



Professional Design For Customer



LIMEDA
INTERNATIONAL



TFS - Fire fighting Equipments

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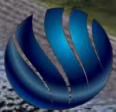
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Brief Introduction

Shanghai Pudong Special Firefighting Equipment Co., Ltd (PDFC) was established in 1993 and in more than 25 years, PDFC has grown to be the quality leader in the fire industry. In July 2000 we got ISO 9001.

The headquarters is located in No.398 Shuanglian Road, QingPu District, Shanghai, China. The factory is located in No. 18 Jinxing Road, Kunshan City, Jiangsu Province, China. The factory covers an area of 16667 square meters, 10000 square meters production for workshop, 3200 square meters for warehouse. At present, we have around 150 employees, including an abundant technical team specialized in fire-fighting research, equipment development, manufacture and distribution.

We are focusing on the wider range of firefighting devices which are used in harbor, airdrome (garage), oil tank farm, warehouse, ship, petrochemical industry, sea platform etc. The products include all kinds of water/foam monitors, diesel/motor driven fire pumps, foam fire-extinguishing system, remote control monitor system, dry chemical powder system, hose reel and deluge valves

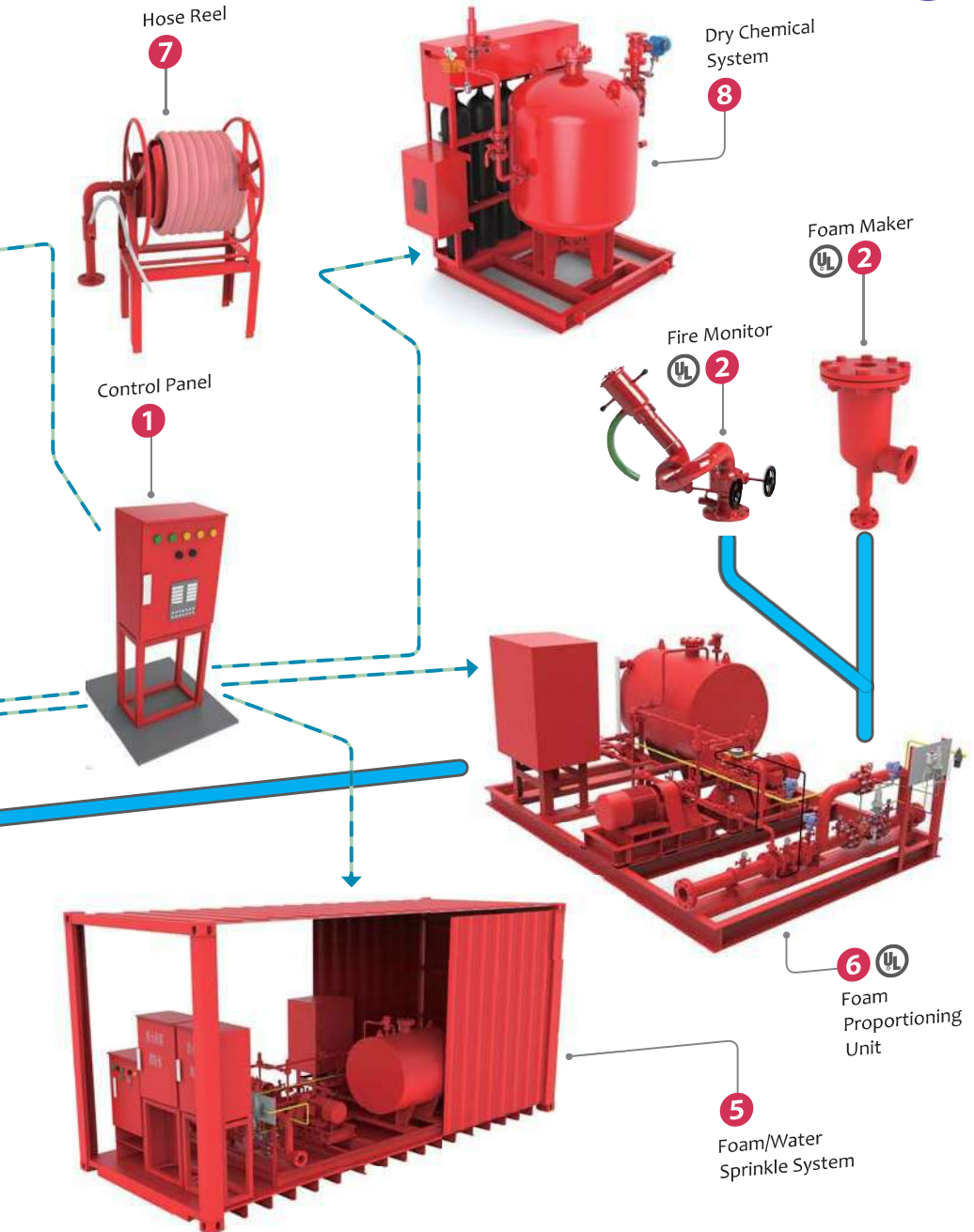
etc. PDFC specializes in providing unique and special products meeting and exceeding client's demands.

