## TO BE A WORLD-CLASS ENTERPRISE OF HIGH-END ENERGY AND CHEMICAL EQUIPMENT

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TO PROVIDE HIGH-END ENERGY AND CHEMICAL EQUIPMENT AND ONE-STOP SOLUTIONS AND BE THE PROMOTER OF CLEAN ENERGY APPLICATION



荆门宏图特种飞行器制造有限公司 JINGMEN HONGTU SPECIAL AIRCRAFT MANUFACTURING CO.,LTD.



## **CORE VALUES**

INTEGRITY-BASED HONEST, LOYAL & PRACTICAL

CUSTOMER FOREMOST BETTER, QUICKER & MORE

EFFICIENCY DRIVEN
EFFICIENCY, EFFECTIVENESS & BENEFIT

INNOVATION UNLIMITED
BOLD IN THINKING, ACTION & COMMUNICATING

**DEDICATION COMMITTED**DEDICATED, RESPONSIBLE & COLLABORATIVE

PERFECTION PURSUED
PROGRESSIVE, LEARNING & EXCEEDING





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## **COMPANY PROFILE**

Jingmen Hongtu Special Aircraft Manufacturing Co., Ltd. (hereinafter called CIMC HONGTU) is a wholly owned enterprise of CIMC ENRIC Holding Co., Ltd(CIMC ENRIC)., a listed company in Hong Kong. It was founded in 1971, formerly known as Hongtu Aircraft Factory(HONGTU), affiliated to the Aviation Industry Corporation of China (the Third Ministry of Machine Building Industry). With a history of over 40 years of pressure vessel manufacturing and an investment of CNY 1.3 Billion in Jingmen City, CIMC HONGTU has become the largest production base of energy and chemical equipment in the central and western regions of China. It is mainly devoted to the manufacturing of high-end equipment for the energy and chemical industry.

With the subject of scientific and technological innovation and the core of intelligent manufacturing and green manufacturing, focusing on manufacturing of high-end energy and chemical transportation and storage equipment. The main products are LPG road tankers, LNG cryogenic liquid road tankers, large scale spherical tanks, cryogenic flat-bottomed storage tanks, large scale special chemical vessels, marine "oil to gas" fuel tanks and supporting equipment for energy and chemical systems. The company can provide one-stop integrated solutions for customers such as the storage stations, peak-shaving stations, refilling stations of energy and chemical gas and natural gas.

The production and sales of LPG road tankers of CIMC HONGTU has ranked No. 1 for the last 40 consecutive years in China, and the spherical tank production and sales has ranked No. 1 for the last 6 consecutive years in domestic market. CIMC HONGTU's products have been exported to 50 plus countries in Europe, Middle East, North&South America, Southeast Asia, Northeast Asia, Mid-Asia and Africa.

#### SOLUTIONS AND BE THE PROMOTER OF CLEAN ENERGY APPLICATION



In 2022: Awarded the titles of "Manufacturing Single Champion Product"(China National Level) and "Changjiang Quality Award of Hubei Province".



Since 2015: Following the "The Belt and Road" strategy, HONGTU has successfully delivered many spherical tank projects in Southeast Asia, Central Asia and Africa, and enjoyed a good reputation abroad with its full LPG industry chain solution advantages.



In 2009: HONGTU entered the spherical tank industry with the advantages of CIMC Group. Since 2016, the market share of the spherical tanks has ranked the top 1 in China.



In 1991: HONGTU entered the cryogenic industry. And the cryogenic transport tanker has been ranking the top in the domestic market since 2013.

In Aug. 1999: HONGTU acquired ASME Certificate and U Stamp.



In April 1971: The Company's predecessor, Hongtu Machine Works (322 Factory) under the former Ministry of Aviation Industry, was founded.

In May 1976: HONGTU undertook the national major aviation project where the first Maritime Bomber in China succeeded in the production and trial



**MILESTONES** 

COMPANY

In 2021: The intelligent and automatic production line for domestic LPG tanks was put into production .CIMC HONGTU has been striding forward to the key booster of the clean energy application from a one-stop solutions provider for energy and chemical industry.



