





### I FORTUNE GAS

FORTUNE GAS (Stock code: 603173 in Shanghai Stock Exchange) is a professional LNG plant, air separation unit, coil-wound heat exchanger and cryogenic cold box manufacturer with ISO9001, ISO14001, ISO45001 & ASME, KGS, CE/PED, KHK, EAC system certified.

FORTUNE GAS has successfully designed, manufactured and delivered more than 1000 sets of air separation units, natural gas liquefaction plants and cryogenic chemical cold boxes all around China, USA, Japan, South Korea, India, Europe, the Middle East, Southeast and Central Asia, Africa and Latin America, etc. The clients include: Linde, Air Products, Praxair, Technip, Petrofac, Danieli Italy, Messer Germany, CNPC, SINOPEC, CNOOC, China State Nuclear power Engineering, etc. Also, we have successfully won the largest "Belt and Road" air separation EPC project in China's cryogenic industry.

We treat all the cryogenic solutions with serious attitude and professional experience. With plenty experience of design and manufacturing LNG plant, air separation unit and other cryogenic equipments, we sincerely hope we can provide you with efficient, sustainable, customized solutions and excellent services.



Hangzhou Workshop 1 for Small-middle Module



Hangzhou Workshop 2 for Nonferrous Metals Process Equipment Production



Huzhou Workshop for Carbon Steel Process Equipment Production



Seaport Workshop for Large Module Max. Weight 1500t



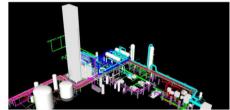
### **I PERSISTENT INNOVATION**

As a national high-tech enterprise, FORTUNE GAS has been committed to research, innovation and development in the field of cryogenic industry and successfully created a R&D team that is experienced, highly innovative and has a pioneering spirit. We set up an advanced process organization by matching industry benchmarking resources, and focus on providing our clients with efficient, sustainable, customized technology and process solutions.









# ADVANCED SUPPORTING DESIGN SOFTWARE

- CALCULATION SOFTWARE

  PVELITE / SW6 / HYSYS / ASPEN
- STRUCTURAL SOFTWARE
  SAP / STAAD.PRO / ANSYS
- PIPELINE SOFTWARE

  PDMS / CAESAR II / SOLIDWORKS











# GERMAN QUALITY LEAN MANUFACTURING







FORTUNE GAS has accumulated exquisite production technology over the past 40 years, which has become the precious wealth of the company and continues to be passed on. In order to ensure all products can meet the requirements of "German quality", we have introduced the lean management system, which ensures that all project participants can strictly follow the management system, and all members carry out high standard inspection and control on each process of the production.

Adhering to the concept of quality as life, the company has established a strict quality assurance system. It has passed ISO9001, ISO14001, ISO45001 and other system certifications, as well as ASME "NB" and "U" certificates, KGS of Korea, CE/PED of Europe, KHK of Japan, EAC of Customs Union and other international product system certifications. All these certifications ensure that we can continue to deliver high quality products to our customers.

### I AIR SEPARATION UNIT

### SCALE

#### 80Nm<sup>3</sup>/h ~ 120,000Nm<sup>3</sup>/h GOX

Large, Medium and Small Scale Air Separation Unit, Liquid Plant, Liquefaction Plant, High Purity Nitrogen Generator, Rich Oxygen Unit

### **APPLICATION FIELDS**

Metallurgy, Steel, Chemical Industry (Petrochemical Industry, Coal Chemical Industry), Machinery, Environmental, Electronics, Pharmaceutical, Glass, Tires, Nuclear Industry, Aerospace, Polysilicon, Energy, etc



GOX60,000Nm³/h (2,000TPD) + GOX30,000Nm³/h (1,000TPD) ASUs for Steel Making Complex















- 1. GOX85,000Nm<sup>3</sup>/h (2,900TPD) ASU for Copper Mining Complex
- 2. 2 Sets of GAN30,000Nm<sup>3</sup>/h (1,000TPD) Plant for MESSER in New Energy Field
- 3. 2 Sets of GOX63,000Nm³/h (2,100TPD) ASU for Coal Chemical Complex
- 4. 400TPD Liquid ASU for New Energy Field
- 5. 3 Sets of GOX84,000Nm³/h (2,800TPD) ASU EPC Project for Refinary Complex
- 6. GOX44,000Nm<sup>3</sup>/h (1,500TPD) ASU for Fertilizer Complex
- 7. GOX10,000Nm³/h (340TPD) ASU for Steel Making Complex

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4	5	6	

# I NATURAL GAS TREATMENT & LIQUEFACTION

### **SCALE**

1×10<sup>4</sup> Nm<sup>3</sup>/d (7TPD) ~ 1000×10<sup>4</sup> Nm<sup>3</sup>/d (2.5MTA)

#### **Natural Gas Treatment**

Natural Gas Liquids Recovery (NGL)
Nitrogen Rejection Unit
Natural Gas Dehydration
Acid Gas Removal-Amine Wash
Natural Gas Heavy Hydrocarbon Removal
Liquefied Petroleum Gas (LPG)

#### Natural Gas Liquefaction (LNG)

Nitrogen Refrigerant Cycle Single Mixed Refrigerant Cycle Dual Mixed Refrigerant Cycle Propane-MR Natural Gas Liquefaction

### **APPLICATION FIELDS**

- Pipeline Gas, Coal Bed Gas (Coal Bed Methane),
   Coke Oven Gas, Shale Gas, Bio Gas,
   Coal Gas Purification and Liquefaction
- BOG Recovery and Liquefaction
- LNG Vaporization Station, LNG Filling Station