All products produced by PDFC, strictly comply to NFPA and other International Standards. When we combine our many resources: as new production facilities, manufacturing machinery, and 3D engineering & design, PDFC truly is your the "solution provider".

Our massive testing facilities and electronic recording equipment, document every PDFC product's performance. Factory Mutual third party testing and certification are found on many specific firefighting products. Now we can test the fire monitor with 400L/s flow and horizontal range till 150m. Both diesel engine and electrical motor driven fire pumps with power of 1600kW can be tested in the test station.

PDFC's mission is to provide: "Professional Design For Clients"! We look forward in engineering and designing "unique solutions" for your every hazard.







Product Overview



Fire Monitor

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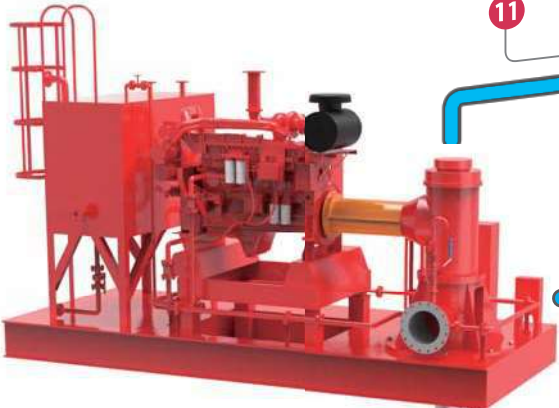
Hydrant



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Deluge Valve

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Fire Pump



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PV Series Vertical Turbine Fire Pump

- Compact structure, large flow stable operation
- Design According to NFPA20, UL and FM
- Max. Capacity: 2,500m³/h (11,000GPM) • UL listed to 5,000GPM
- MAWP: 2.5MPa (360PSI)
- Material: Ductile Iron, Stainless steel, Duplex Stainless Steel, Bronze and Ni Al Bronze



PS Series Split-case Fire Pump

- Compact structure, large flow stable operation
- Design According to NFPA20, UL and FM
- Max. Capacity: 2000m³/h (8,800GPM) • MAWP: 2.5MPa (360PSI)
- Material: Ductile Iron, Stainless steel, Duplex Stainless Steel, Bronze and Ni Al Bronze



PI Series End-suction Fire Pump

- Saving space, pipeline layout easier.
- Design According to NFPA20 and UL
- Max. Capacity: 2400m³/h (667L/s) • MAWP: 2.0MPa (290PSI)
- Material: Ductile Iron, Stainless steel, Duplex Stainless Steel, Bronze and Ni Al Bronze

In-line Fire Pump

- Compact structure, Saving space
- Design According to NFPA20 and UL
- Max. Capacity: 340m³/h (1,500GPM)
 - MAWP: 0.83MPa(120PSI)
- Material: Ductile Iron, Stainless steel



CXB Marine Type Fire Pump

- Saving space, pipeline layout easier.
- Max. Capacity: 2,400m³/h (10,500GPM)
- MAWP: 2.0MPa (290PSI)
- Material: Stainless steel, Duplex Stainless Steel, Bronze and Ni Al Bronze

FIRE PUMP SYSTEM

Electric Motor Driven Vertical Turbine Pump

Diesel Engine Driven Vertical Turbine Pump

Electric Motor Driven Horizontal Pump

Diesel Engine Driven Horizontal Pump

CXB series marine type Fire Pump

Jockey Pump

Hydraulic Driven Fire Pump



Fire Pump System

As the heart of water and foam fire-fighting system, fire pump supplies the power for the liquid. It has the characters such as working intermittent, dependable, flat performance curve, etc. The fire pumps we manufactured are in accordance with the standard of FM1311 “Centrifugal Fire Pumps Split-Case Type”, GB6245 “Fire pump” & NFPA20 “Standard for the Installation of Stationary Pumps for Fire Protection”.

