

NEXT GENERATION LINE PIPE

# EXTREME PERFORMANCE VALUED DURABILITY



OIL & GAS



WATER



CO<sub>2</sub>



OTHER APPLICATIONS

- Reduced CAPEX with up to 65% lower onshore installation cost
- Corrosion-resistant properties minimize cost of maintenance, lowering overall OPEX
- Lowest total cost of ownership vs. steel line pipe
- Proven reliability when failure is not an option
- Environmentally friendly zero emission lines
- Faster commissioning and improved flow rates

# NEXT GENER

FlexSteel is the revolutionary spooled pipe solution that couples the durability of steel with the installation, performance and cost benefits of spoolable pipe products. The highly corrosion-resistant technology was developed from more than 30 years of experience in demanding offshore environments and offers proven performance in both onshore and shallow water applications. The FlexSteel team is a group of hard-working and dedicated people united by a common mission: To responsibly deliver the next generation of pipeline solutions. Our product and services are truly **AHEAD OF THE CURVE**.



#### OIL & GAS

FlexSteel is a smart investment that yields indisputable life-cycle quality cost and performance advantages in a myriad of oil and gas applications.



#### CO<sub>2</sub>

FlexSteel uses a combination of polyethylene and steel to create the ideal pipe for CO<sub>2</sub> transportation.



#### WATER

Fast, easy and cost-effective installation coupled with extreme corrosion resistance make FlexSteel a natural choice for water transportation pipelines.



#### OTHER APPLICATIONS

Our solution-based approach has opened up many applications and markets where FlexSteel adds tangible, long-term value.





# ATION LINE PIPE



**FlexSteel's unique characteristics make it the best and most versatile choice for a variety of environments and applications.**

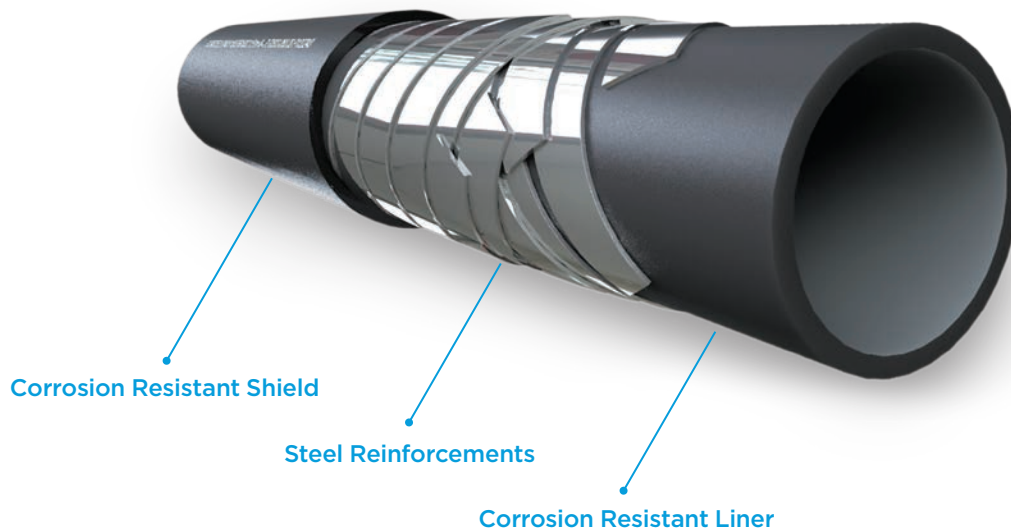
**ACROSS THE GLOBE** FlexSteel outperforms traditional steel line pipe and other flexible pipe through cost-effective measures and proven reliability.

**ROUGH TERRAIN** FlexSteel's innovative and durable design make it the ideal choice for direct installation in difficult terrain. You save time and money because no bedding materials or special handling is required.

**MARSHES, SHALLOW WATER** FlexSteel's unique design protects against corrosion allowing the pipe to remain durable and strong even in shallow water depths up to 100m. Its negative buoyancy and no-weld required connections simplify shallow water installations.

**CYCLIC SERVICE** With superior structural integrity, FlexSteel can be used in cyclic loading environments that can cause other flexible pipe to fail.

# EXTREME BENEFITS



## FLEXSTEEL PIPE



With unmatched structural integrity, FlexSteel continues to perform to original design specifications and does not need to be de-rated over time. Durable by design, it is the only flexible pipe that can be laid directly in rough terrain without affecting reliability. It is the clear choice when failure is not an option.

