

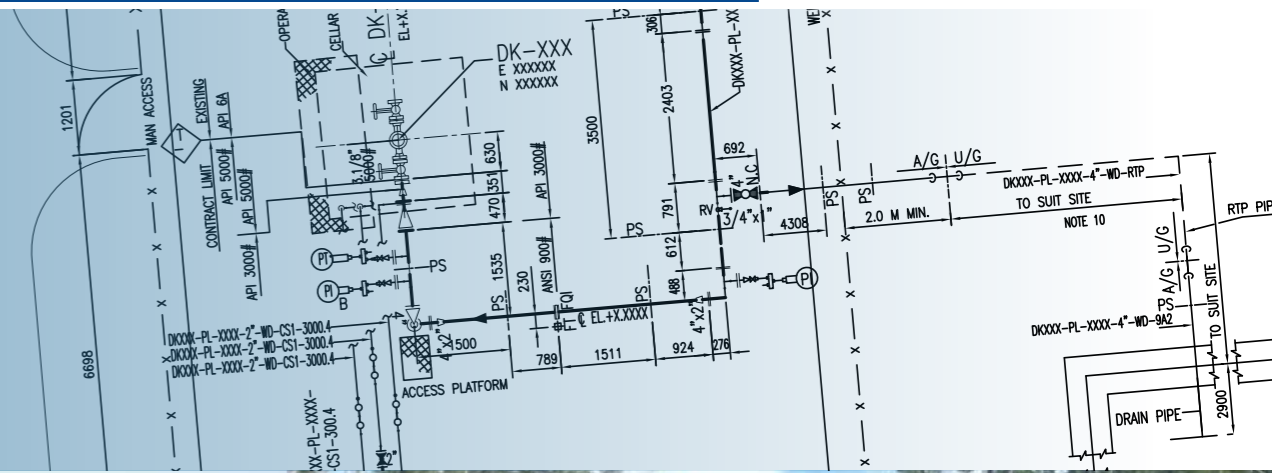


Flexible thinking geared to
today's tough environment

Advanced pipeline systems for oil and gas production

SoluForce[®]

Smart solutions for tough economic conditions



Our clients move hydrocarbons and water from point A to point B in the harshest environments on Earth. They use our system onshore and offshore for oil and gas pipelines, flow lines, water injection lines and effluent pipelines.

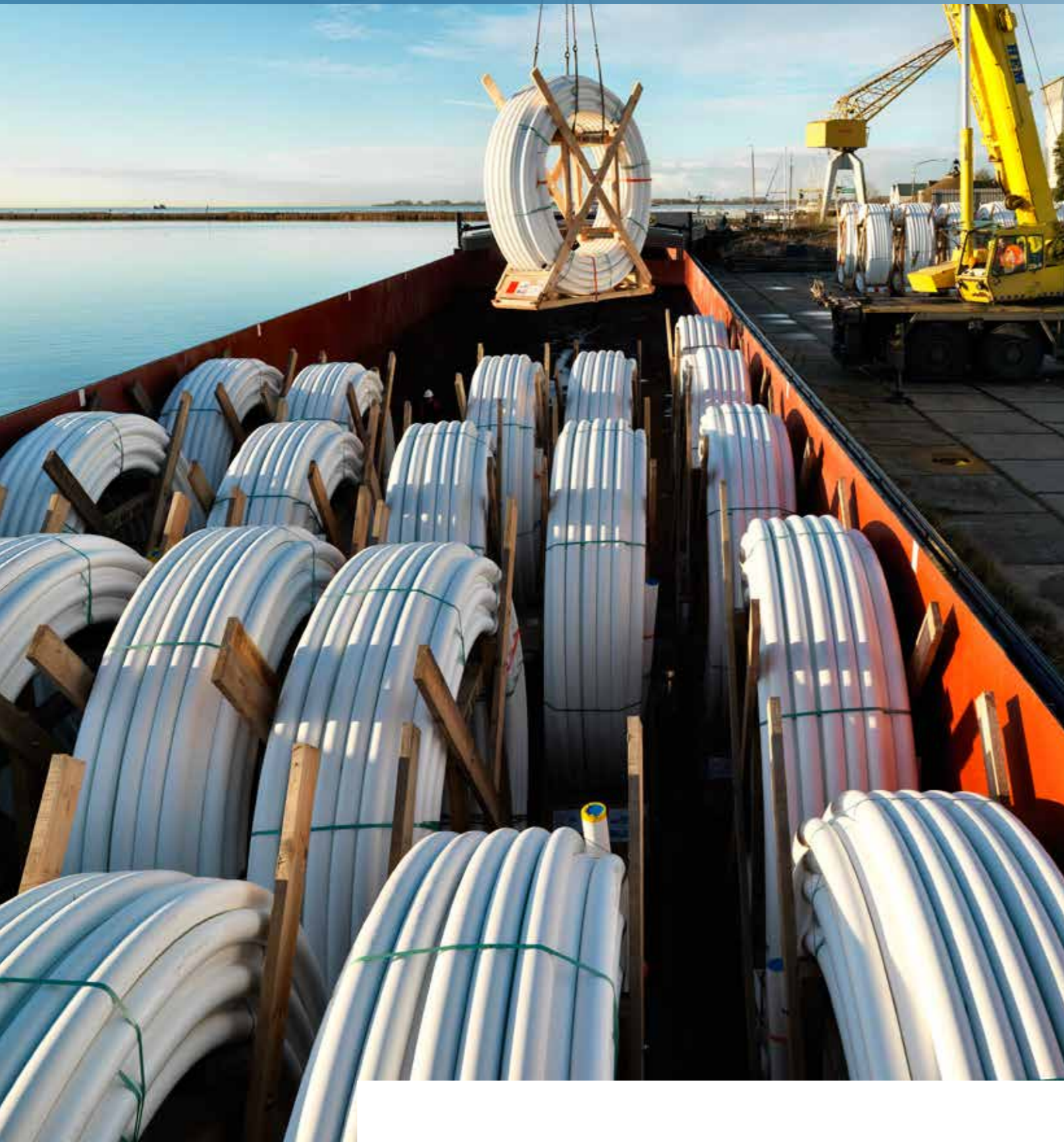
SoluForce® is the originator and technological leader in the research, development, manufacture, supply and installation of Flexible Composite Pipes (also known as Reinforced Thermoplastic Pipes).

