



Flexible pipeline

Aban marine CO.

Comprehensive Solutions for Offshore Flexible Pipelines
and Accessories



About Us

ABAN Marine Co. is a trusted leader in delivering high-quality offshore flexible pipelines and risers, integrated by expert installation and repair services. With a robust commitment to reliability, safety, and innovation, we specialize in addressing the unique demands of diverse offshore environments. Our cutting-edge solutions are designed to ensure optimized performance, even in the most challenging conditions, empowering our clients to achieve operational excellence with confidence.

ISO 9001

ISO 14001

ISO 45001

ISO IMS





Our Products

Flexible Pipelines and Risers

flexible pipes are complex multi-layered structures that generally made of metal and plastic. The Metal layers Provide Mechanical Strength , while the plastic section to seal the bore and to protect from external environment. Flexible pipes can be used either as static flow lines to transfer fluids from a wellhead platform to a production platform or as a dynamic riser for various applications such as transport of multiphase hydrocarbon fluids, water injection and gas lift operation.

Feature:

- Size: 2 to 16-inch ID.
- Design Pressure: 7500 psi.
- Design Temperature: Up to 130°C.

Operational Range:

- Suitable for high-corrosive fluids.
- Up to 1000 meters water depth
- Design life of up to 30 years.

Key Reasons to Use Flexible

- Quicker offshore installation operations
- Easy crossing, less preparation work
- Excellent adaptability to seabed terrains
- Optimized route selection due to inherent flexibility, shorter length
- Superior corrosion resistance.
- Continuous manufacturing eliminates field joints.
- Reusable and environmentally friendly.

Cost benefits

- 30% Lower CAPEX for infield flowline up to 12" ID and lengths up to 10 Km
- Reduced offshore cost for flowline, no metrology & no spool
- Easy crossing, less preparation work
- Excellent adaptability to seabed terrains.
- Significant OPEX costs reduction up to 90%
- No corrosion Inhibitor
- No intelligent Pig



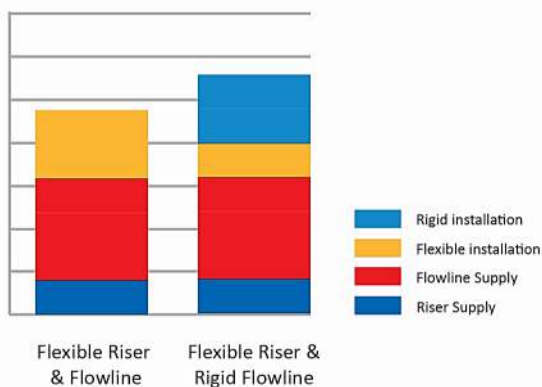


CAPEX Cost Comparison - Maximising saving using flexible pipes,

Recent Cost Comparison:

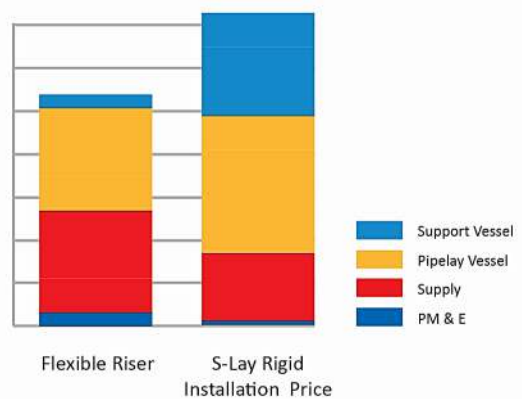
Project A

8 no risers (220m each) (6.5" - 12" ID)
17km of flowlines (6.5" - 12" ID)



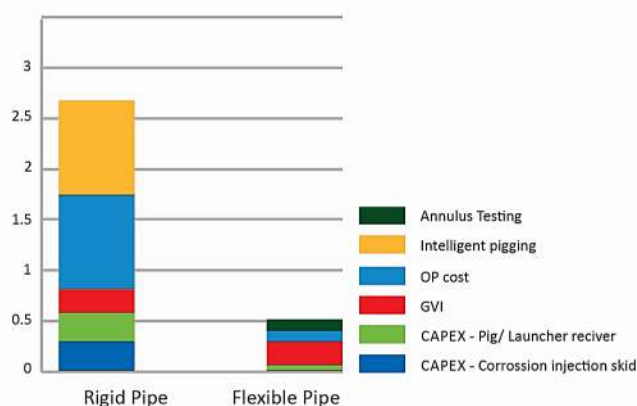
Project B

19km of flowlines (4" - 8 ID)



