FLEXPIPE®

TechTalk

Dual Composite Pipelines vs. Steel

Flexpipe is the premier manufacturer of non-metallic, spoolable, reinforced thermoplastic pipe.

Flexpipe's composite pipe products are used for a variety of applications within the oil and gas industry such as oil gathering, gas gathering, water transfer and gas distribution. Flexpipe products are corrosion resistant, safer and quicker to install, and the total cost of installation can be more cost-effective than a traditional steel line.

As well pad efficiency improves, the resulting increase in volumetric flow drives a need for larger diameter pipe; however, in certain cases, deploying multiple 6-inch reels of spoolable pipe at once offers a more effective and adaptable solution compared to a single 8-inch steel counterpart.

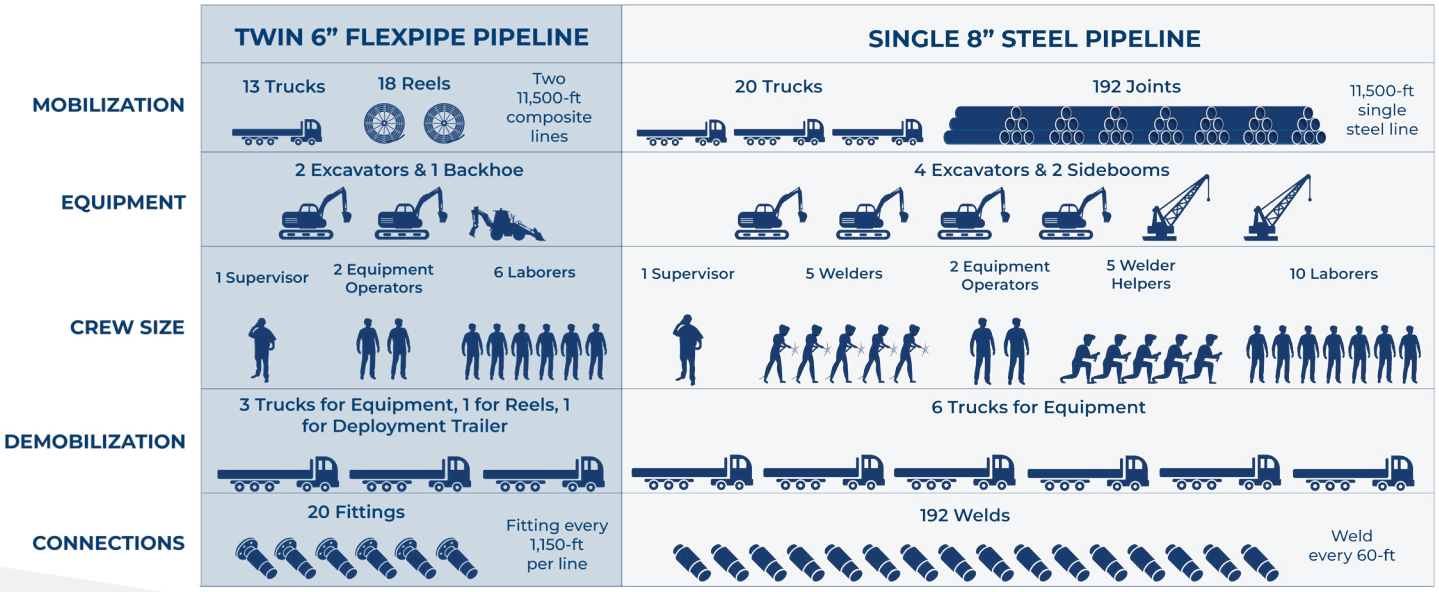
Flexpipe has many significant advantages over traditional steel lines, making it an appealing choice for many oil and gas operators. Flexpipe's twin 6-inch line solution not only reduces installation costs, but also delivers comparable flow rates and operational flexibility when compared to a single 8-inch steel line. Flexpipe is committed to understanding customers' needs and to developing comprehensive solutions that meet demands.