The SoluForce® pipe system is completely non-metallic, meaning it can go round corners, up hills, down slopes, across gullies, under water and more with ease. It's also fully corrosion resistant and

quick and simple to install. Our solutions also include a corrosion-resistant fitting system that also makes it easy to connect our pipe systems to conventional pipeline infrastructure. And we can supply installation equipment and certified installation engineers wherever our customers require them.

Our philosophy is to cut your costs and make your operation safe and more efficient. And we do.

The SoluForce system



SoluForce pipeline solutions are comprehensive yet economic. You can opt for a pipe-and-fittings only solution. But we can also supply a range of services and support. These include computer-controlled electrofusion installation machines for rent or purchase. We can train and educate international and local workforces in the use of the SoluForce system, so you can speed up installation and reduce your labour needs – safely. We can assist with project management and help you find the right people for your project. Or a combination of the above.

SoluForce Light shares the same properties but is designed for low to medium-pressure operations. SoluForce Heavy is specially developed for very high pressure (saline) water injection and provides an excellent, flexible solution for high-pressure water transportation.

SoluForce pipe systems come in Classic, Light and Heavy versions. SoluForce Classic is designed for medium to high-pressure fluid transportation and is fully resistant to all hydrocarbons and chemicals involved in water injection as well as in extreme sour applications.

In addition to our conventional high-performance pipes, we now also offer Gas Tight (GT) versions of SoluForce Classic and High Temperature versions (HT) of SoluForce Heavy. These special extensions to our portfolio are new to our programme.

	SoluForce Classic - M480 SoluForce Classic - M570	113 bar / 1640 psi 90 bar / 1305 psi	Water Hydrocarbon Offshore
	SoluForce Classic - M480 GT SoluForce Classic - M570 GT	113 bar / 1640 psi 90 bar / 1305 psi	Hydrocarbon Offshore
	SoluForce Light - L450 SoluForce Light - L540	45 bar / 650 psi 36 bar / 520 psi	Water Hydrocarbon
	SoluForce Light - L450 GT SoluForce Light - L540 GT	45 bar / 650 psi 36 bar / 520 psi	Hydrocarbon
	SoluForce Heavy - H415 SoluForce Heavy - H515	344 bar / 4990 psi 275 bar / 2990 psi	Water Hydrocarbon Offshore
	SoluForce Heavy - H415 HT SoluForce Heavy - H515 HT	344 bar / 4990 psi 275 bar / 2990 psi	Water Hydrocarbon Offshore

Reliable **water** solutions are central to profitable operation

Economic pipeline systems for water injection and disposal



Water injection has long played a key role in increasing the productivity, life-expectancy and profitability of onshore and offshore wells. When profits are under pressure, maintenance, repairs and downtime can turn a just profitable field into a financial burden. SoluForce has the technology and know-how you need to avoid this. SoluForce pipeline systems for water are durable, sustainable, fast to install, maintenance-free and have a design life of up to 50 years.



SoluForce offers a range of solutions for the high-pressure transportation of water. Featuring polyethylene liners and metal-free fittings, our pipeline systems are durable – they cannot corrode – high quality, fast and easy to install over ground or in trenches, efficient, cost-effective and built for the long term.

- High-quality SoluForce flexible composite pipeline systems are typically used in these oil and gas-related applications:
- High-pressure water injection pipelines
 - Water transport solutions
 - Effluent water disposal
 - Water distribution lines
 - Temporary surface lines

- All SoluForce flexible composite pipeline systems use metal-free fittings, couplings and connectors. Our pipeline systems are therefore resistant to all chemicals involved in injection applications, including:
- H₂S
 - CO₂
 - Strong inorganic acids like HCl and H₂SO₄
 - Strong alkaline materials, including NaOH, KOH and NH₃ solutions
 - Anti-corrosion additives
 - Mineral salts



SoluForce Heavy pipes can withstand very high pressures and are ideal where the need to operate at high pressures is a priority.



SoluForce pipeline systems:

The durable choice for high-pressure water transportation



SoluForce Classic: M480/M570

SoluForce Classic is an excellent, flexible solution for medium to high-pressure fluid transportation, and the system itself is fully non-metallic. Reinforced with synthetic fibre tape, it has a design pressure of 113 bar / 1640 psi for the 4-inch M480 and 90 bar / 1305 psi for the 6-inch M570 pipe. Being fully metal-free, it is ideal for even the toughest applications. With SoluForce Classic, it is possible to uprate the maximum pressure in line with the maximum ambient and/or fluid temperature under which the pipeline will operate. SoluForce Classic is resistant to all chemicals involved in water transportation, including:

- H₂S
- CO₂
- Strong inorganic acids like HCl and H₂SO₄
- Strong alkaline materials, including NaOH, KOH and NH₃ solutions
- Anti-corrosion additives
- Mineral salts



SoluForce Light: L450/L540

SoluForce Light has all the same properties as SoluForce Classic, at lower pressures. SoluForce Light therefore provides an excellent, flexible solution for low to medium-pressure fluid transportation and is fully non-metallic. SoluForce Light is reinforced with synthetic fibre tape and has a design pressure of 45 bar / 650 psi for the 4-inch L450 and 36 bar / 520 psi for the 6-inch L540 pipe. SoluForce Light shares exactly the same resistance to chemicals as SoluForce Classic.



