

# MAIN CUSTOMER

The main customer network of ZTOC is distributed across Europe, North America, South America, the Middle East, Southeast Asia, Africa and the Chinese domestic market.



# FLEXIBLE COMPOSITE PIPE



Jiangsu Zhengdao Ocean Technology Co.,Ltd

# FLEXIBLE COMPOSITE PIPE



**10KM+**  
SPOOLABLE PIPE INSTALLED PER DAY

**30%+**  
REDUCE INSTALLATION COSTS

**20 YEARS**  
THE SERVICE LIFE OF THE PRODUCT

**300-1500 METERS**  
THE LENGTH OF EACH REEL

- CORROSION RESISTANT
- QUICK AND EFFICIENT INSTALLATION
- COST-EFFECTIVE
- SAFE AND DURABLE
- QUALIFICATION PROGRAM IN ACCORDANCE WITH API 15S AND API 17J

 WATER INDUSTRIAL WASTE  
 GAS  
 OIL  
 CHEMICAL  
 NEW ENERGY INDUSTRY(H<sub>2</sub>, CO<sub>2</sub>)

## FLEXIBLE COMPOSITE PIPE

ZTOC's flexible pipes feature a multi-layer structure design, with diameters ranging from 2 to 8 inch (DN 50 to 200), suitable for various pressure ratings, lengths, and bending radii. They are designed for the transportation of oil, gas, water, and multi-phase fluids. Over 10,000 kilometers of flexible composite pipes are estimated to be in operation worldwide.

The spooled line pipe packaging allows for convenient storage, intermodal transportation, and quick deployment on-site. ZTOC offers spooled and reel-less packaging options based on customer requirements. ZTOC's connection systems include end flange fittings, midline connectors, venting valves, and swaging equipment.

ZTOC provides a standard installation procedure and certified operators to ensure successful installation.

## CUSTOMISATION

Common sizes are normally in the 2 to 8 inch range (DN 50 to 200), with larger sizes available upon request especially for offshore applications.

The design of the pipe structure can be tailored to meet the specific conditions of the project, taking into account parameters such as flow rate, temperature, pressure, and the transported fluids.

**20 YEARS SERVICE LIFE** Our products are suitable for both onshore and offshore applications, with pipes designed to last for 20 years.

**10,000+ KILOMETERS** Over 10,000 kilometers of ZTOC pipes are currently in service worldwide.

## APPLICATION AREA



Land, Desert, Swamp

Mine, Mountains, Rocks

Offshore, Ocean Engineering

# ONSHORE FLEXIBLE COMPOSITE PIPE

**2 to 8 inch  
(DN 50 to 200)**

**Up to 3600psi (25MPa)**  
Design pressure

**20 years**  
Service life

**984-4921ft (300-1500m)**  
Per reel length

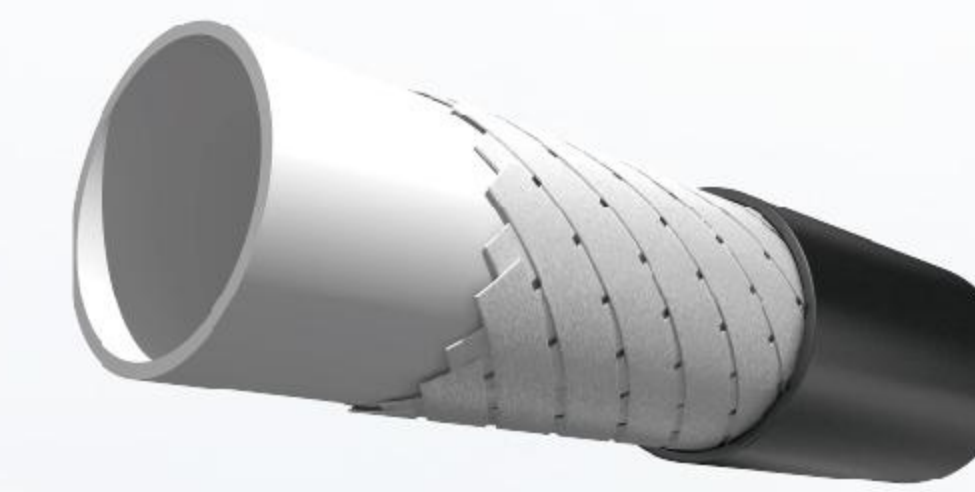
**Up to 266°F (130°C)**  
Design temperature



## FEATURES

- Spoolable and compact.
- Qualification compliant with **API 17J and API 15S**.
- Anti-corrosion, high pressure and high temperature resistance.
- Metal and non-metal reinforcement materials.
- Safe, cost-effective and environmentally friendly.
- Oil and gas gathering, water transfer and CO<sub>2</sub> injection.
- Our connection systems include gas-venting system.
- The service life of surface and buried installations is 20 years.