OPEX related Costs over 5 years (per pipeline)

Cost over 5 year (MUSD)



Estimated Cost To be Finetune With Client

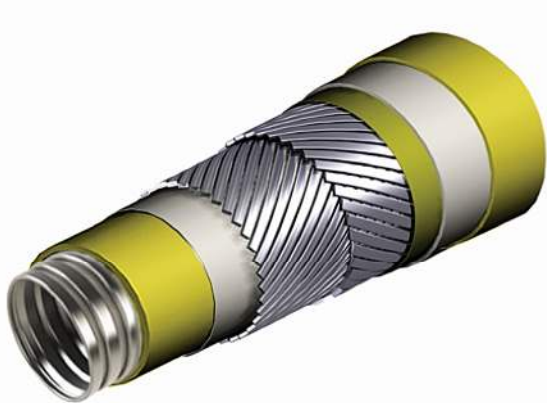
Associated Browfield Cost For Rigid (Top Side Modification and Marine Spread) is Not Included

Cost May Vary According To Diameter and Application

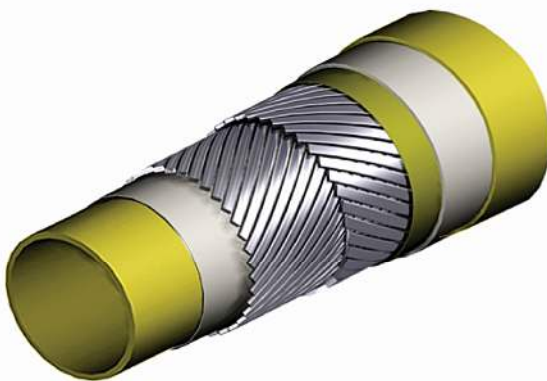
Product Specifications

Feature	Details
Design Pressure	Up to 7500 psi
Design Temperature	Up to 130°C
Maximum Water Depth	1000 meters
Pipe Inside Diameter (ID)	2 to 16 inches
Applications	Oil, Gas, and Water

The flexible pipe features include a design pressure of up to 7500 psi and a design temperature of up to 130°C. It can be used at a maximum water depth of 1000 meters, with an internal diameter ranging from 2 to 16 inches. This pipe is utilized for transporting oil, gas, and water.

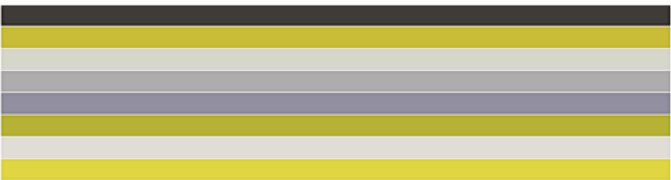


Rough



Smooth Bore

Item	Static Application	Dynamic Application
Inner Diameter	2"-16"	2"-16"
Pressure Rating	≤ 40MPa (7500 psi)	≤ 40MPa (7500 psi)
Temperature Range	-40 C -130 C	-20 C -130 C
Water Depth	≤300m	≤300m
Fluids	Water/Oil/Gas/Chemicals	Water/Oil/Gas/Chemicals



Certifications

- API 17J Production Certificate for flexible pipes.
- BV TAC certification for design, manufacture, and testing.
- CCS factory certification for quality management.