SoluForce Heavy: H415/H515

SoluForce Heavy provides an excellent, flexible solution for high-pressure water transport. Reinforced with high-strength steel wire, SoluForce Heavy has a design pressure of 344 bar / 4990 psi for the 4-inch H415 pipe and 275 bar / 2990 psi for the 6-inch H515 pipe (call us or see the technical data sheet for more information). The SoluForce Heavy pipe is resistant to:

- Strong inorganic acids like HCl and H₂SO₄
- Strong alkaline materials, including NaOH, KOH and NH₃ solutions

As the pipe is reinforced with steel wire, it has certain limitations regarding fluid composition. See the technical data sheet or contact us for more information.



**CASE 1
A low OPEX pipeline made for jungle conditions**

When a major American gas operator needed to lay water injection flow lines in the jungles of central Sumatra, Indonesia, there was only one solution. Tough, environmentally sensitive ground conditions and near 100% humidity pose no problems for SoluForce's non-corrosive, flexible composite pipeline systems.



The 24 km of SoluForce Heavy pipeline (needed to handle pressures of 2200 psi), was laid by local people trained by SoluForce. The pipes' low weight made them significantly easier to handle and transport in remote jungle conditions, and the very small footprint kept the ROW to a minimum, so that only a few trees had to be cut. And with no need for corrosion inhibitors or cathodic protection, the result is a low OPEX water injection system in a highly demanding environment.

Economics, safety and speed are more important than ever in **hydrocarbon** production

Fluctuating prices, unconventional sources and growing environmental pressures mean safety, economics and speed are an even higher priority for the oil and gas industry. SoluForce pipeline systems meet these requirements. Our transportation solutions are durable, do not require corrosion inhibitors and are easier to dewax than metal pipelines. They don't crack, break or leak. They have a service life of up to 50 years. They are up to 10 times lighter than their steel equivalents (and therefore much easier to handle), quicker to install, maintenance-free and they can be recycled.



Economic pipeline systems for onshore oil and gas



Whether you need to deploy a network in physically challenging terrain or move highly corrosive liquids at high pressure, or both, SoluForce pipeline systems have your needs covered. Our hydrocarbon pipes and pipes for high-pressure water injection lines feature polyethylene liners and non-metallic fittings. These ensure the durability of the complete system.

Pushing the boundaries even further, our SoluForce Heavy HT pipe (High Temperature) has a design temperature of 105°C/220°F – a level of performance unmatched by any other flexible composite pipe available today.

SoluForce Classic GT pipes (Gas Tight) have been specially developed for high-pressure gas applications and completely eliminate permeation of fluid components like H₂S, methane and BTX.

High-quality SoluForce flexible composite pipeline systems are typically used in these onshore hydrocarbon applications:

- Oil and gas flow lines
- Oil and gas gathering lines
- Gas pipelines
- Gas condensate
- Multi-phase pipelines
- High-pressure water injection pipelines



All SoluForce flexible composite pipeline systems use metal-free fittings, couplings and connectors. Our pipeline systems are therefore resistant to all chemicals involved in oil and gas production and extreme sour environments, including:

- H₂S
- CO₂
- Strong inorganic acids like HCl and H₂SO₄
- Strong alkaline materials, including NaOH, KOH and NH₃ solutions
- Anti-corrosion additives
- Mineral salts



SoluForce pipeline systems: The economic choice for onshore oil and gas

SoluForce flexible composite pipes are ideal for transporting hydrocarbons and moving injection fluids across any terrain. They are fast, easy and cost-effective to install, and they feature a complete, non-corrosive coupling system. The product range is tailored to suit a variety of needs in onshore oil and gas production, and transportation.



SoluForce Classic: M480/M570 (GT)
The SoluForce Classic and Classic GT (Gas Tight) pipes are both designed with the needs of hydrocarbon transportation in mind. The SoluForce Classic is reinforced with synthetic fibre tape and has a design pressure of 113 bar / 1640 psi for the 4-inch M480 and 90 bar / 1305 psi for the 6-inch M570 pipe. Being fully non-metallic, it is ideal for even the toughest applications, such as sour oil service without restrictions on H₂S and CO₂ content. The SoluForce Classic GT contains an aluminium barrier layer to completely stop the permeation of hazardous and toxic fluid components like BTX and H₂S. Both pipes provide an excellent, flexible solution for medium-pressure fluid transportation.



SoluForce Light: L450/L540 (GT)
SoluForce Light provides an excellent, flexible solution for low to medium-pressure fluid transportation. Reinforced with synthetic fibre tape for lower-pressure applications, SoluForce has a design pressure of 45 bar / 650 psi for the 4-inch L450 and 36 bar / 520 psi for the 6-inch L540 pipe. The pipe is fully non-metallic, which allows it to be used in any sour application, without restrictions on H₂S and CO₂ content.

The SoluForce Light GT contains an aluminium barrier layer to completely stop the permeation of hazardous and toxic fluid components like BTX and H₂S. Both pipes provide an excellent, flexible solution for medium-pressure fluid transportation.



SoluForce Heavy: H415/H515 (HT)
SoluForce Heavy and Heavy HT (High Temperature) are reinforced with high-strength steel wire. They have a design pressure of 344 bar / 4990 psi for the 4-inch H415 pipe and 275 bar / 2990 psi for the 6-inch H515 pipe, and are resistant to most chemicals involved in hydrocarbon transportation including:
- Strong inorganic acids like HCl and H₂SO₄
- Strong alkaline materials, including NaOH, KOH and NH₃ solutions



CASE 2 A pipeline network that requires no maintenance

The remote northern Iraq-Kurdistan region is known for its difficult terrain. So when a Norwegian oil company needed to deploy a new pipeline system quickly, there was really only one viable solution. The advanced flexible composite pipeline system from SoluForce met all requirements. We could despatch the order quickly and installation would be far quicker than is possible with conventional alternatives. Our SoluForce Classic pipeline system also easily met all the technical demands it would face: high H₂S and CO₂ levels, plus extreme salinity.



