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INSTAFLEX ensures a safe and reliable potable water distribution system





T. Mariotti is a renowned Italian shipyard specializing in constructing luxury cruise ships. After setting an industry benchmark with a sister ship, the Seabourn Venture, the company based in Genoa, decided to further improve operational safety on its latest vessel, the Seabourn Pursuit. Outfitting the potable water system with a polybutene INSTAFLEX solution by GF Piping Systems has increased longevity and hygiene while lowering maintenance costs.

Project background

Cruise ships feature extensive piping systems for various applications that can reach a length of several hundred kilometers. During the construction of the ultra-luxury cruise ship Seabourn Pursuit, shipyard T. Mariotti therefore needed solutions that could meet a number of requirements. On the one hand, the potable water system on board needed to meet the highest standards for safety and hygiene. At the same time, it needed to be long-lasting, costeffective, and offer an efficient installation. As a result, T. Mariotti partnered with prefabrication specialist Lowat and Swiss flow solutions provider GF Piping Systems.

Selected technical solution

Initially, Lowat proposed a comprehensive engineering study of the complete potable water manifold onboard the vessel. During this phase, the company utilized extensive digital libraries including 3D drawings and CAD files by GF Piping Systems. The decision was made to create a prefabricated plug-and-play solution using the polybutene INSTAFLEX product range. INSTAFLEX by GF Piping Systems is designed to meet the highest requirements, from distribution to the extraction point and is approved for marine use. Polybutene, a material specially developed for these applications, offers numerous benefits such as corrosion resistance, low weight, and a high level of hygiene during operation.

Achieved improvements

After completing the fully custom spools, including pipes, fittings, manual ball, diaphragm, and pressure control valves, Lowat conducted pressure tests at the workshop to ensure the highest possible quality. Thanks to the prefabricated pipe sections as well as socket and electrofusion jointing techniques, the installation could be carried out quickly and easily. In addition, the option to directly weld saddle outlets on the main line allowed T. Mariotti to work efficiently even in the tightest spaces on board. The result is a potable water system that ensures long-term reliability and plays an important role in providing a luxurious experience for passengers around the world.



The corrosion- and maintenance-free polybutene system INSTAFLEX provides operational safety to Seabourn Pursuit. Source: GF Piping Systems



Prefabricated spools by Lowat allowed a fast and easy installation on board. Source: GF Piping Systems

Customer Benefits

- INSTAFLEX is ideally suited for water applications onboard ships thanks to corrosion-free and cost-effective materials that improve hygiene
- Extensive support and digital planning resources like Digital Libraries allow customers to create custom prefabricated solutions for their specific needs
- Electrofusion and Socket fusion jointing possibilities for an up to 50% faster installation of the piping system