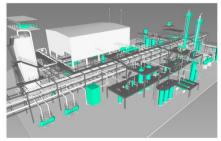


350TPD LNG Plant in Shanxi, China









- 1. 350TPD LNG Plant in Baotou, Inner Mongolia, China
- 2. 100TPD LNG Plant in Tai'an, Shandong, China
- 3. 200TPD LNG Plant in Shenzhen, China
- 4. 3D Model of Typical 200TPD LNG Plant

1	2
3	4



## **CRYOGENIC LIQUID TANK I**







#### SCALE

- Cryogenic Flat-Bottom Storage Tank 250m³~50,000m³
- · Vacuum Powder or High Vacuum Multi-Layer Insulated Storage Tank 3.5m<sup>3</sup>~500m<sup>3</sup>
- · Cryogenic Liquid Tank Container
- · Re-gasification Station

#### STORAGE MEDIUM

Liquid Oxygen, Liquid Nitrogen, Liquid Argon, Liquid Carbon Dioxide, LNG, Liquid Ethylene, Tetrafluoroethylene, Liquid Hydrogen, etc

- 1. 20,000m3 LNG Storage Tank for SHENZHEN GAS (A Governmental City Gas Company) 2. 2×3,000m³ Liquid Nitrogen, 2×1,500m³ Liquid Oxygen, 500m³ Liquid Argon Storage Tanks for Large ASU Project in Coal Chemical Complex
- 3. TOYO Japan: C<sub>2</sub>F<sub>4</sub> Storage Tank

### **RARE GASES**

Krypton/Xenon Helium/Neon Helium Extraction and Liquefaction

# | HYDROGEN & SYNGAS

CO Cold Box-Methane Wash CO Cold Box-Partial Condensation Methanol Steam Reforming Hydrogen Liquefaction Steam Methane Reforming Liquid Nitrogen Wash









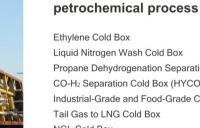
H<sub>2</sub>-Cryogenic CO<sub>2</sub> Separation Normal Pressure CO<sub>2</sub> Purification

- 1. Hydrogen & Syngas
- 2. Vacuum Cold Box GAN350 Plant to IWATANI (Japan)
- 3. Rare Gases Extraction Unit of GOX48,000Nm³/h (1,600TPD) ASU for Steel Making Complex

### CHEMICAL COLD BOX I

FORTUNE GAS has developed various cryogenic liquefaction and purification cold boxes in the







Liquid Nitrogen Wash Cold Box

Propane Dehydrogenation Separation Cold Box (PDH)

CO-H<sub>2</sub> Separation Cold Box (HYCO)

Industrial-Grade and Food-Grade CO2 Cold Box

Tail Gas to LNG Cold Box

NGL Cold Box

Demethanizer Cold Box

Light Hydrocarbon Recovering Cold Box





- 1. 160×10<sup>4</sup> Nm<sup>3</sup>/d Coke Oven Gas to LNG in Shandong, China
- 2. CO-H2 Separation Cold Box for Overseas Market
- 3. Demethanizer Cold Box

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### I COIL-WOUND HEAT EXCHANGER

### SCALE

FORTUNE GAS has the world advanced workshop and facilities for the manufacture of coil-wound heat exchanger (CWHE), with a maximum capability of manufacturing the CWHE up to 6m of diameter and 360t of weight

### **APPLICATION FIELDS**

The heat exchanger can be widely applied in large scale chemical fertilizer plant, air separation unit, LNG, coal chemical industry, ethylene engineering, nuclear industry, continuous reforming plant mixed feeding heat exchanger on petrochemical industry and other fields

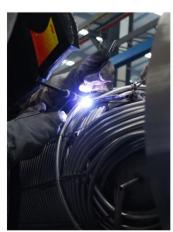












8 Sets of Coil-Wound Heat Exchanger in Rectisol Process System for Coal to Hydrogen Complex

### **EXCELLENT SERVICE**

FORTUNE GAS has set up agent offices in many places around the world, and established a perfect after-sales service system to protect the rights and interests of customers, to ensure the long-term stable operation of the device. The company also has a remote monitoring center, which can provide remote diagnosis and big data services for overseas customers.

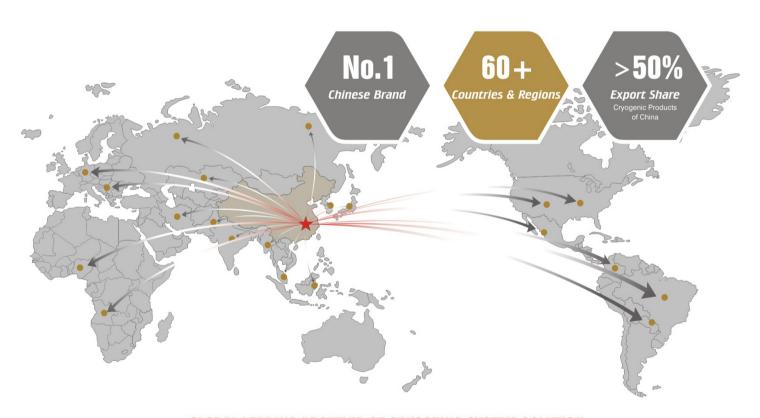
We will provide excellent service to our clients, covering the entire project life cycle, from initial design, manufacturing, inspection to after-sales service.







We have successfully delivered our products to United States, Europe, Japan, South Korea, India, Saudi Arabia, the United Arab Emirates, Mexico, Egypt and other more than 60 important countries and regions.



#### **GLOBAL LEADING PROVIDER OF CRYOGENIC SYSTEM SOLUTION**



#### **CONTACT US**

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