The crude oil flowline was laid at an average rate of 2 km a day. Installation was performed by local crews, trained at the SoluForce Academy. Ultimately, over 15 wells were connected to a processing facility, with the short lead time helping boost early production. The network is also completely maintenance-free.

Making marginal fields economically viable is the huge, easy-win opportunity in **offshore**

Economic pipeline systems for offshore oil and gas



As the easier to exploit oil and gas fields become scarce, the industry focus is increasingly turning to deepwater drilling. But there is another opportunity: making shallow-water fields that are now barely viable cost-effective. And just as in deepwater drilling, innovation is the key. SoluForce pipeline solutions are at the forefront in helping the industry exploit marginal fields profitably.



When it comes to making marginal offshore oil and gas fields economically viable, SoluForce pipeline solutions offer a number of advantages over steel and other flexible options. Light, strong, durable and reliable – and with shorter lead times – our pipeline systems are perfect for connecting marginal wells to nearby platforms, so eliminating the need for a new drilling platform. They are quicker, easier and cheaper to deploy with no welding required, no need for hot permits and no need for specialist pipe-laying barges.

SoluForce pipeline systems are completely corrosion resistant – even in extreme sour service. Our pipes have a smooth bore, which ensures a much lower flow-resistance and improved flow capacity. SoluForce pipes can be used

unfilled and unpressurised at a maximum depth of 80 metres/260 feet. Fluid filled they can be used in much deeper water. SoluForce pipelines have been used as a temporary test line at a water depth of 1000 metres/3280 feet.

High-quality SoluForce flexible composite pipeline systems are typically used in these offshore oil and gas applications:

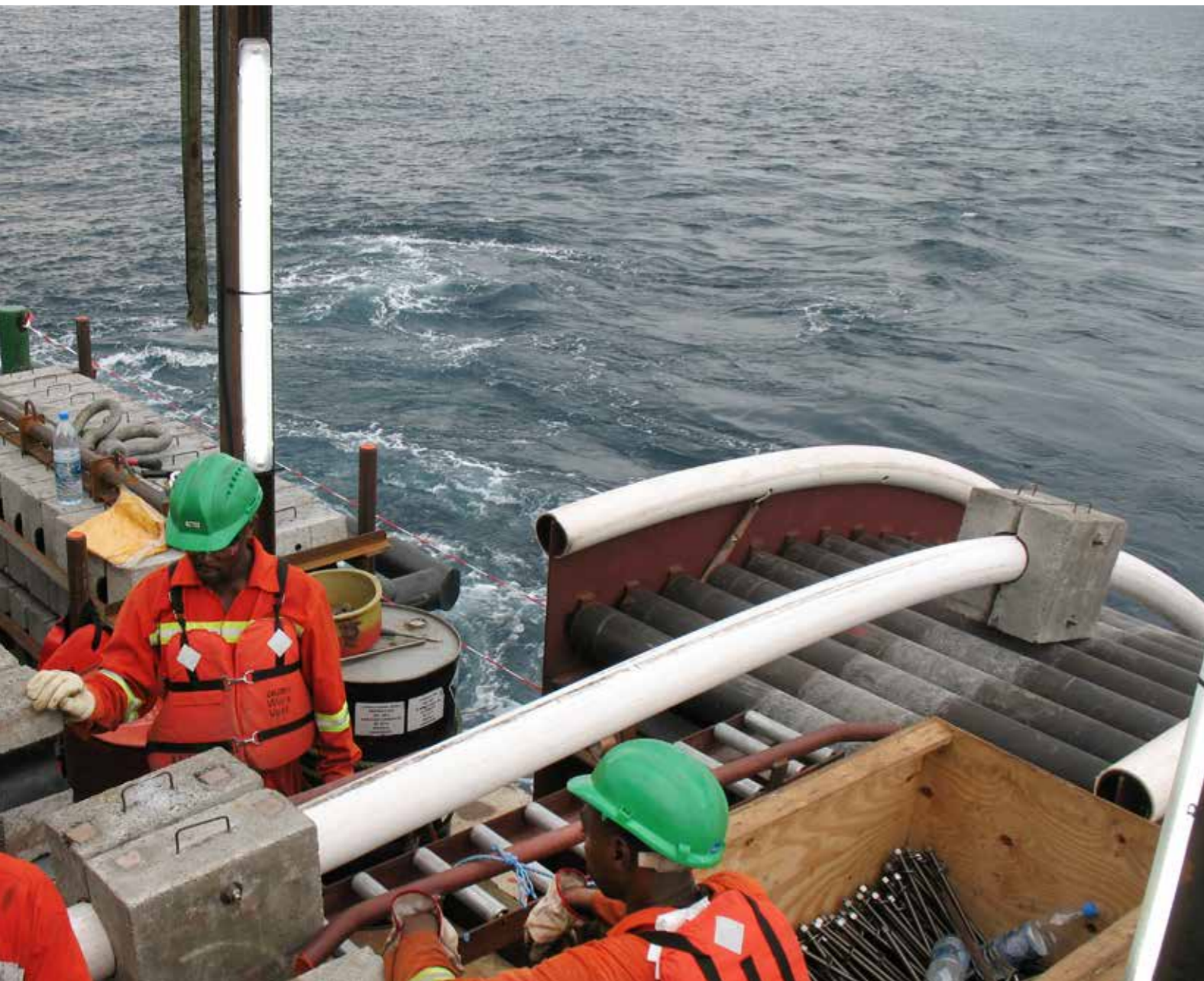
- High-pressure water injection lines
- Oil and gas transportation flow lines
- Gas and oil gathering lines
- Well intervention
- Landing/ export lines

All SoluForce flexible composite pipeline systems use metal-free fittings, couplings and connectors. Our pipeline systems are therefore resistant to all chemicals involved in injection applications, including:

- H₂S
- CO₂
- Strong inorganic acids like HCl and H₂SO₄
- Strong alkaline materials, including NaOH, KOH and NH₃ solutions
- Anti-corrosion additives
- Mineral salts

SoluForce Heavy pipes can withstand very high pressures and are ideal where the need to operate at high pressures is a priority.





