Flexible pipe

Dynamic risers, flowlines, static and dynamic fluid transfer lines, and jumpers are critical to offshore oil and gas production, injection, and export systems. They are subject to extreme temperatures, pressures, physical stresses, and movement while carrying hot, highly pressurized corrosive materials—yet must still ensure reliable connections and optimal product flow. As offshore developments move into deeper waters and even more challenging environments, flexible pipe is a highly versatile fluid transportation solution, often the only suitable technology to enable floating production.

BHGE solutions

Our portfolio of flexible pipe solutions draws on more than 25 years of research and development, material science, and installation experience in some of the harshest conditions the industry offers—particularly in environments where water depth and seabed conditions impose unusual restrictions. Our products are robust, highly flexible, and adaptable to unique project requirements, and offer cost-effective and proven reliability for corrosive reservoirs.

The performance value of our flexible pipe is further enhanced by BHGE’s Fullstream industry capability and track record, which ranges from high-pressure/high-temperature and extremely corrosive applications, to the deepest water drilling record, the longest subsea tieback, and the offer of complete systems design for some of the world’s most ambitious offshore and subsea projects.
The next generation of flexible pipe

Flexible pipe is highly variable in nature, meeting the demands of subsea and FPSO-based production in several environments. It’s only technology available for a production system.

Flexible pipe systems (FPS) products cater for a very large number of production situations around the world. They are designed to address the most demanding of project needs. To meet this challenge, we continually overcome the frontier of design and manufacturing to ensure optimized safety, efficiency, and productivity over the full life of the field.

An established portfolio

Baker Hughes, a GE company (BHGE), has an established portfolio of flexible pipe systems perform in operation. Our pipe products are all manufactured to the highest levels of quality and reliability and are manufactured in Newcastle, Western Australia and Malaysia—with additional support capabilities available through the extensive resources of the BHGE network.

Installation excellence

Our products are manufactured to the highest standards. But that would be of little value without the same rigorous approach to installation, ensuring the highest levels of quality and reliability when it comes to deployment—and most importantly—connection to riser bases and accommodating the motion of the production facility. In static environments, our flexible pipe systems perform in operation.

Solutions that span the water column

We have a portfolio of differentiated technologies for polymer systems, metallurgy, mechanical modeling, and analysis. We also invest significant resources and our in-depth experience into the development of advanced analytical modeling tools for material and product testing.

Key benefits

• Proven track record in all water depths.
• High temperature (up to 300°C)
• Re-usable
• Pipe is fully tested onshore prior to installation.
• Rapid installation and removal

Key features

• Promotes flexibility infield architecture
• Integrated sideline solutions, high-temperature materials, and proprietary lightweight carbon fiber
• Competitive economics on an analysis basis
• Jumps into the development of advanced analytical modeling tools for material and analysis. We also invest significant resources and our in-depth experience into the development of advanced analytical modeling tools for material and product testing.

Integrity management

With a rich history of experience in the design, testing, and manufacture of flexible risers and flowlines, we have established a unique position in the integrity management of these systems.

Our proven solutions include the MPMS series, combined break isolation and inspection systems, integrated leak detection cables, and fiber optic-based sensors embedded in the pipe structure, and tailorable requirements for the monitoring of polymer and pipe anomalies. In many ways, our monitoring systems can be tailored to existing infrastructure, regardless of the original equipment manufacturer.

In all cases, our approach is underpinned by a risk-based methodology developed specifically to address the attributes of the flexible pipe construction that governs lifecycle performance. This level of expertise enables solutions that are customized to meet the particular needs of any installation or operation system.

A recent independent industry study, published by Hermes in 2017, showed the BHGE integrity management technology to be the highest performing, and most value-adding option from over 20 available solutions evaluated in the All

Our corporate culture is one of “doing it right” all the time. We strive to make our products better, not only by applying the best processes and technologies, but by conducting operations and relationships with the utmost honesty and integrity no matter what challenges may arise.

Our commitment to HSE

Every BHGE innovation is driven by a focus on safety, and practical industry requirement. We carefully evaluate product designs with proven technologies, rigorous testing, and qualification processes. Our objective is to continually deliver measurable increases in efficiency, reliability, availability, and performance.