## COMMON FLEXIBLE COMPOSITE PIPE FOR ONSHORE



### ZTOC TCP

Glass fiber reinforced composite pipe

Non-metallic  
Bonded process  
For new energy transportation



### ZTOC SCP

Steel cord reinforced composite pipe

High pressure  
High temperature resistance  
For different geological



### ZTOC RTP

Polyester fiber reinforced composite pipe  
Aramid fiber reinforced composite pipe

Light weight  
Low cost and economical  
Easy to install



# ONSHORE APPLICATION

Installation Year: 2013

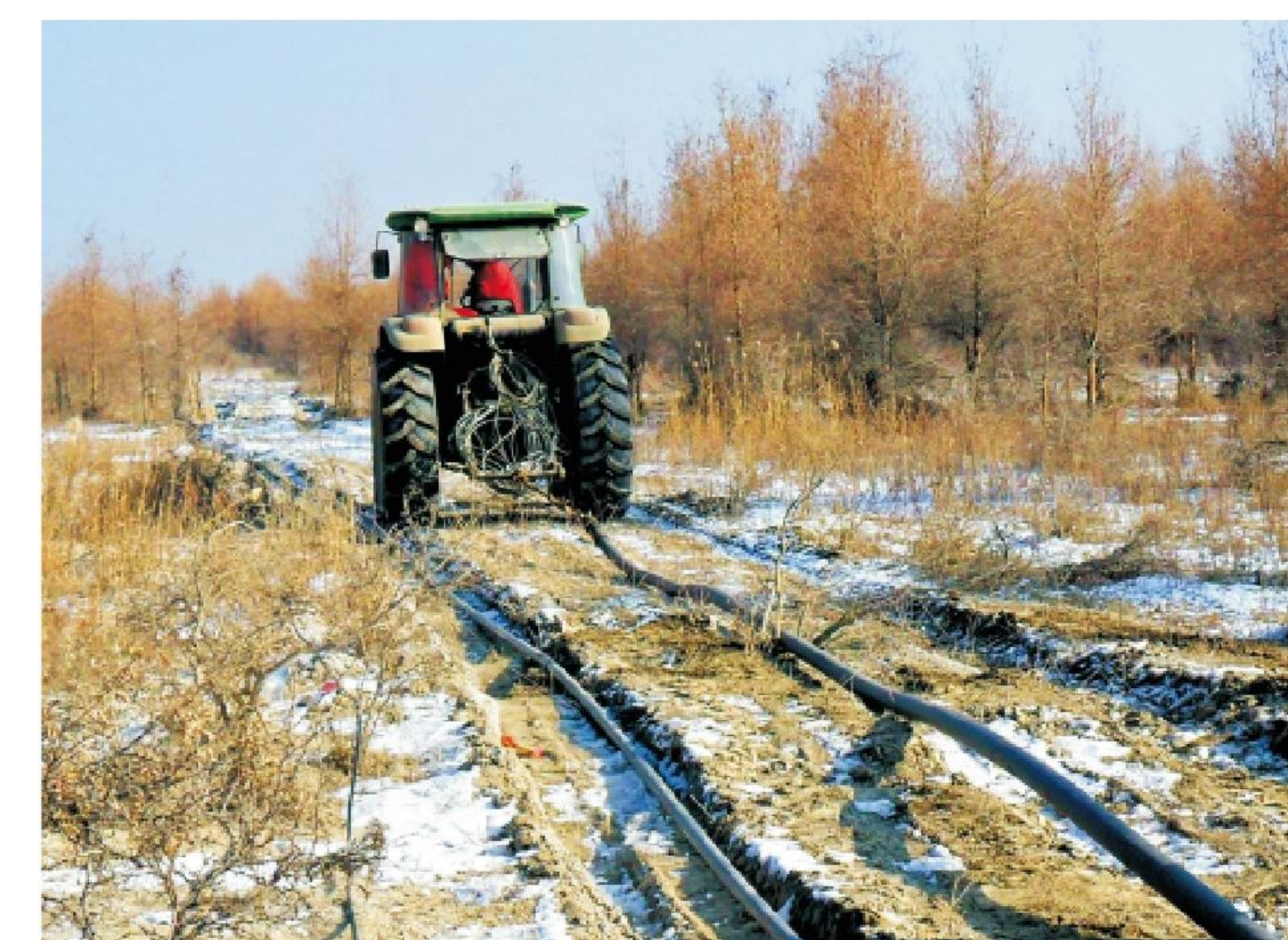
Product: 3inch 725psi-1500psi (DN 75, 5-10MPa)