SoluForce pipeline systems: The innovative choice for offshore oil and gas

SoluForce flexible composite pipes are easy to install, making them a durable and economical solution for offshore use. Because offshore oil and gas is an especially demanding industry, we work directly with oil operators, subsea contractors, engineering companies and industry suppliers to provide the added value required to run complex projects successfully.

Our solutions for offshore are based on our SoluForce Classic and SoluForce Heavy pipeline systems, and we would be happy to advise you on the various options, including weights.



SoluForce Classic: M480, M570 (GT)
The SoluForce Classic and Classic GT (Gas Tight) pipes are both designed with the needs of hydrocarbon transportation in mind. The SoluForce Classic is reinforced with synthetic fibre tape and has a design pressure of 113 bar / 1640 psi for the 4-inch M480 and 90 bar / 1305 psi for the 6-inch M570 pipe. Being fully non-metallic, it is ideal for even the toughest applications, such as sour service. The SoluForce Classic GT contains an aluminium barrier layer to completely stop the permeation of hazardous and toxic fluid components like BTX and H₂S. Both pipes provide an excellent, flexible solution for medium-pressure fluid transportation offshore.

SoluForce Heavy: H415, H515 (HT)
SoluForce Heavy and Heavy HT (High Temperature) are reinforced with high-strength steel wire. They have a design pressure of 344 bar / 4990 psi for the 4-inch H415 pipe and 275 bar / 2990 psi for the 6-inch H515 pipe, and are resistant to most chemicals involved in hydrocarbon transportation including:
- Strong inorganic acids like HCl and H₂SO₄
- Strong alkaline materials, including NaOH, KOH and NH₃ solutions

SoluForce Heavy Offshore: H415 DW, H515 DW
SoluForce heavy deep water (DW) is reinforced with high strength steel wire. It is specially designed to withstand the toughest subsea environment. Reinforced with high-strength steel wire, SoluForce Heavy has a design pressure of 344 bar / 4990 psi for the 4-inch H415 pipe and 275 bar / 2990 psi for the 6-inch H515 pipe.



CASE 3 An inter-field connection with low CAPEX and no OPEX

A French oil company was looking for a straightforward, reliable, cost-effective and easy-to-deploy solution to connect two of its fields off the coast of west Africa. The perfect project for a SoluForce solution.

SoluForce pipeline systems are ideal for anyone who wants to minimise CAPEX and eliminate OPEX in offshore production. The 8.8 km SoluForce Classic pipeline system was laid in less than two days, at an average speed of 5.5 km a day, and needed only one deployment carousel. It was assembled onshore, locally, and stabilised on the seabed, 40 metres down, using locally made concrete blocks. The capital costs were low, and being made of corrosion-free reinforced thermoplastics, the flexible composite pipeline system eliminates operational costs.



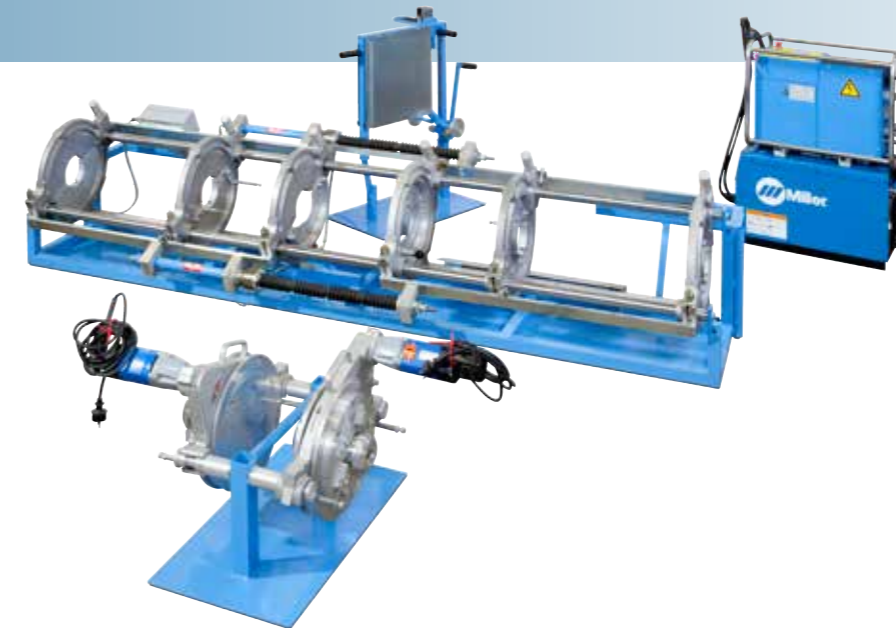
SoluForce Academy: Installation made easy



The SoluForce Academy offers extensive training programmes to certify local contractors and end-user staff for installation, operation, maintenance and inspection. We train and support your international staff and deliver local-content training to ensure your SoluForce system is installed safely, quickly and in a way that will ensure its long-term durability.

SoluForce pipe systems include a full fitting solution that is specially designed for the various different SoluForce pipes. For the Light and Classic pipe systems, a non-metallic electrofusion connection system is available. For the Heavy pipe system, we offer a non-metallic single swaged and a high performance double swage connection system.

Our services also include providing dedicated SoluForce installation equipment. The equipment, which can be rented as well as purchased, is state of the art and computer controlled. This guarantees that all couplings and fittings are installed in a way that is controlled, consistent and correct.