In Feb. 2010: The utilizing of the new 48,000 m2 workshop enhanced the production capacity of pressure tankers up to No.1 in Asia.



In Aug. 2008: HONGTU became a key member enterprise of CIMC



In 1981: HONGTU engaged in the design and installation of gas pipelines business.

n 1982: The first unit of HONTO LPG transport tanker was introduced to the market, ranking NO.1 in the domestic market for the last 40 consecutive years, and the domestic market share reached 60% since





## INTERNATIONAL QUALIFICATIONS





















#### O1 POWERFUL R&D CAPABILITY

Hongtu has 329 technical staff in Tankers & Vessels R&D Department, Cryogenic Vessel R&D Department, Engineering R&D Department, Production Technology Department, Welding Technology Department, Quality Technology Department and Quality Control Department.

The company has 92 valid patents (including 18 invention patents, 1 appearance patent).

#### 02 STRONG PRODUCTION CAPACITY

The company has various manufacturing equipment over 2,300 sets.

The total area of the company is 130,000 m, of which, the total area of the workshop is 103,641 m. There are 6 manufacturing workshops, including LPG tanker and vessel manufacturing workshop, spherical shell prefabrication workshop, LNG and cryogenic liquefied gas tanker and vessel manufacturing workshop, household LPG storage tank manufacturing workshop, petrochemical equipment manufacturing workshop and chassis manufacturing workshop.

The company ranks No.1 in production capacity & efficiency of the LPG vessels in China.

The company ranks No.1 in working capacity & efficiency of the spherical shell prefabrication line in China, with annual capacity of 70000 tons.

The company owns the first intelligent production line for household LPG storage tanks in China, with annual capacity of 12000 units/shift.

#### 0.3 SCIENTIFIC AND RIGOROUS QUALITY ASSURANCE SYSTEM

The whole process of product quality control from design to delivery needs to pass 115 quality control points, 192 quality control procedures, with 66 QC documents to support and to be followed.

The annual number of X-ray film is more than 500,000 pcs, and the quality file of each product is archived throughout its life cycle, and each weld can be traced back.

Hongtu owns a special quality control center, which obtains grade 3 certificate for national defense metrology and has inspection capability of length, hardness, pressure, temperature, metallographic, electromagnetic, chemical and mechanical, covering all the inspection of outsourced material and process tests.

#### 04 FAST AND EFFICIENT AFTER-SALES SERVICES

The company has 30 plus professionals engaged in after-sales services, and it has its own customer service center, always dedicated to providing the best on-site after-sales service and online after-sales technical support.

With strong technique, manufacturing, testing and other capabilities, Hongtu is committed to providing excellent service in the whole product life cycle.



## LPG AND PETROCHEMICAL STORAGE & TRANSPORTATION EQUIPMENT



## LPG SEMI-TRAILER

HONGTU has 40-plus years of experience in design and fabrication of LPG semi-trailers. With European and American certificates of pressure vessels, HONGTU can supply various semi-trailers as per Chinese standard, international standards, and tailored design, etc. HONGTU has cooperated with the international reputed suppliers of valves, instruments and other accessories, such as REGO, FISHER, KITZ, JC, ROCHESTER, WIKA, CORKEN, BLACKMER, etc. in the long term so as to supply the optional brands of valves, pumps and flow meters etc. as per clients' requirements.













## LPG SEMI-TRAILER





#### Technical specification

Design code: ASME BPVC VIII-1/VIII-2, EN 12493, GB/T 19905, JB 4732

Volume: 30m<sup>3</sup>~70m<sup>3</sup>

Materials: SA-516, SA-517, SA-612, P460, WH590E, Q370R, etc.

Tank type: Cylindrical tank, Eccentric cone tank, etc.

Vehicle type:

ASME codes pressure vessel material plus international brands of valves and safety accessories.

Chinese standard pressure vessel material plus Chinese brands of valves and safety accessories.

Chinese standard pressure vessel material plus international brands of valves and safety accessories.

