



Non-Welded Piping Solutions for Offshore



Customer environment

Customers

GS-Hydro's non-welded piping systems are used in a number of applications in the offshore market. Drilling packages, ring lines, different types of cranes & winches are typical areas in the offshore market, where highly reliable high pressure systems are needed continuously. One cornerstone of a reliable high pressure system is a leak free piping system.

An example of a customer segment where GS-Hydro piping systems are used frequently is drilling platforms (fixed platforms, semisubmersible rigs or jack-up rigs). Drilling vessels, seismic or research vessels are other examples of where leak free high pressure piping systems are valued. Production platforms and vessels also include hydraulic systems, and present an example of customer need and where GS-Hydro non-welded piping system can add value.

Demanding working environment

The offshore environment is very demanding. Customers are working in challenging environmental condi-

tions where systems need to endure harsh weather conditions and where equipment is used and exposed to corrosive environments. This is why high quality reliability in the offshore market is essential.

In addition to demanding conditions, a further challenge is the servicing of the equipment. This takes time and requires special knowledge. Service personnel need to follow strict safety regulations that customers have set. For example, avoiding hot works on platforms as much as possible.

Drilling or production platforms or vessels are often in remote locations. In case of failures, spare parts and service teams to platforms or vessels can take a long time and lead to extended downtime. If drilling operation or production has to be stopped, it means substantial financial losses for operator.

Environmental concerns are on top of the list amongst all offshore companies. All oil spills are to be avoided if at all possible, making leak free systems vital.





GS-Hydro technology benefits

Optimal piping solutions for all offshore installations

With over 40 years of experience and thousands of installations in the rugged conditions of the North Sea and other areas in the world, the GS-Piping System has demonstrated its benefits for all customers around the world.





Added value for customer

Revenue

Increase Customer's Revenue

- Increased uptime
- Higher revenue and profits
- Faster start-up of operations
- Improved quality through engineering
- High quality products
- Deep understanding of classification requirements
- Increased hydraulic system lifetime due to fewer component failures and operational stoppages

Risk

Eliminate Risks

- Reduced schedule risk
- Reduced financial risk
- High quality products
- Improved quality through engineering and prefabrication
- Professional project management
- Reduced risk of contractual penalties
- Reduced resource risk through machining
- No welding quality risk