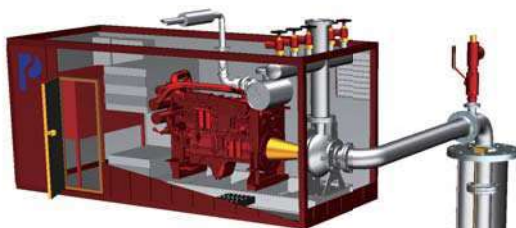
Electric Motor Driven Vertical Pump

- Design According to NFPA20
- UL listed pump
- UL listed motor optional
- Controller and other accessories selected as requirement
 - Marin growth prevention device optional
 - Anti-frozen device optional



Diesel Engine Driven Vertical Pump

- Different stages for option, saving space
- Design According to NFPA20
- UL listed pump
- UL listed or FM approval engine optional
- UL listed or FM approval Controller
- Other accessories selected as requirement
- Marin growth prevention device optional
- Anti-frozen device optional



Hydraulic driven fire pump

- Design According to NFPA20
- UL listed pump
- Safe and reliable hydraulic system
- Complete protection shell for pump and engine
- Controller and other accessories selected as requirement
- Marin growth prevention device optional
- Anti-frozen device optional





Electric Motor Driven Horizontal Pump

- Design According to NFPA20
- UL listed split-case or end-suction pump
- UL listed electric motor optional
- UL listed controller optional
- Other accessories selected as requirement

Diesel Engine Driven Horizontal Pump

- Design According to NFPA20
- UL listed split-case or end-suction pump
 - UL listed controller optional
- Other accessories selected as requirement



Jockey Pump Package

- Stainless steel multi-stage vertical pump
- Different size tank for option
- Controller and other accessories selected as requirement



Balanced Pressure Proportioning Unit

- Compliant With NFPA, and FM/UL standards.
- The balancing valves controls the ratio of foam concentrate to accurate levels.
 - UL listed proportioner
- Foam concentrate can be refilled when operating and used for high LPM/GPM foam flow supply requirements.
- Power supply can be diesel engine, electric motor, or water turbine (or any combination of power sources).
- Bronze foam pumps available in capacities from 110LPM/30GPM to 1,890LPM/500GPM
- Working flow can be 120~20,400LPM (320~5,400GPM)
- Working pressure range: 0.4MPa~2.0MPa (58PSI~290PSI)

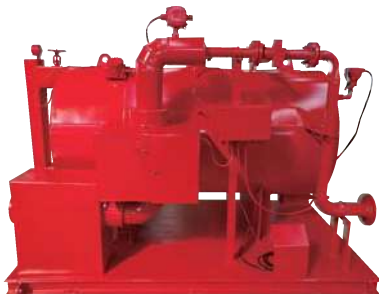
Water Motor Foam proportioning Unit

- NFPA compliant design
 - Driven by fire-fighting water, no extra power needed.
- Easy to operate, needing only to control the inlet and outlet valves to control flow rate
 - The flow of foam solution is flexible and range wide.
 - The ratio of foam concentrate is accurate.
- Foam proportioning rate is immediate and easily adjustable
 - Working flow can be 120~20,400LPM (320~5,400GPM)
- Working pressure range: 0.4MPa~2.0MPa (58PSI~290PSI)



Hi-expansion Porportioning Unit

- NFPA compliant design
- In-line inductor mounted on the foam concentrate storage tank.
- Used to inject foam concentrate into a water supply line at a pre-set ratio.
- Non-corrosive stainless steel or bronze piping and tank available.
- Flow can be 240LPM (64GPM), 360LPM (95GPM) or 480LPM (127GPM)
- Working pressure range: 0.4MPa~1.6MPa (58PSI~290PSI)



Hi-expansion foam Generator

- No outside source of power required .
 - Stainless steel body and screens.
- Four different models available: PR-3, PF-4, PF-6, and PF-10
 - Working pressure 3 bar to 10 bar(40 to 100 PSI)





Foam System

Foam is an important method for fire extinguishing of A and B type fire. The foam system is an essential part of the whole firefighting system. Foam systems and equipment provided by our company can suitable all kinds of dangerous area. They all comply with NFPA 11.