Optional Intelligent/Advanced Configuration: Tire Pressure Monitoring, Automatic Tire Inflating, Intelligent Reversing Braking, Burglar Alarm, Blind Zone Radar Alarm, Security Monitoring, Intelligent Emergency Shut-off Valve, Remote Temperature / Pressure / Liquid Level and Location Transmitter, Gas Leakage Alarm, etc.



## LPG SEMI-TRAILER WITH PUMP

HONGTU is qualified to design and manufacture LPG semi-trailer with pumps and loading & unloading system on the side or at the rear of the tankers. The pump can be driven by PTO, hydraulic oil or electric motors. The valves and instruments used on the tankers are well-known international brands, catering to application requirements of Europe, America, Southeast Asia and other countries.

#### Technical specification

Design code: ASME BPVC VIII-1/VIII-2, EN 12493, GB/T 19905, JB 4732

Vessel capacity: 30m<sup>3</sup> ~ 70m<sup>3</sup>

Material: SA-516, SA-517, SA-612, P460, WH590E, Q370R,











## LPG BOBTAIL TANKER

HONGTU is qualified to design and manufacture bobtail tankers with pumps and loading & unloading system on the side or at the rear of the tankers. The pump can be driven by PTO, hydraulic oil or electric motors. The valves and instruments used on the bobtail tankers are well-known international brands, catering to application requirements of Europe, America, Southeast Asia and other countries.

#### Technical specification

Design code: ASME BPVC VIII-1/VIII-2, EN 12493, GB/T 19905, JB 4732

Vessel capacity: 5m3~40m3

Material: SA-516, SA-517, SA-612, P460, Q420R, Q370R, etc.















## LPG STORAGE TANK

HONGTU has the design and fabrication capability of stationary storage tanks, including above-ground storage tanks, underground storage tanks, horizontal storage tanks, and vertical storage tanks etc., which is customized according to the customers' requirement.

#### **Technical Specification**

Design Code: ASME BPVC VIII-1/VIII-2, GB/T 150, JB 4732 Vessel Capacity: ≥5m³ Vessel Material: SA-516, SA-612, Q370R etc.

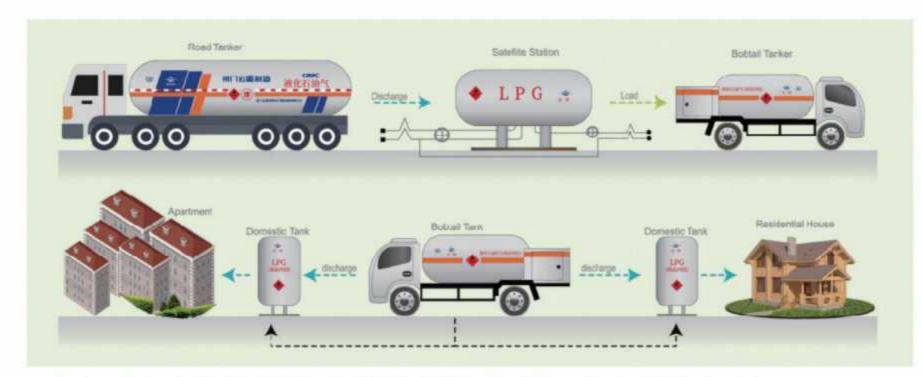








## LPG HOUSEHOLD TANK



Design Code: GB/T 150, ASME BPVC VIII-1/VIII-2 Tank Type: Vertical & Horizontal Tank Capacity: 0.4m³~5m³ Tank Material: Q345R, SA-516, SA-414









## LPG FILLING SKID

Portable LPG skid for cylinder refilling or autogas refueling, with optional functions such as unloading, pressure transmitting, liquid level transmitting and temperature transmitting.

Tank Design Code: GB/T 150, ASME BPVC VIII-1/VIII-2

Tank Capacity: 5m3~100m3 Tank Material: Q345R, SA-516











## PETROCHEMICAL PROCESS EQUIPMENT

HONGTU can provide ASME heat exchangers, towers, reaction vessels, non-ferrous metal containers, high-pressure fatigued equipment and various storage vessels for petrochemical process equipment.