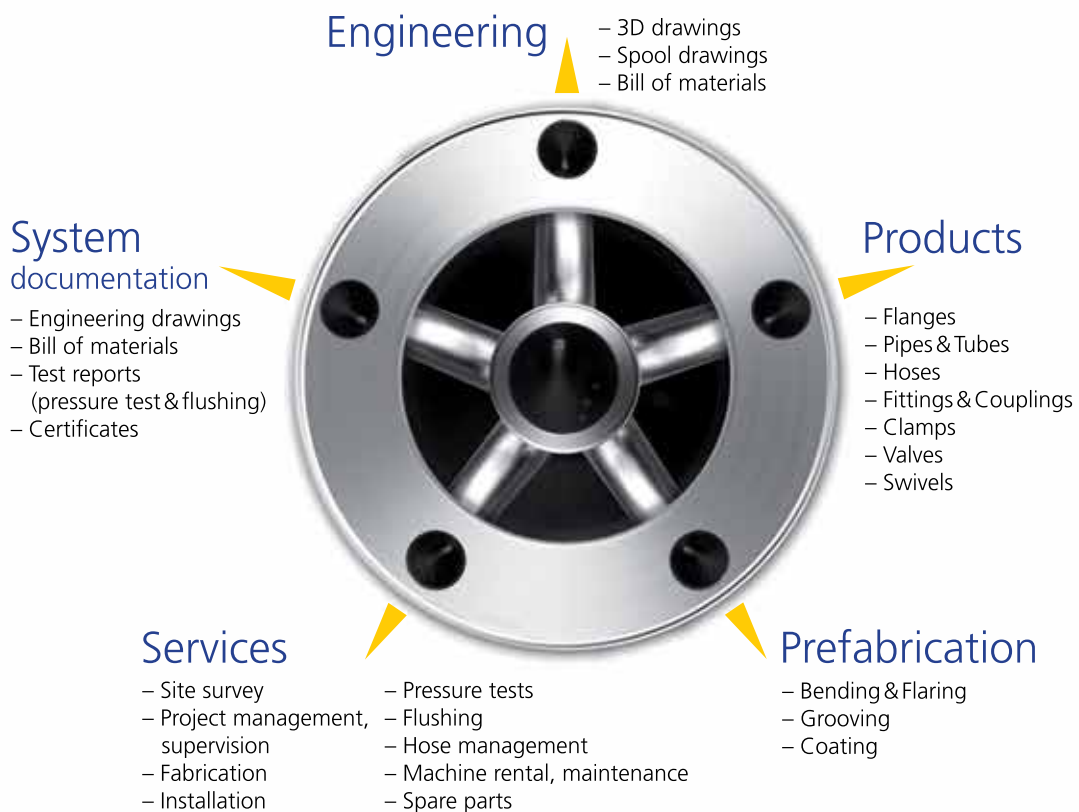
Efficiency

Improve Efficiency

- Increased operational efficiency
- Decreased installation costs
- Minimized on-site work through prefabrication
- No need for post welding X-ray testing
- No need for acid cleaning
- No need for welding requirements

GS-PIPING WITHOUT WELDING™

Complete piping systems



Engineering

GS-Hydro can provide all engineering services. We can work together with the customer's engineering services or can use 3-D models provided by customer to develop detailed spool drawings. The earlier we start working with our client, the easier it is for our customer to achieve their business goals, reliable high pressure piping system for their offshore needs.

Products

All products (pipes, flanges and fittings, hoses and hose couplings, seals and clamps) are high quality products and have all relevant certificates. GS-Hydro's wide product offering enables our customers to choose the ideal solution for different needs. We can offer stainless steel material, different alloys, galvanized or with painted coatings, just to mention a few.



Prefabrication

Using prefabrication helps to reduce the amount of on-site work and thus reduces cost and minimizes hassle on a customer site.

Services

GS-Hydro has over 40 years of experience offering non-welded piping solutions for offshore customers globally. Over that period of time we have gained extensive experience working with this very special customer segment. GS-Hydro is continuously and actively seeking opportunities on how to better serve offshore customers across the globe.

System documentation

Maintenance of the system is important to our clients. Good system documentation is a cornerstone when lifetime service is considered. For example GS-Hydro provides systems design drawings, spool drawings, material lists and test reports. This is our typical documentation package provided to our customer in conjunction with piping system delivery.

Non-welded GS-Hydro technology

The ORIGINAL GS-Piping System consists of three flange systems, which allow piping systems with working pressures from 10 to 690 bar and pipe diameters between 16 and 600 mm to be assembled without welding. The Retain Ring and 37° Flare Flange systems are used for high and intermediate pressure connections and the 90° Flare Flange connection for low pressure applications.

In addition to the original GS-Hydro products, we are offering a wide selection of fittings, hoses and hose couplings. A complete product and service offering gives GS-Hydro a great position in the market, serving different kinds of offshore customers and their unique needs.

Quality of operations, products and customer solutions are critical business drivers for GS-Hydro. The company manufactures, sources and delivers only components and materials, which have all the relevant certificates needed for different customer segments. In project sales, the quality management system also covers projects and services for piping system implementations.





- ✔ Certified quality system (ISO 9001:2008) in place
- ✔ Full materials traceability
- ✔ High quality materials and manufacturers

Approved by numerous classification agencies

ABS American Bureau of Shipping

DNV GL DNV GL Group

LRS Lloyd's Register of Shipping

BV Bureau Veritas

RINA Registro Italiano Navale

RS Russian Maritime Register of Shipping

NKK Nippon Kaiji Kyokai

KR Korean Register

DOT Department of Transport Marine Directorate

TÜV Technische Überwachungs Verein

The GS-Piping Systems are also approved for use in offshore by NORSOK piping specifications.



Partner you can trust





GS-Hydro is the world's leading supplier of non-welded piping systems. Operations began in 1974 with the commercialization of an innovative flange system, which allowed the rapid and secure connection of pipes without the need for welding. Investing in continuous product and systems development, GS-Hydro now offers the broadest range of non-welded piping solutions in the market. Our core technology has been validated in thousands of applications for over three decades and has been taken to virtually every corner of the globe.

- Global presence through 14 GS-Hydro companies and agents
- Headquarters and production facility in Italy
- Over 40 years of experience in non-welded piping technology
- Tens of thousands of piping systems installed around the world
- Provider of GS-Hydro original non-welded flange technology

GS-Hydro is the original provider of non-welded piping solutions with numerous benefits for a wide variety of demanding applications. We create value together with our customers by providing innovative fluid transfer solutions which enable safe operation, reduced environmental impact and lower total cost of ownership. We deliver our piping and hose solutions globally in more than twenty-five countries through own companies and partners.



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