



Media Release

Schaffhausen

20 June 2023

Operational safety for a specialized high-performance vessel Fassmer Shipyard resolves condensation issue in HVAC application

Using COOL-FIT, GF Piping Systems' pre-insulated plastic piping system, Fr. Fassmer GmbH & Co. KG, a leading German shipyard for specialized high-performance vessels, addressed a condensation issue in the HVAC piping system. The solution, used in one of their latest projects, also brought several other benefits and efficiencies to the customer's operations.

Fassmer is renowned for innovative designs, cutting-edge technologies, and high-quality standards. The shipyard has planned a series of four specialized high-performance vessels on behalf of a German owner. When designing the piping systems of special operations vessels, the reliability and operational safety of materials and components are crucial. HVAC and cooling systems are needed to ensure the safety and comfort of the crew. Selecting the right piping system can help ensure that the vessel can fulfill its mission effectively. Fassmer designed and equipped the series' first three vessels with traditional metal systems and post-installed soft rubber foam insulation and mineral wool to provide the best possible operating conditions on board the project. After being in service for some time, the ship's operators faced condensation issues with the metal solution, and parts of the insulation were damaged.

With a strong focus on the quality and sustainability of their projects, Fassmer has decided to look for an improved solution for the execution of the fourth and last one of the ships. Although the ship design was originally laid out for an HVAC piping system made of copper and steel, Fassmer decided to install the pre-insulated COOL-FIT system by GF Piping Systems. COOL-FIT pipes, fittings, valves, and tools consist of a medium-carrying PE100 pipe, a high-energy insulation foam, and a protecting HDPE pipe jacket, providing an extra layer of insulation and protection. Sealing lips ensure vapor-tight insulation and help to avoid condensation and resulting corrosion. During installation, the challenge was to adapt the system to the existing metal design. Still, thanks to the engineered components and the electrofusion technology, Fassmer could install the system without problems. The insulation step became obsolete thanks to the pre-insulated parts of the new solution.

Overall, Fassmer's decision to install the marine-approved COOL-FIT system (ABS, BV, DNV, LR, RINA) on board their project has solved the condensation issue. It will also bring several other benefits to the owner and operators of the vessel: With the maintenance-free plastic piping system, the German owner can rely on an energy-efficient, lightweight solution for their HVAC system for the entire service life of the ship.

[Find the full reference and more about GF Piping Systems' marine solutions here.](#)

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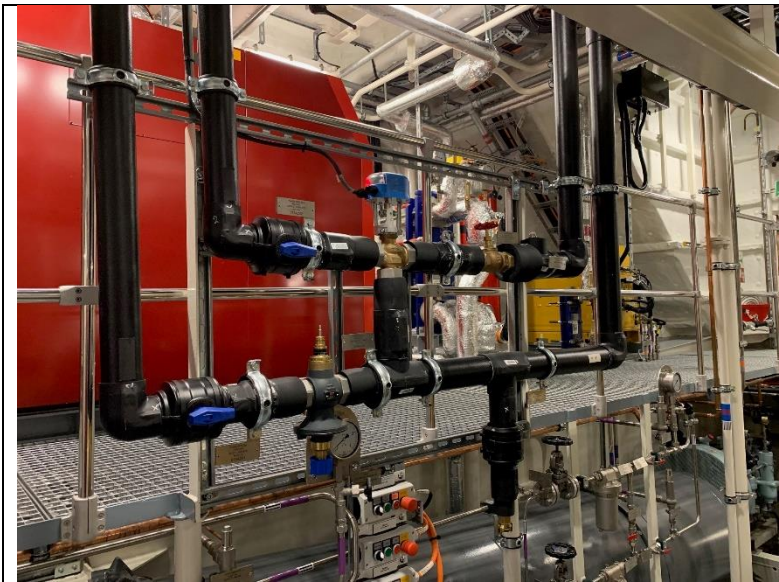
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GF Piping Systems

As the leading flow solutions provider for the safe and sustainable transport of fluids, GF Piping Systems creates connections for life. The division focuses on industry-leading leak-free piping solutions for numerous demanding end-market segments. Its strong focus on customer-centricity and innovation is reflected by its global sales, service, and manufacturing footprint and its award-winning portfolio, including fittings, valves, pipes, automation, fabrication, and jointing technologies.

GF Piping Systems has its own sales companies in 31 countries, which means it is always by its customers' side. Production sites in 36 locations in America, Europe, and Asia ensure sufficient availability and quick, reliable delivery. In 2022, GF Piping Systems generated sales of CHF 2'160 million and employed 8'085 people. GF Piping Systems is a division of Georg Fischer AG, founded in 1802 and headquartered in Schaffhausen, Switzerland.

www.gfps.com

Pictures

Pre-insulated pipes, valves, and fittings help to increase the operational safety and energy efficiency of the newly built high-performance vessel.

Source: Fassmer



Thanks to engineered components, planning support as well as customizing opportunities, the system can also be adapted to individual customer needs.

Source: Fassmer



The COOL-FIT system components consist of a medium carrying inner pipe made of PE100, closed-cell insulation, and a robust outer jacket made of HDPE for extra protection.

Source: Fassmer



(Title picture)

The German builder of special purpose vessels, the Fassmer Group, relies on pre-insulated thermoplastic piping systems to tackle condensation and corrosion in HVAC applications.

Source: Fassmer