## PETROCHEMICAL ROAD TANKER







Fluid: anhydrous ammonia, propylene, iso-butane, butadiene, Anhydrous methylamine, oxirane, liquid chlorine, sulfur dioxide, Anhydrous hydrogen fluoride, trichlorosilane, methyl alcohol, etc.







## LNG AND REFRIGERATED LIQUEFIED GAS STORAGE & TRANSPORTATION EQUIPMENT

#### **LNG SEMI-TRAILER**



#### **Technical Specification**

Design codes: GB/T 150 Pressure Vessels, NB/T47058-2017 Road Tankers for Refrigerated Liquefied Gas,

ASME BPVC SEC VIII Capacity: 20m3 ~ 58m3

Material: TAS30458/S30408/SA-240 304(Inner Tank)

Q345R/SA-516(Outer Tank)







## REFRIGERATED LIQUEFIED GAS STORAGE AND TRANSPORTATION EQUIPMENT









Design Code: GB, ASME

Fluid: LO2, LN2, LAr, LCO2

Heat Insulation: High vacuum multi-layer winding, polyurethane foam

High quality Chinese brand or international brand valves and accessories, with optional fuctions of unloading system (Pump, Pressurizer/Vaporizer)

Available choices of running gear parts (axles, suspension, tyres, rims, etc.) from top suppliers.

Optional Intelligent/Advanced Configuration: Tire Pressure Monitoring, Automatic Tire Inflating, Intelligent Reversing Braking, Burglar Alarm, Blind Zone Radar Alarm, Security Monitoring,

Intelligent Emergency Shut-off Valve, Remote Temperature / Pressure / Liquid Level / Location Transmitter, Gas Leakage Alarm, etc.





## LNG AND REFRIGERATED LIQUEFIED GAS STORAGE TANK



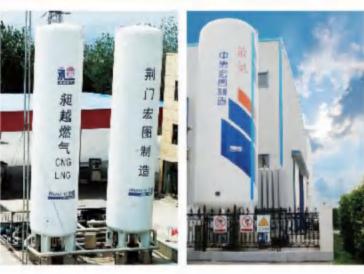
Design codes: GB/T 150, GB/T18442, ASME BPVC VIII-1

Capacity: 5~200m3

Working Pressure: 0.8 ~ 1.2MPa Type: Vertical or Horizontal Fluid: LNG, LO2, LN2, LAr, LCO2 Material: S30408, 16MnDR(Inner Tank) Q345R (Outer Tank)







## **LNG SHIP-BORNE FUEL TANKS**











## LPG, PETROCHEMICAL AND NATURAL GAS EPC PROJECT

## LPG SPHERICAL TANK

**Technical Specification** 

Design Code: ASME BPVC VIII-1/VIII-2, GB/T 12337, JB 4732

Vessel Capacity: 200m³~10000m³ liquefied gas spherical tank, 200m³ ~20000m³ gas spherical tank Vessel Material: SA-516, SA-537 CL1, SA-537 CL2, Q370R etc.





Bangladesh 2x4000m3 Spherical Tanks



Bangladesh 3x4250m3 Spherical Tanks



Thailand 4x2000m3 Spherical Tanks



Kyrgyzstan 4x1000m3 Spherical Tanks



Cambodia 6000m3 Spherical Tank



Ghana 2x6000m3 Spherical Tanks



Maldives 3000m3 Spherical Tank



Nigeria 2x5000m3 Spherical Tanks



Nigeria 2x6000m3 Spherical Tank



Nigeria 4x10000m3 Spherical Tanks



## LPG MOUNDED TANK

HONGTU has the design and fabrication capability of large size mounded tanks without saddles and medium & small size mounded tanks with saddles.

#### **Technical Specification**

Design Code: ASME BPVC VIII-1/VIII-2, EEMUA 190 Vessel Capacity: ≥5m³ Vessel Material: SA-516, SA-537 CL1, SA-537 CL2, P355N etc.