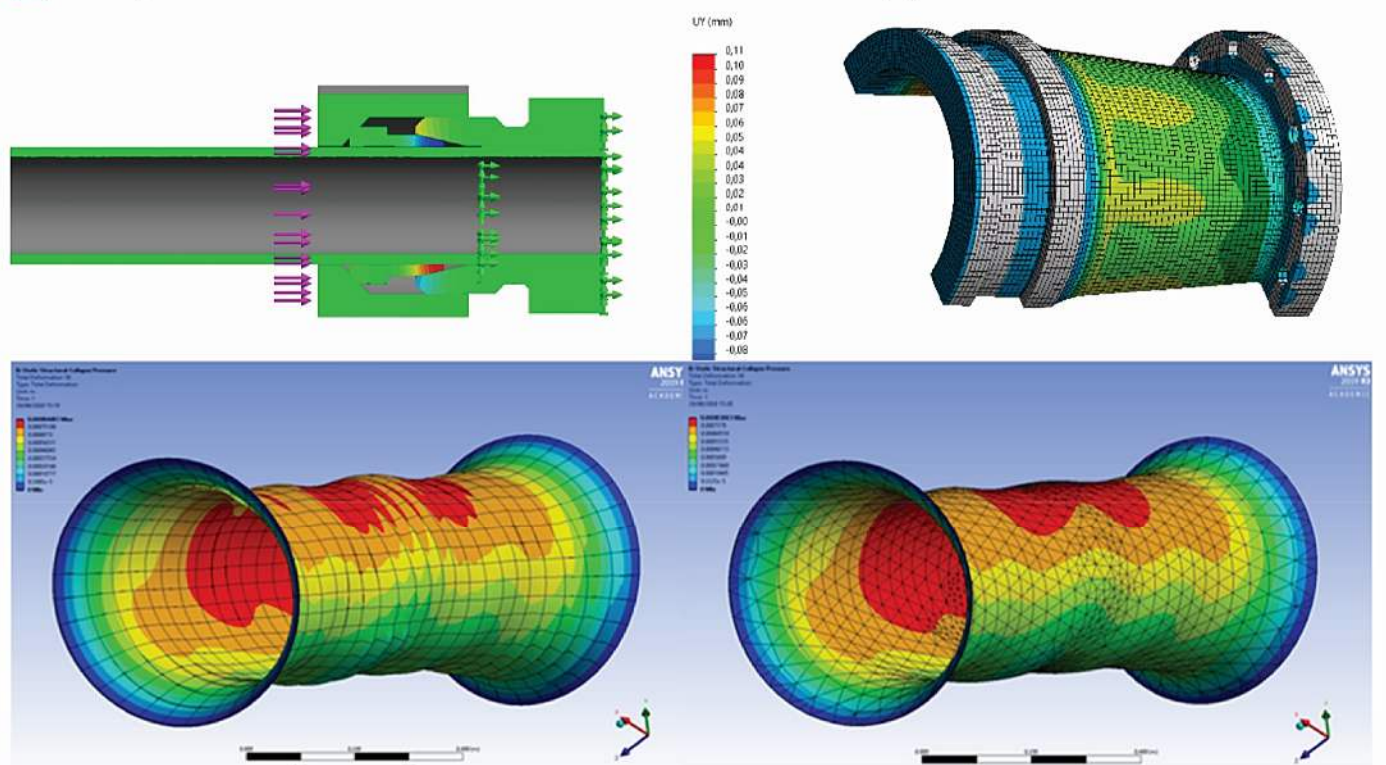
Technical Capabilities

flexible pipes are characterized by having a low bending stiffness Combined with a high axial tensile stiffness. Each layer within these pipes is meticulously designed to serve a specific function, contributing to their overall performance and durability.

■ Design Standards ■ Construction Layers ■ Materials ■ Testing Protocols ■ Accessories



■ Design Standards: API 17B and API 17J for unbonded flexible pipe



Construction Layers:

- Carcass: Prevents collapse of the sheath.
- Pressure Sheath: Ensures a leakproof bore
- Pressure Vault (Zeta): Resists internal pressure.
- Tension Armor: Provides tension resistance.
- Outer Sheath: Protects against environmental elements.