Application: Water Injection



Onshore use cases are found all over the world, in Europe, the Americas and Asia. Our most typical application can be exemplified in Argentina, where we provided an onshore pipeline solution for an oil field company. The oil field area had a harsh environment with a dry climate, high temperatures, low rainfall, and high soil ion content, with Cl-content up to 230,000 ppm, leading to serious corrosion of metallic materials.

As a solution, we provided an engineered ZTOC pipe which had a glass fiber reinforcement. Currently, the pipeline is operating satisfactorily.



- OIL AND GAS INDUSTRY
- GREEN ENERGY
- MINERAL AND COAL MINING INDUSTRY
- CHEMICAL INDUSTRY AND OTHERS



# CASES

# OFFSHORE FLEXIBLE COMPOSITE PIPE

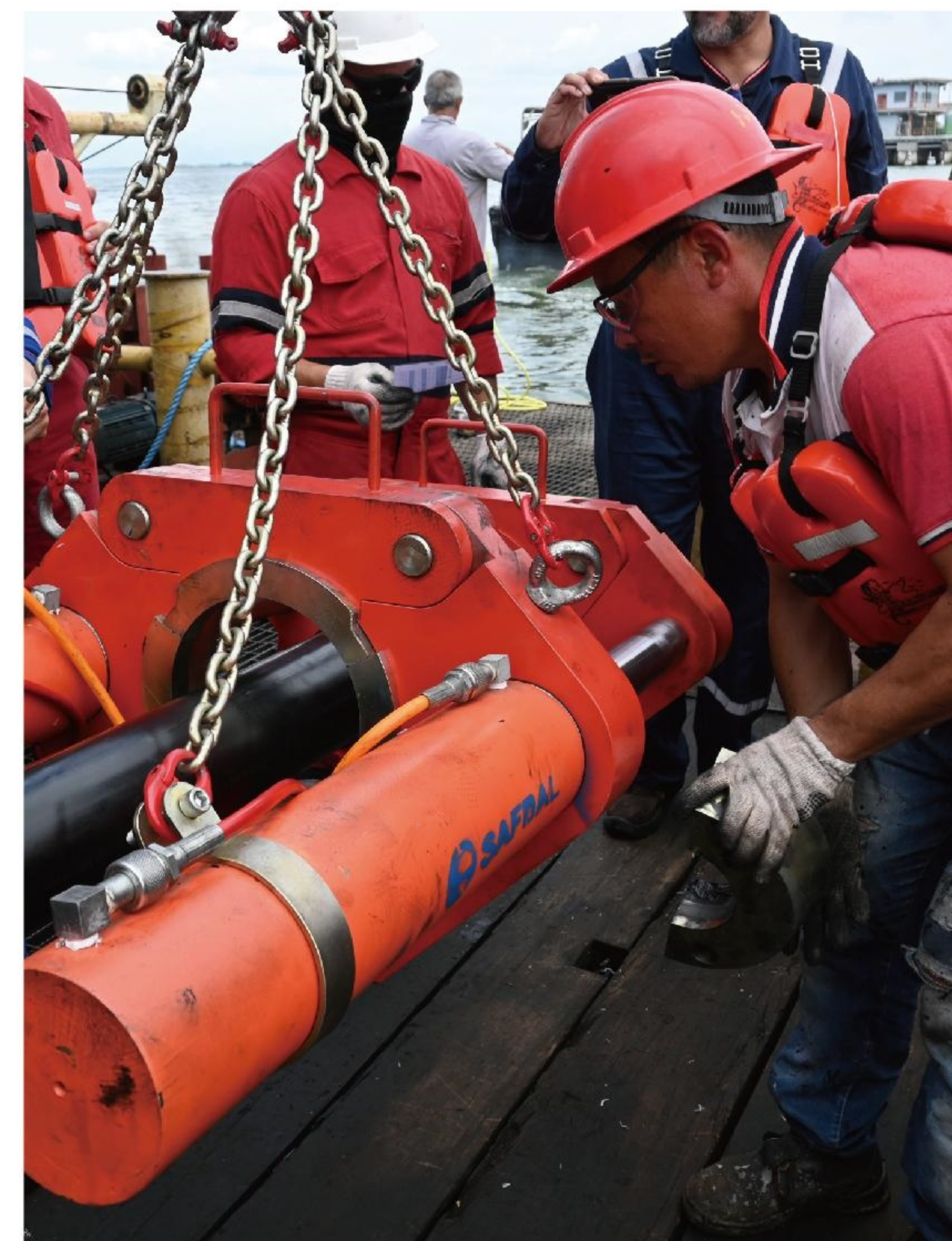
**4 to 12 inch  
(DN 100 to 300)**

**Up to 3600psi (25MPa)**  
Design pressure

**20 years**  
Service life

**Over 656ft (200m)**  
Water depth

**Up to 266°F (130°C)**  
Design temperature



## FEATURES

- Multi-layer and anti-buoyancy design.
- Qualification is compliant with API SPEC 17J.
- Oil, gas and water transportation systems.
