000, API 5LC**
- **ABS, BV, LR, KR, DNV.GL, RINA, CCS, GOST, CU-TR**
- **Manufacture License of Special Equipment (China)**  
特种设备制造许可证（中国）

# 终端认证和业绩

## Approvals & References

### 国外 OVERSEAS



国内 DOMESTIC





# Key Project Reference

**TSINGSHAN**

Client	EPC	Application	Project name	Project Location	Year of Supply
Petrobras	MODEC	FPSO	MV30	Brazil	2018
ExxonMobil	CTCI McDermott Integrated	LNG	<a href="#"><u>GCGV MEG Project</u></a>	USA	2018
GAZPROM	NIPIGAS CPECC FLUOR	GAS	<a href="#"><u>AMURSKY GAS PROCESSING PLANT PROJECT NON LICENSED UNITS</u></a>	Russia	2018
Murphy	SBM Offshore	Oil	SIAKAP North-Petia Development Epcic	Malaysia	2018
ADNOC	CPECC	Oil	Bab Integrated Facilities Project	Abu Dhabi	2018
Sakhalin Energy Investment Company Ltd.	Petrofac	Oil&gas	Compression Station of the Offshore Processing Facility	Sakhalin, Russia	2018
GS Caltex	GS Engineering	VRHCR (Vacuum residue Hydrocracker)	VRHCR Train2 Restoration	Korea	2018
Petronas	Samsung	Oil	RAPID	Malaysia	2017-2018
SRDI Oil&Gas "Peton" LLC	Linde	LNG	<a href="#"><u>Portovaya LNG Plant</u></a>	Russia	2017-2018
Sibur	Technip France	Petrochemical	<a href="#"><u>ZAPSIB2-PE Plant</u></a>	Russia	2016-2017