Foam System

Balanced Pressure Proportioning Unit

Bladder Pressure Proportioning Unit

Water Motor Foam proportioning Unit

Hi-expansion Porportioning Unit

Foam generate

Foam make

Foam monitor trailer





Foam concentrate tank

- Designed and manufactured according to ASME or EN standard.
- Anti-corrosion material.
- Various patterns and models for option.
- Capacity decided as requirement.



Foam Hydrant

- Stainless steel material
- Coupling can be BS(John Morris), Din (Storz), JIS(Machino) and etc.



Medium expansion foam Branchpipe

- Stainless steel material
- Two models: 480LPM (127GPM) or 960LPM (254GPM)

Foam maker

- Stainless steel material
- Flow: 360LPM (95GPM), 720LPM (190GPM), 1,440LPM (390GPM) or 2,880LPM (750GPM)



Foam pourer

- Stainless steel material
- Flow: 360LPM (95GPM), 720LPM (190GPM) or 1,440LPM (390GPM)



Bladder Pressure Proportioning Unit

- Compliant With GB, NFPA, and FM/UL standards
- Tank capacity: 500 liters to 15,000 liters (130 to 4,000 gallons)
- Water pressurized bladder construction, simply structure and simple operation.
- Bladder tank can be designed and manufactured according to GB, ASEM or EN standards
 - Working flow can be 120~20,400LPM (320~5,400GPM)
 - Working pressure range: 0.4MPa~2.0MPa (58~290PSI)



Mobile Foam Extinguishing Unit (Low-Ex)

- The material of tank can be fiberglass which has excellent non-corrosion qualities.
- The tank capacity available to 300 liters / 80 gallons.
- The units provide excellent mobile fire protection.
- Flow: 240LPM (64GPM) or 480LPM (127GPM)

Mobile Foam Extinguishing Unit (High-Ex)

- The material of tank is stainless steel which has excellent non-corrosion qualities.
- The tank capacity available to 300 liters / 80 gallons.
 - The units provide excellent mobile fire protection.
- Flow: 240LPM (64GPM), 360LPM (95GPM) or 480LPM (127GPM)



Foam Monitor Trailer

- Foam monitor and foam concentrate tanks are available on trailers of varying design and construction.
- Trailers are designed and engineering to clients specific requirements in many capacities and flow rates
- Diesel foam pump package can also be added on the trailer.



Fire Monitor

- Compliant to NFPA, and FM standards
- Monitor Assembly is welded construction
- Stainless steel or carbon steel body available
- Stainless steel, brass or aluminium nozzle available
- Handle manual, wheel manual, electric or hydraulic operation type can be chosen.
- Capacity: 1,200LPM~21,000LPM (317.5GPM~5,555GPM)



Monitor Tower

- Be suitable for every hazard area
- Single floor, double and triple floors available
- Middle rest platform for option.
- Customized layout of accessories as requirement.

Fire Monitor

The fire monitors are used for putting out of large fire, and our company's products have complete specifications, superior performance and high reliability.

The fire monitor tower is a special equipment that raises the fire monitor to a certain height to give full play to the fire extinguishing ability of the fire monitor. The company's fire monitor tower can be designed and manufactured according to customer requirements.



Fire Monitor

- Fire monitor system
- Manual Fire Monitor
- Electric Fire Monitor
- Hydraulic Fire Monitor
- Mobile Fire Monitor
- Oscilating Fire Monitor
- Monitor Tower





- Agent capacities ranging from 250 to 3,000kg (550 to 6,660lb) for a wide range of hazard sizes.
- Nitrogen and powder storage vessels available with ASME stamp.
- A wide range of dry chemical storage tanks and pressure vessels are available to meet clients requirements.
- Stable discharging performance even in cold ambient temperature.
- Can be deployed by hand held hoses, fixed monitors, or a combination of both.
- Dry chemical systems are engineered and design to industry standards.