Carcass

Pressure Armour

Inner liner

Anti-wear Layers

Strip Armour

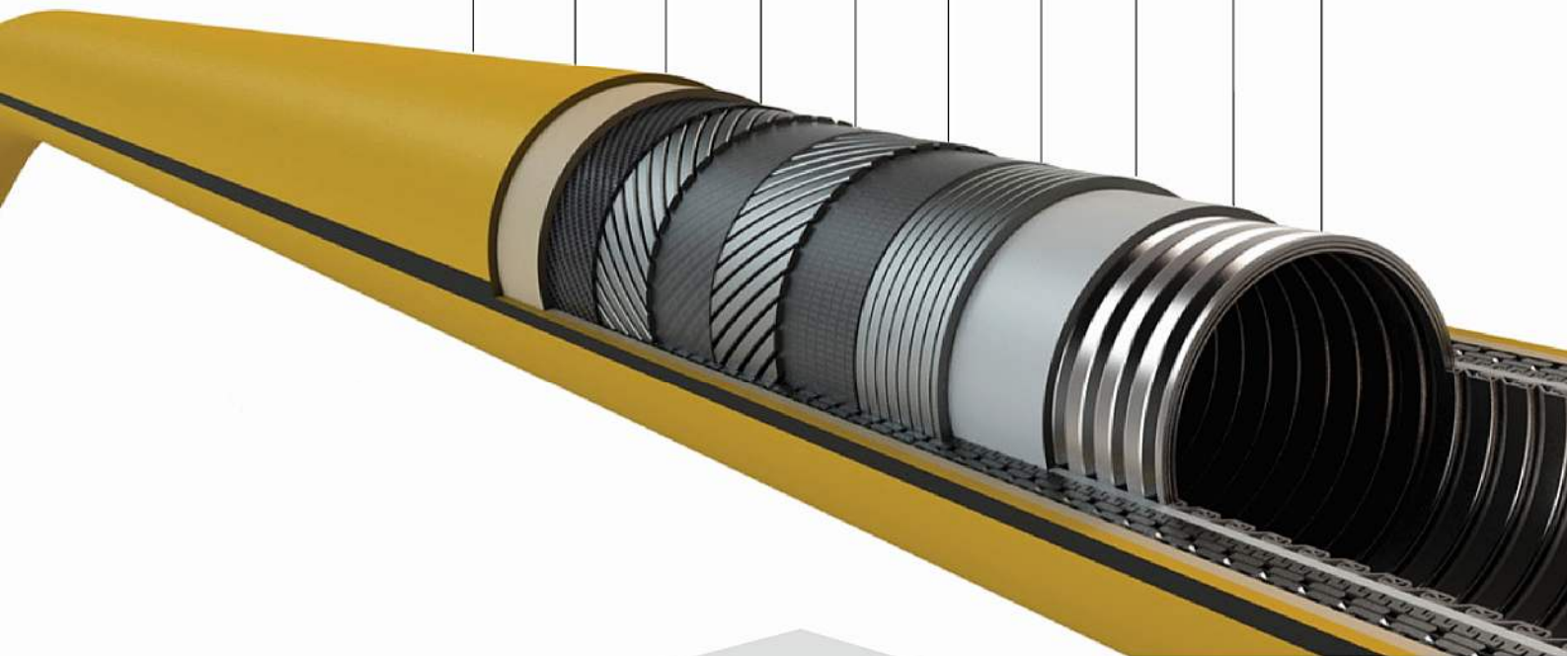
Intermediate Layer

Tensile Armour

Anti-bird Caging Layer

Insulation

Outer Sheath



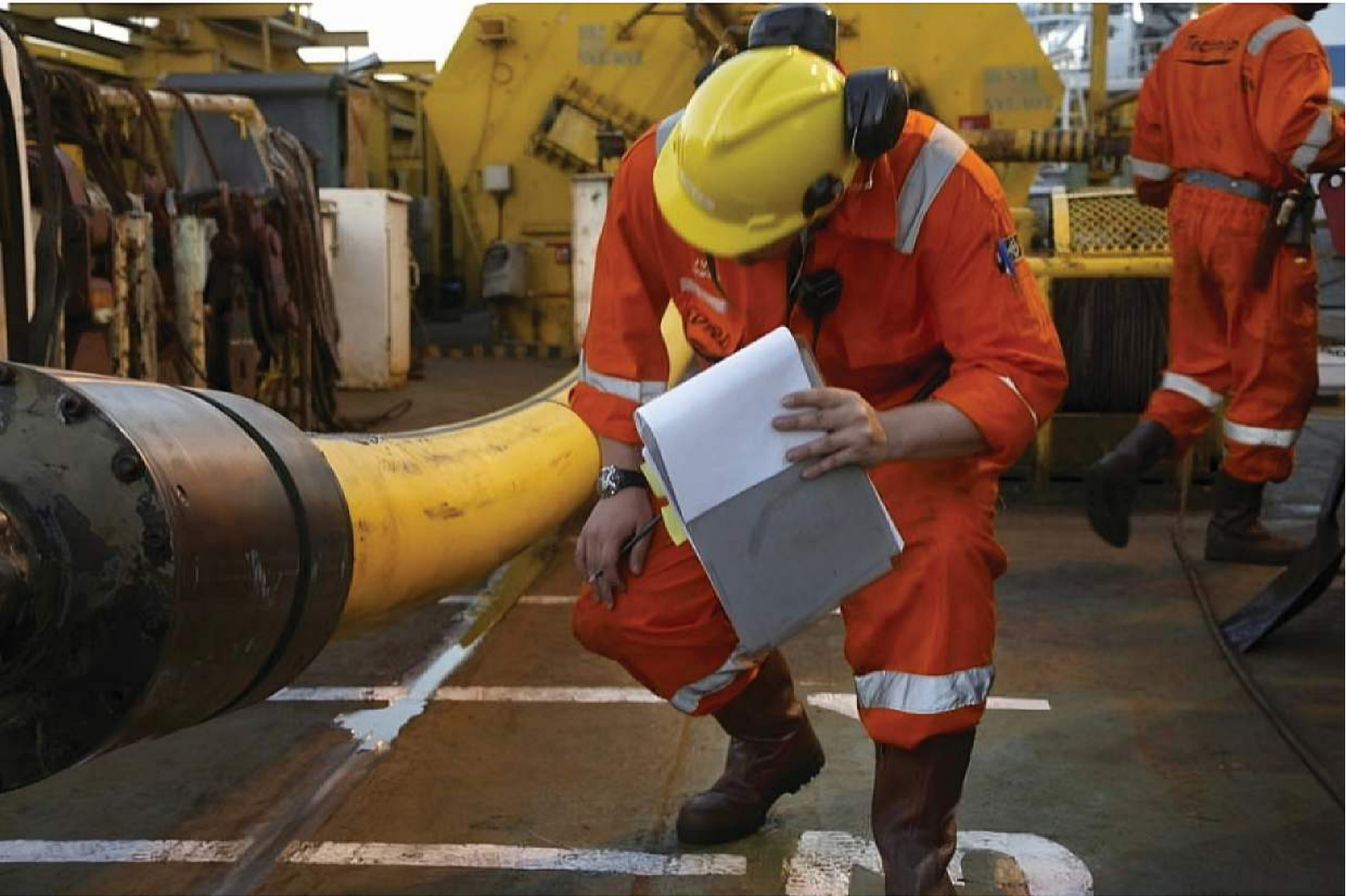
An example of the Various layers of the flexible pipe
Not every layers is used in a given design

Materials:

High-quality alloys, stainless steel, polymers (HDPE, PA11, PEXAND PVDF) for durability.

Testing Protocols:

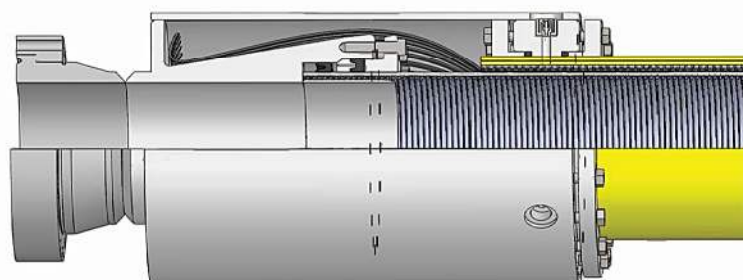
- Factory Acceptance Tests (FAT) for all products.
- Prototype testing to ensure reliability under operational condition



Accessories

- End Fittings: Customizable and robust to ensure secure pipeline connections.