### DURABILITY

- Steel core provides durability and increased on-bottom stability offshore
- Polyethylene inner liner provides superior corrosion resistance
- Polyethylene outer shield is UV resistant and able to withstand rough terrain
- Stands up to cyclic loading environments
- Manufactured to API17J standards

### INSTALLATION

- Fast, easy and inexpensive to install with minimal disruption to land, and with less complex marine spreads offshore reducing overall installation cost
- Can be laid directly in rough terrain, without needing any special handling or bedding materials
- Superior tension capabilities enable longer pulls, requiring less connections
- Steel reinforced core provides electrical continuity, eliminating the need for tracer wires and lowering costs

### OPERATION AND MAINTENANCE

- Corrosion resistance – greater safety and lower costs for maintenance
- Continues performing to original specifications for longer life and no de-rating over time
- Improved flow rates compared to steel pipe

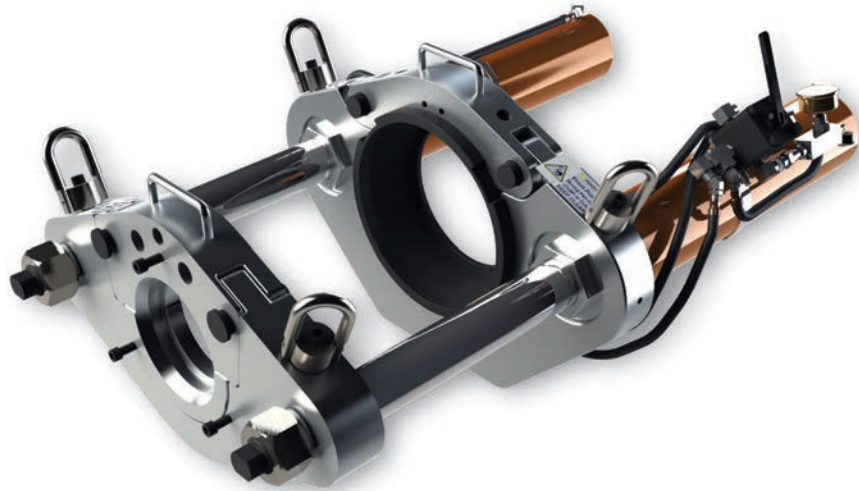
### ONSHORE

<b>Nominal Size Range</b>	2in - 8in	(50mm - 200mm)
<b>*Design Pressure Range</b>	750psi - 3,000psi	(50bar - 200bar)
<b>Operating Temperature Range</b>	-40°F to 140°F	(-40°C to 60°C)
<b>High-Temperature Operating Range</b>	-40°F to 180°F	(-40°C to 82°C)

### OFFSHORE

<b>Nominal Size Range</b>	3in - 6in	(75mm - 150mm)
<b>*Design Pressure Range</b>	up to 3,000 psi	(200bar)
<b>Operating Temperature Range</b>	-40°F to 140°F	(-40°C to 60°C)

\* Please visit our website or contact a FlexSteel sales or technical services representative to verify specific product availability.



## FLEXSTEEL CONNECTIONS

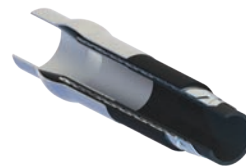


Dedicated to achieving the easiest installation for each project, we offer a variety of end fittings, both flanged and weldneck, as well as a myriad of variations and combinations for making midline connections. Our pre-fabricated and custom fittings provide innovative options for making complicated connections. Manufactured locally at our 24,000 sq ft FlexSteel Connections facility in Houston, Texas means shorter lead times and faster delivery of even the most custom fitting assemblies.



### MIDLINE FITTING

The most common of all of our connections, this fitting is used to connect two lengths of FlexSteel pipe together without having an intermediate flanged or welded joint.



### WELDNECK FITTING

A weldneck fitting can be used to weld FlexSteel pipe to other standard components. Weldnecks are generally used when welded connections are preferred in lieu of bolted connections.



### FLANGED FITTING

The flanged fitting is most often used to connect with other standard pipeline components, such as valves and other upstream/downstream connections.



### SPECIALTY FITTING

Our highly skilled design engineers can design a fitting to fit any need. From 90s, crosses, reducers or tees, we have you connected.

## INSTALLATIONS

Cut project time from weeks to days. FlexSteel is suitable for a variety of installation methods, deploys quickly and easily from a reel.



### TRENCHING

FlexSteel can cut the right-of-way required for trenching installations by 20% to 40% compared to jointed steel and reduce the project duration from weeks to days.



### PLOWING

Plowing installations can be performed three times faster, at 30% to 50% of the cost of trenching, where conditions permit. Using FlexSteel in plowing, you can install multiple miles per day.



### SURFACE LINES

FlexSteel is a great alternative for temporary or permanent surface pipelines. Highly economical, it installs quickly and easily in lengths up to 8,858 feet (2,700 meters) to minimize connections, and can be re-spoiled for reuse on a new project.



### HORIZONTAL DIRECTIONAL DRILLING

FlexSteel has been the solution of choice to overcome surface challenges such as road and river crossings or installing pipe in environmentally sensitive areas.



### PIPE REHABILITATION

Long lengths of FlexSteel – in excess of 10,000 feet – can be pulled through failed pipelines, which quickly and easily restores original operating pressure at a fraction of the cost of new pipeline construction.



### SHALLOW WATER

FlexSteel's unique design protects against corrosion allowing the pipe to remain durable and strong even in shallow water depths up to 100m. Its negative buoyancy and no-weld required connections simplify shallow water installations.



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