Other Fire Suppression System

DCP System

Customized System

Deluge Valves

Hose Reel Station

Control System



Dry Chemical Powder System

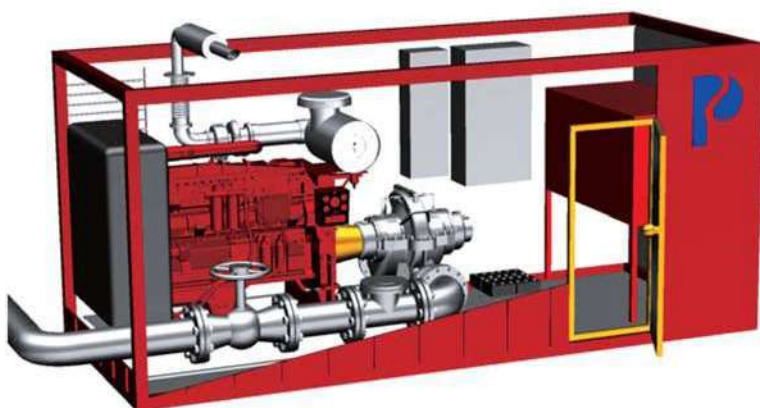
Customized firefighting systems are all designed and manufactured according to the client's special requirement.





Foam /Water Skid

- NFPA compliant design.
- Easy to transportation as the common skid.
- Can supply fire water or foam solution as requirement.
- Used to injector foam concentrate into the water supply line at a pre-set ratio.
- Anti-corrosive stainless steel or bronze materials available.
- With controller on the skid, the system can be controlled and monitor.



Emergency Firefighting System

- Move easily, and can suction from the raw water source.
- Can supply large flow and high pressure fire water.
- Can supply water long distance with large flow fire hose.



Customized System

Customized firefighting systems are all designed and manufactured according to the client's special requirement.





Deluge Valve

- Pressure Rating: 20 Bar (300PSI)
- Sizes available: 50mm (2") to 300mm (12")
- Designed and engineered for a simple valve construction.
- Will regulate from zero to full flow with no need for additional throttling plug or by-pass valves
- Low pressure loss in base model. Applicable with any deluge activation control system
- Stainless steel and bronze material available
- Stainless steel tube and pipes.
- Pressure gauge or pressure transmitter available.
- Parker brand solenoid valves or other equivalent brand valves.

Hydrant

- Sizes available: DN100 (100mm / 4") and DN150 (150mm / 6")
 - Pressure ratings: PN16 (16 bar / 250 PSI)
 - Compliant to NFPA or BS standards
- The fire hydrants are of heavy steel construction and suitable for any location.
 - Reliable structure, and not easy to be destroyed.
- Each unit has low pressure loss and valve control allows for pressure control.
 - Hydrants are equipped with "twinned screw" assembly for easy operations.
- Hydrants are equipped with drain valves and are of low maintenance design.



Hose Reel Station

- Pressure ratings: PN16 (16 bar / 250 PSI)
- Complete stainless steel structure.
- Double bearing easy operation
- Select the length of hose as requirement
- Different volume tank available.
- Water station or foam station available.

Other Fire Suppression System

As industrial firefighting system provider, beside the fire pump system, foam system and fire monitors, we also provide other important accessory equipment, such as deluge valves, hydrant and hose reel station etc.



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Diesel Engine Fire Pump Controller

- According to NFPA standard.
- Professional industrial PLC as core.
- Has touch screen, setting parameters easily.
- Be suitable different diesel engine.
- Piping pressure signal and other signals for option.
- Different IP degree for option
- Can add weekly test function
- Feedback signals confirmed according to project's requirement.

Fire Monitor Controller

- According to NFPA standard.
- Bus control system, easy operate, low cost.
- Different structure, console or vertical cabinet.
Different operate model, button or stick.
- Can be remote, local and wireless controlled.
- Different IP degree and Ex-proof degree for option
- Feedback signals confirmed according to project's requirement.



Controller for foam system or DCP system

- According to NFPA standard.
- Professional industrial PLC as core.
- Can be remote, local and wireless controlled.
- Can be control the system according to pressure signal.
- Different IP degree and Ex-proof degree for option.
- Feedback signals confirmed according to project's requirement.

Linkage Controller for Firefighting System

- According to NFPA standard.
- Professional industrial PLC as core.
- Can be remote, local and wireless controlled.
- Different IP degree and Ex-proof degree for option.
- Feedback signals confirmed according to project's requirement.



Control System

As the nervous centralis of the firefighting system, the control panel is necessary. PDFC provides all the controllers of the firefighting subsystem, according to project requirement and related standard.