- SoluForce electrofusion equipment**
- Create a leak-tight connection by butt-fusion welding of the liner pipe
 - Electrofusion welding of the coupling gives it strength
 - Build a completely non-metallic, corrosion-free pipeline
 - Electrofusion of the end fitting
 - The base for
 - The inline coupler
 - The end flange
 - The weld stub
 - The pipe-to-pipe system
 - 100% traceability
 - Fully automated

Electrofusion fittings

The non-metallic fittings and connectors used with the SoluForce Light and Classic systems rely on electrofusion. Electrofusion requires only limited equipment and crew to create a safe connection. It's quick and proven to be maintenance-free and durable.

In-line couplings



The SoluForce inline coupler connects two lengths of SoluForce pipe. The electrofusion inline couplings are completely non-metallic and ensure that the transported fluids never come into direct contact with steel, so preventing corrosion.

Electrofusion inline couplings:

- Fully non-metallic thanks to a combination of butt-welding and electrofusion
- The installed coupling is designed to be stronger than the pipe itself

End fittings



SoluForce pipe-to-pipe connector:

- A metal pipe-to-pipe connector with electrofusion connections
- No direct contact between fluid and metal parts, corrosion free.
- Easy and quick to assemble

SoluForce end fittings:

- ANSI rated flanges
- Weld stubs for gas use

SoluForce end fitting with steel flanges

- End flange with an electrofusion connection to the pipe
- Standard flange in 316 stainless steel RF 600#
- Different RF and RTJ flanges, ratings and/ or alloys are available

SoluForce end fitting with weld stub

An end fitting with weld stub can be used to weld a SoluForce pipe to other standard components. Weld stubs are generally used when welded connections are preferred to bolted ones.

The right connection every time



Single swage fittings

The SoluForce Heavy system employs swaged fittings. For onshore high pressure applications our new single swage fitting system, with non-metallic lining, is the fitting system of choice. The single swage system is fully corrosion free and combines high strength with cost effectiveness.



Double swage fittings

For high performance and offshore operations, SoluForce offers the heavy duty double swaged fitting system. This fitting system is optimised for extreme high pressures, high axial loads and dynamic operation. It's available as standard with Grayloc connections, but weld stub and other user-specified connections are possible.



SoluForce single swage fittings

- Offers inline couplers and end fittings
- Fully corrosion-free thanks to non-metallic interior
- Standard with swivel flange for easy connection
- Multiple flange types available, including RF or RTJ, any rating or alloy

The SoluForce single swage machine

- Hydraulic pressure compresses the single swage fitting onto the SoluForce pipe
- Creates a high strength connection
- Build a completely non-metallic, corrosion-free pipeline

- The base for
 - The inline coupler
 - The end flange
- 100% traceability
- Lightweight equipment, easy to use



The SoluForce double swage machine

- Hydraulic pressure compresses the SoluForce pipe between the stem and ferrule of the double swage fitting
- Creates a connection for operating at high pressure and high axial load

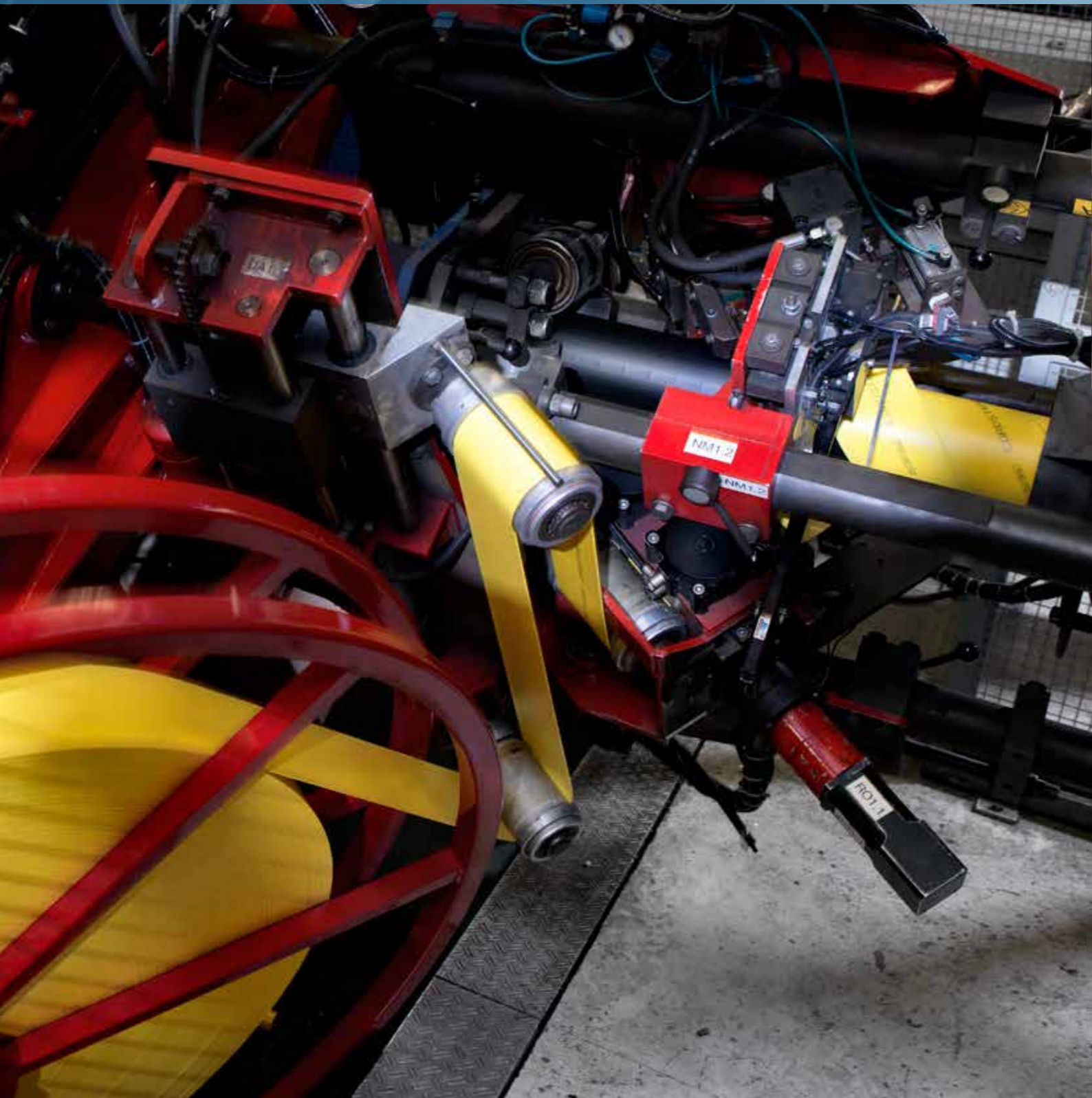
- Fast, two-step process
- Specially designed for tough environments
- 100% traceability
- Robust equipment, easy to use