Operational Flexibility

- Multiple composite lines give customers the opportunity to shut down one line at a time to tie in additional lines, or to provide maintenance while maintaining uninterrupted production
- Flexpipe's custom fittings allow for flexibility in the design of gathering systems
- No chemical injection for corrosion prevention of the composite line is required
- No cathodic protection is required

Hydraulic Performance

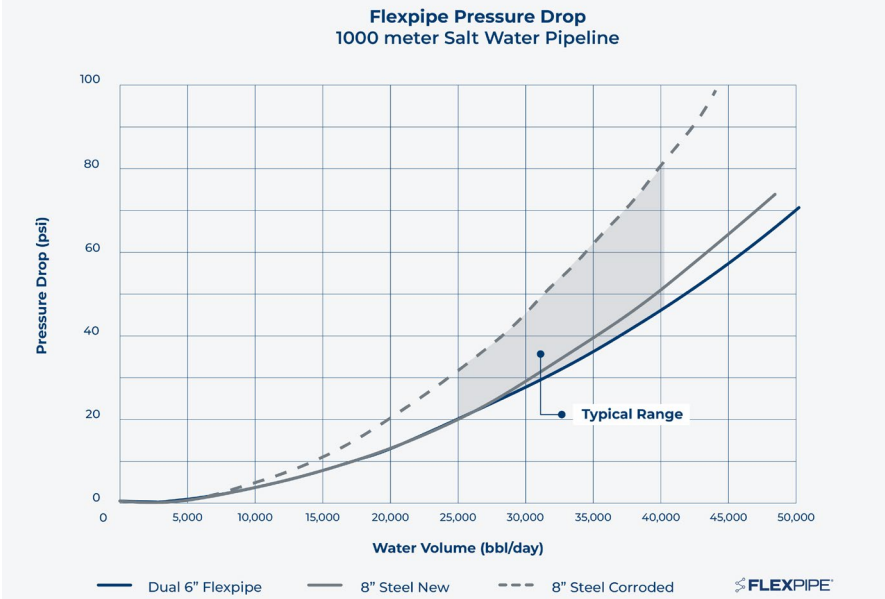
- Smoother flow characteristics reduce pressure drops, saving customers ongoing maintenance costs of rotating equipment
- Paraffin takes longer to build up in a composite pipeline compared to steel
- Smoother wall characteristics maintained over time, where steel will have an increase in pipe roughness leading to larger pressure drops
- If one line encounters an issue, the other remains fully operational, mitigating the potential of pipeline shutdowns



Note: Above comparison chart is based on a 2 mile pipeline installation

Safety and Reliability Considerations

- Dual 6-inch lines can offer better risk management to an issue in one line
- The ability to isolate and service one line while keeping the other operational can be crucial for maintaining a consistent flow, especially in critical applications
- Over time, and as early as 12 months after the start of operations, the flow rate for a single 8-inch steel line drops due to higher friction losses caused by increased surface roughness, whereas the flow rate for Flexpipe remains constant throughout
- Over a 10-year period, pump costs can increase by more than 50% due to pressure losses, with the annual expenses for corrosion inhibitors further contributing significantly to the maintenance costs of steel pipelines





With the constantly evolving oil and gas industry putting an emphasis on operational efficiency and cost management, the dual 6-inch composite line configuration exemplifies Flexpipe's ability to address complex industry demands, offering many advantages compared to a single 8-inch single steel pipeline despite comparable flow rates.

With superior hydraulic performance, reduced maintenance costs, and enhanced reliability, Flexpipe delivers solutions that adapt to operational challenges without compromising performance. As industry needs grow, Flexpipe's commitment to innovation and engineering ensures it remains a trusted partner for operators and the future of pipeline infrastructure.





FPTTDL1124 | ©Mattr corp. 2024

FLEXPIPE®