## LPG RECEIVING TERMINAL

Based on collectivized operation and business synergy pattern and its own equipment manufacturing advantages, HONGTU is committed to providing global customers with integrated LPG engineering solutions, engineering services giving priority to engineering design and EPC services, and providing integrated services of system design, key equipment manufacturing, onsite installation and commissioning, personnel training and operation technical support.









## LNG AND REFRIGERATED LIQUEFIED GAS TANK



## **CRYOGENIC STORAGE TANK**

With the characteristics of light weight, low evaporation rate and reliable quality, HONTO cryogenic storage tank is the cost-effective choice for customers. HONGTU can provide single containment tanks, bimetal full containment tanks, cluster tanks, industrial gas storage tanks. Meanwhile, HONGTU has the ability to provide EPC solutions for LNG peak-shaving stations, LNG storage station, LNG gasification stations and industrial gas storage station, etc.

Design code: API 620, GB/T26978

Capacity: 500~50000m3

Material: Inner Tank, S30408/SA-240 304 Outer Tank. S30408/SA-240 304





### SINGLE CONTAINMENT TANK

The single containment tank is a double-walled tank which consists of an inner tank and an outer tank. Inner tank is used for storing cryogenic liquid. The space between the inner and outer tanks is filled with insulating material and sealed by nitrogen. The outer tank, which cannot store the liquid, is made of low alloy steel or carbon steel. The single containment tank requires an external dike. It has the advantages of mature technology and lowest initial investment.

Design code: API 620, GB/T26978

Capacity: 500~30000m3

Material: Inner Tank. ASTM A240/S30408

Outer Tank. ASTM A516/Q345R/16MnDR



## **BIMETAL FULL CONTAINMENT TANK**

The bimetal full containment tank consists of an inner tank and an outer tank. Inner tank is used for storing cryogenic liquid. Outer tank is used for storing the boil-off gas under normal conditions, and can store the cryogenic liquid in case of leakage. The outer tank is made of stainless steel. It has the advantages of short construction period and low cost when compared with reinforced concrete full containment tank.

Design code: API 620, GB/T26978

Capacity: 5000~50000m3

Material: Inner Tank. S30408 /ASTM A240 Outer Tank. S30408/ASTM A240



## **CLUSTER TANK**

The cluster tank is used for storing large-capacity pressurized cryogenic liquid. Several inner tanks filled with liquid are placed in an insulated outer tank in a certain arrangement, and the space between the inner tanks and the outer tank is insulated by powder accumulation. It has the advantages of storing pressure liquid, discharging without pump and saving operating cost.

Design codes: ASME BPVC VIII-1; GB/T 150 Capacity: Total Capacity 1000-2500m3 Inner tank capacity: 200m3 or 250m3

Material: Inner tank: 30408/SA-240 304

Outer tank: ASME SA-516/Q345R/16MnDR





## PIPELINE EPC PROJECT











## LPG STORAGE AND DISTRIBUTION STATION



## LPG BOTTLING STATION





## **LPG AUTO-GAS STATION**



## LNG/CNG/L-CNG FILLING STATION

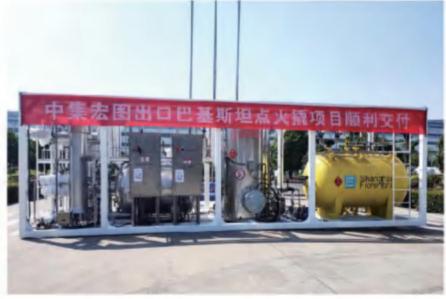


## LNG GASIFICATION STATION



## LPG/LNG POWER GENERATING PLANT







- More Than 500 Clients and Customers
- 50+ Countries and Regions Overseas Market
- 60% Domestic LPG Semi-trailer Market Share
- Top 1 LPG Semi-trailer Manufacturer and Exporter in China
- Top 1 Spherical Tank Manufacturer and Exporter in China
- The First-class Cryogenic Storage and Transportation Equipment Manufacturer in China
- The Only Full LPG Industry Chain Solution Provider in China
- The Whole Product Life Cycle Services Provider ......































## **PARTNERS**























