Item	Static Application
Function	- Form the transition between the flexible pipe and the connector - Transfer the load between the flexible pipe and connector
Material Selection Based on	- Fluid properties - Pressure - Temperature
Material	- Carbon steel - Stainless steel - Epoxy
Assembly	Manual process





- **Bend Stiffeners:** Designed to enhance pipeline longevity by preventing excessive bending at critical points.
- **Bend Restrictors:** Ensures structural integrity under varying loads and environmental conditions.

Our Services

Pipeline and Riser Installation

- Expertise in deploying flexible pipelines and risers in offshore environments.
- Access to specialized installation vessels and equipment, including DP2 vessels for close-plat form operations and complete set of pipeline installation spade
- Water depth of operation: Up to 100 meters.
- Resources include tensioners, Reels, Under roller for efficient installation.

Pipeline and Riser Repair

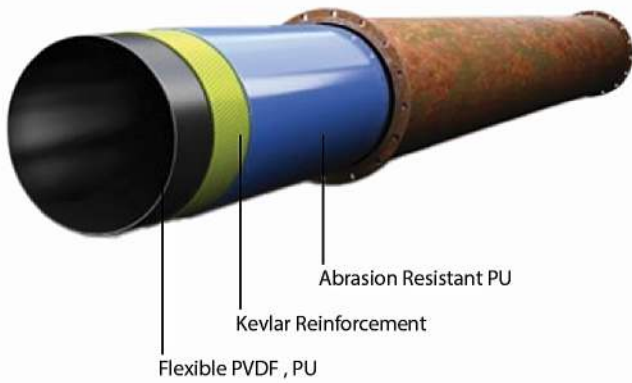
- Comprehensive repair solutions for damaged or aged pipelines.
- Advanced diagnostic tools to assess and rectify issues.
- Dedicated team of engineers and specialists for rapid response.



Pipeline Rehabilitation Using Super Flexible Pipe Technology

Super Flexible Pipe is a breakthrough in subsea pipeline rehabilitation, offering a proven solution to extend the service life of aging oil and gas infrastructure. By leveraging existing host pipelines, this technology delivers a sustainable approach to maintaining production integrity while minimizing environmental impact. Historically, the industry has lacked a viable method to install internal structural corrosion barriers within live hydrocarbon pipelines. Our innovative Super Flexible Pipe solves this challenge through an advanced composite design. Engineered for both longitudinal and axial flexibility, enabling tight bending radii and adaptability to pipeline contours. It can be flattened for compact transport and reeled for rapid installation, significantly reducing downtime. Provides a durable, leak-tight barrier while maintaining flow efficiency. This integrated design represents a paradigm shift in pipeline rehabilitation, offering a cost-effective and sustainable solution to extend asset life without costly replacements.





■ Features:

Host pipeline size: 4 inch – 24 inch

Corrosion-free core

Max burst pressure: 120 bar

Max operation temperature: 60° c

Service life: 20 years

Lower CAPEX and OPEX compared to new pipeline

Installation and Repair Resources

■ Construction Vessels:

DP2 vessels equipped for flexible pipes and cables Installation.



■ Pipeline Recovery Laying Equipment:

Tensioner 15T



■ Diving Equipment:

- Surface supplied Air Diving Crew and gears to provide pipeline recovery and installation services Up to 50m water depth
- Surface supplied Mixed Gas Diving personnel and tools to provide pipeline recovery and installation services for operation at more than 50-75 m water depth

WHY TRUST ABAN MARINE ?

- Proven expertise in offshore pipeline solutions.
- End-to-end services from design to repair.
- Commitment to quality, safety, and environmental sustainability.
- Customizable products tailored to client needs.

CONTACT US

- For more information or to discuss your For inquiries or to explore how we can support your goals, please don't hesitate to contact us.. We look forward to partnering with you to meet your offshore pipeline needs.

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