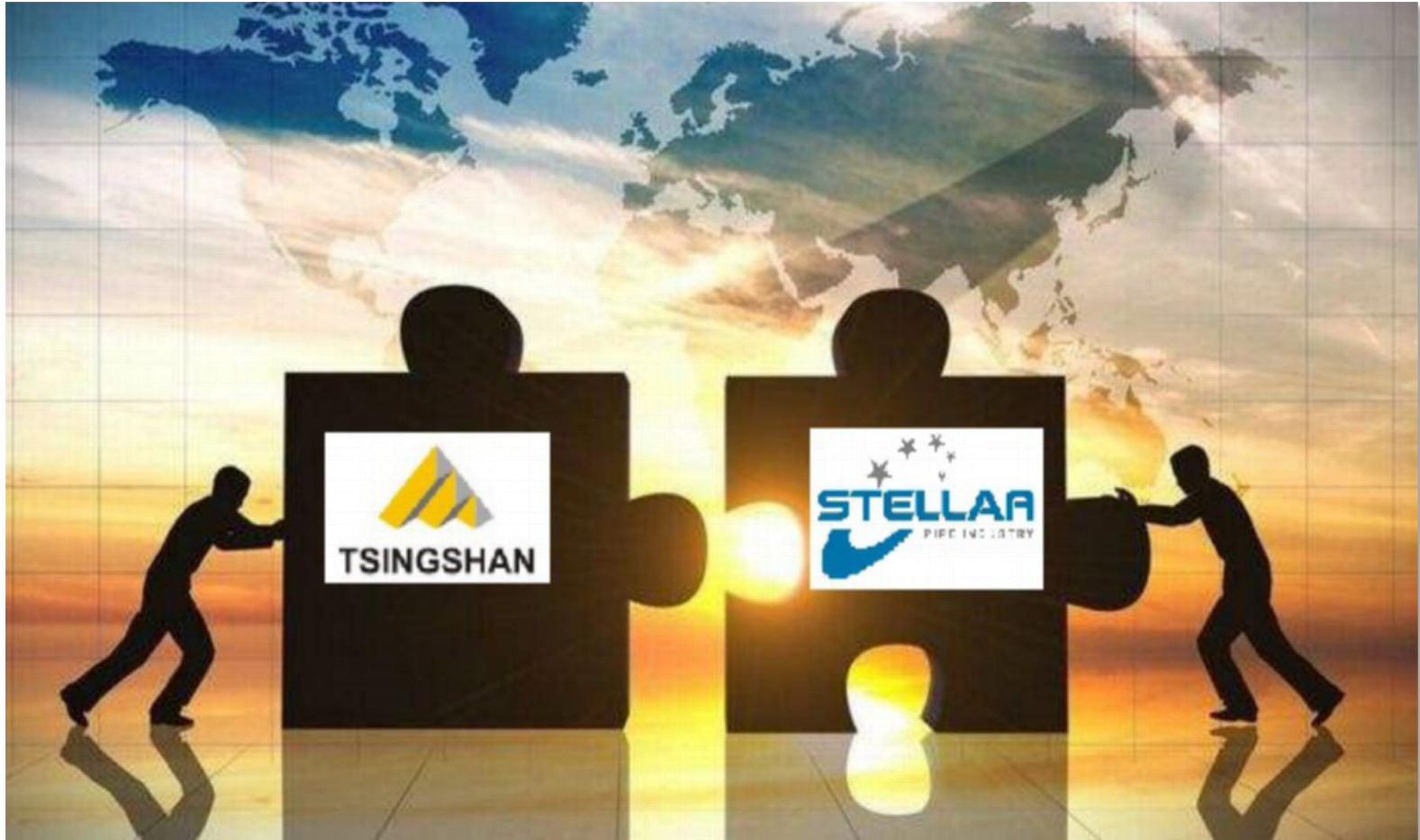


Client	EPC	Application	Project name	Project Location	Year of Supply
Petrobras	Jurong	FPSO/Oil & gas	P76	Brazil	2014-2017
Dangote Oil Refining	EIL	Oil/Refinery	Dangote Refinery and Petrochemicals	Nigeria	2017
Arkema	Toyo	Chemical	STD161 Bombax Project	China	2017
TANAP DOĞALGAZ İLETİM A.S.	Worley Parsons	LNG/Gas	Trans Anatolian Natural Gas Pipeline	Turkey	2017
KOC	Petrofac/UAE	Oil	<a href="#">Lower FARS Heavy Oil Development Program</a>	UAE/Kuwait	2016-2017
ADCO	ALASAB EST.	Oil	Tie-in Works at South East (Package A)	Abu Dhabi	2016
Socar Polymer	Tecnimont India	Petrochemical	PP Plant	Azerbaijan	2016
Taiwan Power Company	MHI JAPAN	Power	Linkou	Taiwan	2013-2015
KOC	Larsen&Toubro	Oil & gas	New Gathering Centre (GC-30)	Kuwait	2015

Client	EPC	Application	Project name	Project Location	Year of Supply
TOTAL	Saipem	Oil & gas	Kaombo	Angola	2015-2016
KOC	Petrofac	Oil & gas	New Gathering Centers (GC) 29	Kuwait/ Abu Dhabi	2015- 2016
PT Petrokimia Gresik/KBR	KBR	Petrochemical	Ammonia-urea II	Indonesia	2015
Novatek/Total /PetroChina	Technip/JGC	LNG	<a href="#">Yamal LNG</a>	Russia	2014-2016
KNPC	Fluor, Daewoo E&C, Hyundai	Refinery	CFP-Hydrogen Producing Unit 118	Kuwait	2015
Groupement TouatGaz	Técnicas Reunidas	Oil & gas	Touatgaz	Algeria	2014
COGA	Techint E&C	Oil & gas	NATURAL GAS COMPRESSSION PLANT PROJECT KP 127 (KEPHASIATO)	Peru	2014
Petrobras	EBR	FPSO/Oil & gas	P74	Brazil	2014
Sungdong Shipping	Sungdong Shipping	Shipbuilding	Oil Carrier 115K (10 Ship)	Korea	2014
Sadara	Linde AG	Chemical	HyCO / Ammonia Industrial Gas Complex	Saudi Arabia	2013

## Acquisition

- **Before** Tsingshan focuses on domestic market & Stellar on international market.
- **From April 2018**, Stellar is acquired by Tsingshan to be one company “**Zhejiang Tsingshan Steel Pipe Co., Ltd.**”, to provide better service for projects.



**青山钢管**  
**诚挚欢迎您考察指导工作**  
**谢谢!**

**Zhejiang Tsingshan Steel Pipe Co., Ltd**  
**Warmly welcome your visit.**  
**Thank You!**