SoluForce double swage fittings

- End-fitting based
- Connection by Grayloc, weld stub or customer specific
- Available in stainless steel, duplex and super duplex alloys
- Any flange type possible, connected to the fitting using Grayloc or weld stub

Precision-manufactured in the Netherlands



SoluForce is a brand of Pipelife International and part of the Wienerberger group, a diversified building materials and pipeline specialist with revenues of over €2.9 billion in 2015.

Pipelife is one of the world's leading suppliers of plastic pipe systems and develops, manufactures and distributes a wide range of quality pipe systems. It provides solutions for water, energy and power distribution, telecommunication networks and industrial applications. It is present in 27 countries.

SoluForce pipeline systems are manufactured in Enkhuizen, the Netherlands, and are developed with constant improvement and innovation in mind. SoluForce pipeline systems focus on reliability,

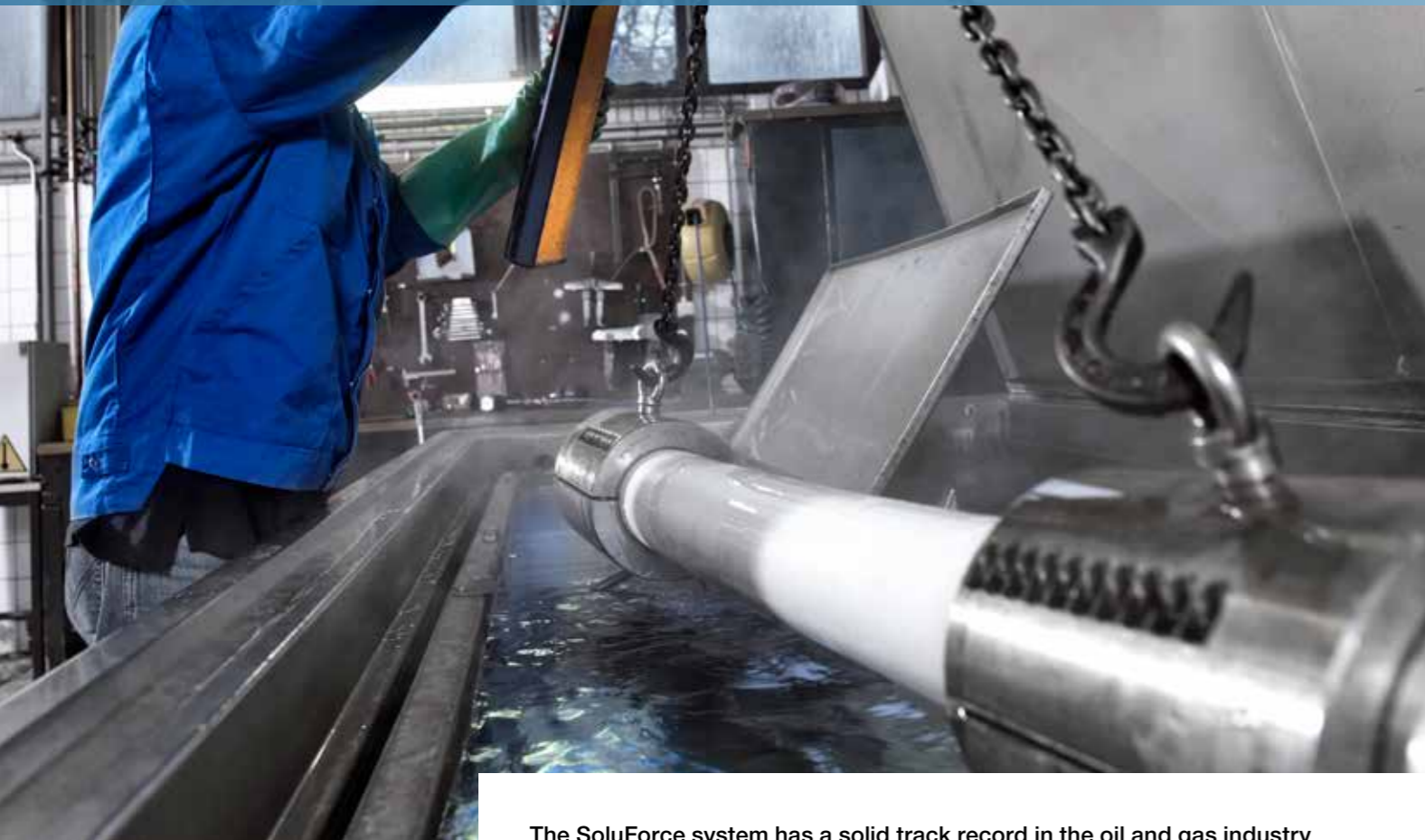
simplicity of installation and use, and, above all, safety. As a trusted expert in our field, the SoluForce brand stands for outstanding competence, extraordinary team spirit and visionary innovation.

Our commitment to the environment

Environmental sustainability is central to plastic pipe technology. Mindful of the many communities we serve, Pipelife companies and brands are committed to Corporate Social Responsibility. We take responsibility for the impact of our activities on the environment, consumers, employees and all other stakeholders in the public sphere. For more information about our commitment to CSR, please visit www.soluforce.com.