Pump and foam system testing station

QUALITY AND TESTING

PDFC is committed to quality and excellence. Our Quality Management System meets the requirements of ISO 9001:2000. We are constantly evolving finding new solutions that create value for our clients. Whether you are looking for a technical solution outsourcing maintenance, or all together a new technology, PDFC invites you to call and explore the possibilities with us.

Fire monitor testing area



Facilities



Warehouse

Structural Fabrication, Welding, Assembly,
Surface Preparation and Painting





- COSL-The Gulf of Mexico offshore platform project (2006)
- CNOOC LD 27-2/32-2 (2007)
- Noble Energy EDC DPB (2009)
- CNOOC SZ36-1 Platform (2011)
- CNOOC KL 10-1 Platform (2012)
- New field LF7-2 Platform (2012)
- SINOPEC EDC DPC (2013)
- CNOOC HY-CX Oil Gas Field (2013)
- CNOOC WC Oil Field (2016)
- CNOOC DF13-2 Plateform (2017)
- CNOOC CFD Oil Field (2018)

OFFSHORE PLATFORM



PETROCHEMICAL TERMINAL

- CNOOC & Shell- Mabianzhou Jetty (2007)
- Port Sudan oil terminal (2003)
- Mauritania friendship harbor 4#, 5# berth construction project (2013)
- SINOCEM Quanzhou 300,000 Tons Oil Terminal (2017)
- Zhoushan Shihua Crude Oil Terminal (2014)
- Qijashan Chemical Terminal (2015)
- CNPC Ningbo Daxie 450,000 Tons Oil Terminal (2016)
- Zhejiang FPC Chemical Terminal (2012)
- CNOOC SZ 36-1 Terminal (2011)
- China-Myanmar Crude Oil Terminal (2007)
- Angola Oil Terminal

- CPP, National Oil Storage, Namibia (2017)
- CPP, Oil depot project in Khartoum, Sudan (2011)
- CNPC Turkmenistan Oil Farm (2008)
- Zhoushan National Oil Storage Project (2007)
- CNOOC Mabianzhou Oil Storage Farm (2009)
- CNPC Dlian Bonded Area Oil Farm (2012)
- SINOPEC Huangdao Oil Farm (2006)
- SINOPEC Zhenhai National Oil Farm (2014)
- SINOPEC Tianjin National Oil Farm (2016)
- SINOPEC (HONGKONG) Hainan Oil Farm

TANK FARM



Reference List



LNG TERMINAL

- CNOOC FuJian LNG (2007)
- CNOOC ShangHai LNG (2007)
- CNPC JiangSu LNG (2009)
- CNPC Dalian LNG (2010)
- CNOOC ZheJiang LNG (2011)
- CNOOC ZhuHai LNG (2011)
- SINOPEC ShangDong LNG (2012)
- CNOOC BeiHai LNG (2013)
- CNOOC Shenzhen LNG (2013)
- SINOPEC TianJin LNG (2016)
- ZhouShan LNG (2017)

- COSL 6500HPFi-Fi 1 (Huangpu Ship)
- COSL 6500HPFi-Fi 1 (Dalian Liaonan)
- COSL 6500HPFi-Fi 1 (Bohai)
- TianJin Floating LNG
- ZPMC 15000HP Ship
- CNOOC BZ25-1 HYSY113 FPSO
- CNOOC LH16-2 HYSY119 FPSO
- CNOOC LS17-2 SEMI platform

- (2007)
- (2007)
- (2007)
- (2012)
- (2013)
- (2017)
- (2019)
- (2019)

SHIP AND MOU



REFINERY

- CNOOC & SHELL CSPC NANHAI PETROCHEMICAL PROJECT (2005)
- BASF MDI COMPLEX CHONGQING PROJECT (2012)
- BASF IPS II Project (2010)
- BP Zhuhai PTA #3 Project (2013)
- Kazakhstan PKOP Shymkent Refinery Project (2017)
- Dalian Hengli Refinery 20 Million Tons per year (2017)
- ZPC Refinery 20 Million Tons per year (2017)
- CNPC Yunnan Oil Refining 10 Million Tons per year (2015)
- WORLEYPARSONS-Symrise (Nantong) Project of 45,000-ton Flavors and Fragrances / year (2018)
- Technip—AT88 PROJECT OF BLUESTAR ADISSEO (NANJING) (2018)