

AEROSPACE PIPING RESTORED WITH COMPOSITE WRAP



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A global leader in aerospace manufacturing, faced a critical challenge with their pressurized 14" and 22" carbon steel intake/supply lines. These vital pipelines, crucial to their operations, experienced localized interior deterioration, resulting in periodic blow-outs. The pipes were so compromised that they couldn't withstand a pressure of 60 PSI, posing a serious risk to operations. The weakened state of the pipes threatened the company's efficiency and safety, necessitating an immediate and effective solution. To prevent further failures and maintain system integrity until a permanent solution could be devised in 5-10 years, this organization sought an emergency preventative maintenance service. They chose the Belzona SuperWrap II carbon fiber system to provide a reliable and effective interim solution.

To address the issue, we wrapped approximately 175 linear feet of the 14" and 22" pipes with the Belzona SuperWrap II system. The project took six weeks and required meticulous planning and execution to meet the highest safety and quality standards.

Next, the team removed and disposed of all pipe insulation, prepping the exterior of the pipes using bristle blasters while the pipes remained in service. This preparation was critical to ensure a clean and dust-free surface for the wrap application. Following manufacturer recommendations, the Belzona SuperWrap II system was then meticulously applied. The process required careful attention to detail, especially given the challenging conditions. The pipes were 8 to 14 feet off the ground and surrounded by various other utilities, making access and scaffolding the most significant hurdles.

One of the unique challenges of this project was maintaining the correct environmental parameters. The pipes, carrying 55°F water, were prone to sweating and condensation. To mitigate this, the team employed heating, cooling, and dehumidification systems to ensure the pipes remained dry and at the optimal temperature for the application of the wrap.

The innovative Belzona SuperWrap II, an engineered design, was used to fully restore the strength of the old deteriorated pipes, ensuring they could sustain the required 60 PSI pressure. This technique allowed the business to remain in full operation while our work was being performed, allowing for no downtime in their daily work. We are proud of our team's expertise and dedication in restoring the operational integrity of the aerospace company's piping system. This successful project not only resolved their immediate concerns but also reinforced our commitment to providing top-tier industrial repair solutions.

About the Belzona SuperWrap II

The Belzona SuperWrap II system is a cutting-edge composite repair solution. This system includes a release film to compact and consolidate the application, offering superior strength and durability.

Key Benefits of Belzona SuperWrap II

- **Rapid Application:** Quick and easy to apply, even under online conditions, ensuring no downtime in operations and rapid return to service.
- **Versatile:** Suitable for use in a wide range of service temperatures from -60 °C (-76 °F) up to 150°C (302°F).
- **Chemical and Corrosion Resistance:** Provides outstanding resistance to chemicals and corrosion, enhancing the longevity of repairs.

The Belzona SuperWrap II system offers a reliable alternative to welding, eliminating the need to replace defective metallic substrates. Ideal for in-situ repairs of through-wall and thin-wall defects on pipes and tank walls, it serves industries such as Oil & Gas, Power Generation, and Marine.

This project demonstrates how Belzona SuperWrap II effectively restored deteriorating carbon steel pipes at a global aerospace facility. Completed without operational downtime, it underscores the value of proactive maintenance and innovative repair solutions in critical environments.