- Flexible reinforced composite pipe, cost of installation is less than steel pipe by up to 50%.
- Propriety connection systems include gas-venting features.
- Proven track with projects in lakes in South America and Bohai Bay in China

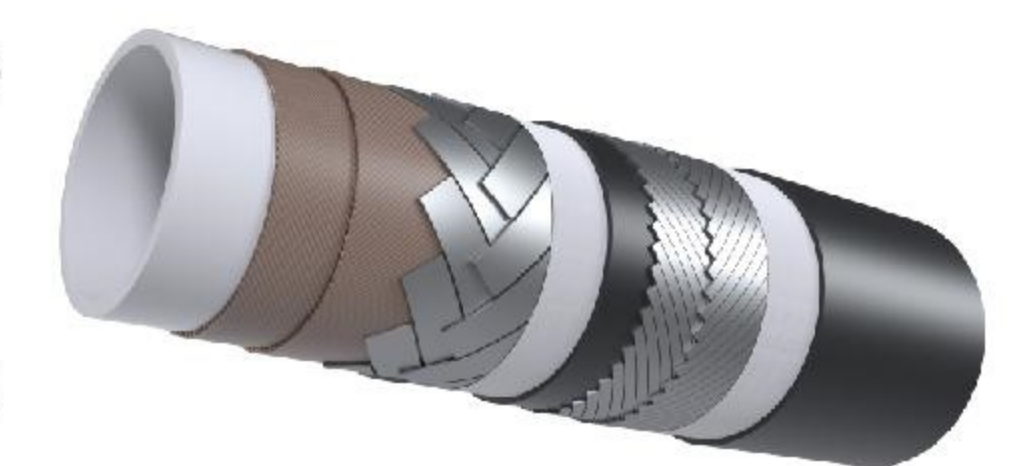
## ZTOC OTP

ZTOC provides 4 to 12 inch (DN 100 to 300) OTP pipes with a pressure rating of up to 3600 psi (25 MPa), and a maximum continuous operating temperature which can reach up to 266 °F (130 °C).

Our products comply with the API 17J standard and we can design according to different subsea conditions to meet the needs of applications in lakes, shallow seas, and deep seas over 656 ft (200 m).

ZTOC OTP can be used both in Flowline and Riser applications in oil and gas production and high-pressure injection, offering the advantages of flexibility, cost-effectiveness, excellent corrosion resistance, and collapse resistance.

The regular structural components include an HDPE liner, carcass, steel wire tensile layer, anti-wear layer, steel tape bonded and unbonded reinforcement layer, HDPE protective layer, and steel tape counterweight layer, all encased in an HDPE jacket.