Certified by the world's leading verification societies



Proven to be made to last

The reliability of SoluForce is guaranteed by extensive lab testing and long-term field experience. To assess long-term strength, for example, SoluForce pipes are pressure-tested for over 10,000 hours – equivalent to more than one year – in line with internationally accepted standards.

One of the most important test criteria ensures that the fitting system is stronger than the pipe itself. After corrosion, third party interference is the major cause of conventional pipeline failure. Because SoluForce Light and Classic are completely non-metallic, including the fitting system, they offer the ultimate solution in corrosion resistance. Their resistance to third party interference, earthquakes and landslides has been verified in the lab by falling-weight impact testing, axial load and bending testing. All under the supervision of major oil

companies. In-field impact testing with digging machines has shown SoluForce delivers equal or better performance than conventional steel pipe.

Most importantly, SoluForce is field-proven. Our first flow lines were installed in the Middle East in 2000. These pipes have remained in service since then without interruption. Meanwhile, SoluForce has been installed worldwide, both onshore and offshore, at major oil and gas companies. There has never been a report of failure in service.

Every SoluForce product is developed with a strong focus on reliability, simplicity of installation and use – but above all safety. SoluForce maintains the highest levels of quality in the design, manufacturing and testing of all its products. As a result, they meet or exceed the various recognised international standards. SoluForce products comply with the following standards:

Oilfield service
API 15S "Qualification of Spoolable Reinforced Plastic Linepipe" (SoluForce Classic and SoluForce Light pipeline

The SoluForce system has a solid track record in the oil and gas industry and has been in use since 2000 for a variety of applications. These include oil and gas utility pipelines, water distribution/ injection lines, oil and gas transportation flow lines, and gas and oil gathering lines.

system). API 17J "Specification for Unbonded Flexible Pipe" (SoluForce Heavy pipeline system).

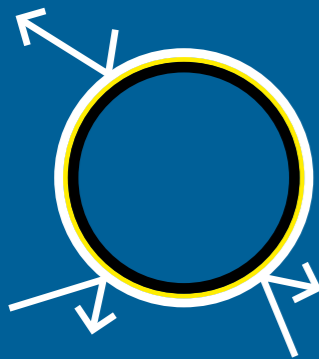
Gas distribution and transport
ISO TS 18226 "Reinforced Thermoplastic Piping Systems for Gaseous Fuels" (SoluForce Classic and SoluForce Light, gas transport & distribution).

Qualification and certification
The design, testing and qualification of SoluForce is verified according to the

applicable standards by ISO-accredited independent institutes. For oilfield applications: Certification by Bureau Veritas for oil applications for SoluForce Classic and Light. Bureau Veritas certifies that SoluForce Heavy complies with AP 17J (specification for unbonded flexible pipe) 3rd edition for sour applications. Det Norske Veritas (DNV).

Quality assurance and quality control
SoluForce is developed, manufactured and marketed under the ISO9001 QA/QC system, approved by KIWA.

SoluForce: this is why



1. Durable, corrosion-free solution



2. Fast installation



3. No scaling or erosion



4. Reusable



5. Maintenance-free



6. Design life of up to 50 years



7. 400-metre lengths per coil



8. Extremely robust



9. Professional installation training

SoluForce Flexible Composite Pipes deliver the benefits of next-generation technology right now. Our pipeline systems deliver a significant improvement in the way water, oil and gas are transported around the world.

Benefits in full:

1. Durable, corrosion-free solution

SoluForce pipeline systems form a completely non-metallic solution. SoluForce Light and Classic are resistant to all chemicals involved in the transportation of water and hydrocarbons.

2. Fast installation

Requiring only a small team and with a limited environmental footprint, SoluForce Flexible Composite Pipes are easy and quick to install.

3. No scaling or erosion

Smooth non-stick HDPE liner pipe (Darcy Weisbach surface roughness (e) 0.0015mm) prevents scaling and erosion from occurring.

4. Reusable

SoluForce Flexible Composite Pipes can be reused over and over again.

5. Maintenance-free

SoluForce Flexible Composite Pipes require no maintenance. Zero. Ever.

6. Design life of up to 50 years

The SoluForce pipeline system has a life expectancy of 20 years when surface installed and of 50 years when buried.

7. 400-metre lengths per coil

With a length of 400 metres per coil, using SoluForce pipes reduces transportation costs versus conventional steel pipe. Plus, SoluForce pipelines can be installed much faster, and the coils are easy to handle in the field.

8. Extremely robust

The SoluForce pipeline system is designed to endure very heavy loads. This protects fluids in the SoluForce network from external influences and third party interference.

9. Professional installation training

SoluForce offers expert training to installation teams worldwide so our customers and local contractors can become certified SoluForce installers. Training is available on-site locally or at our SoluForce Academy facilities in the Netherlands.

For a complete overview of the specifications, data sheets, fittings, connectors and supporting services of the SoluForce pipeline system, see our Technical Brochure.

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SMART SOLUTIONS FOR TODAY'S TOUGH ENVIRONMENT SoluForce® is the originator of Flexible Composite Pipes. Our 100% metal-free pipeline systems and connectors for oil and gas, flow line, water injection and effluents are quick to deploy in challenging terrain. They go round corners, up hills, across gullies and under water. With ease. They last up to 50 years, maintenance-free. Plus we offer specialist installation equipment and support, including on-site training. Our customers are cutting their costs in the toughest physical and economic environments on Earth. Isn't it time you joined them?

SoluForce®

www.soluforce.com

Pipelife Nederland B.V.
Flevolaan 7, 1601 MA Enkhuizen
P.O. Box 380, 1600 AJ Enkhuizen
The Netherlands
T +31 (0)228 355 555
F +31 (0)228 355 666