Flowline



Riser

# OFFSHORE APPLICATION

Installation Year: 2017

Product: 2 inch 2300psi (DN 50 16 MPa)

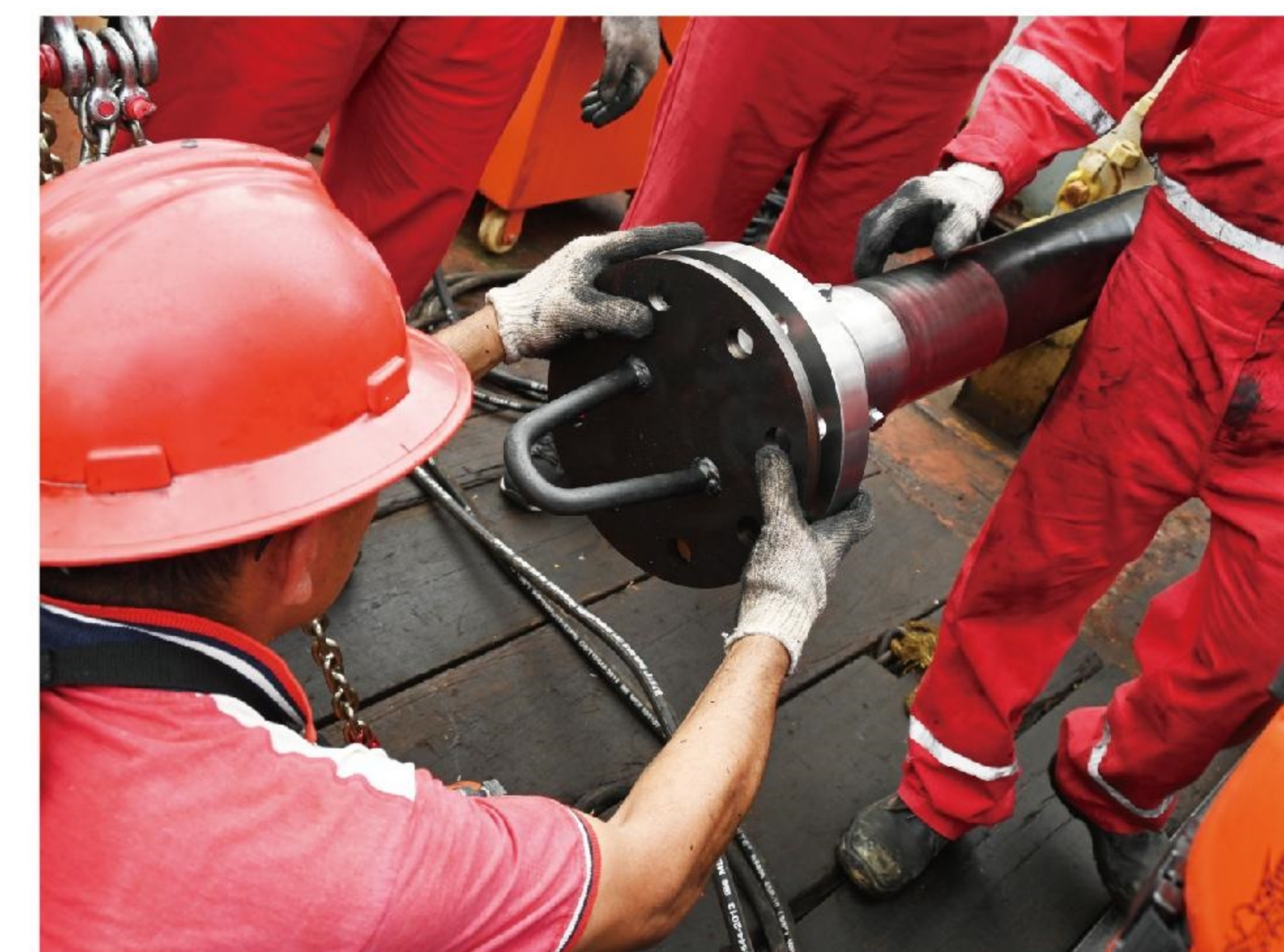
4 inch 1500psi (DN 100 10 MPa)

6 inch 1500psi (DN 150 10 MPa)

Application: Oil & Gas Transportation



We also have vast experience in offshore applications. Typically, we provided a ZTOC pipe to replace old steel pipes transporting oil in a lake located in South America. Our product contained 9 layers, including tensile and counterweight layers. The water depth was 148 ft (45 m). Currently, 800 kilometers of pipeline have been installed with the pipes operating satisfactorily.



- SHALLOW WATER
- LAKES
- RIVERS
- DEEP SEA



# CASES