

GF Piping Systems

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ELGEF Plus – Big Dimensions

Corrosion-free intake/outfall lines

Azomures, Romania

Corrosion-free PE piping system for
intakes and outfalls of cooling lines
in the chemical process industry.

Rapid retrofitting thanks to efficient branch-offs



Pipelines for process cooling in the chemical process industry are often exposed to rather corrosive environments. If the cooling system has a serious failure, the main process has to be shut down in the factory, which can lead to extremely high downtime costs. When replacing cooling pipelines, corrosion resistance, reliability, longevity and the speed of replacement are crucial.

Project background

The largest Romanian producer of fertilizers – Azomures – supplies farmers with mineral fertilizers for agricultural use. The production plant of Agrumures in Tirgu Mures decided to replace its old and very corroded DN 900 steel pipes for process cooling by d1000 mm polyethylene pipes. The pipeline transports the cooling water between the chemical processing site (50 °C) and the cooling tower. To compensate evaporated water, an intake line collects fresh water directly from the nearby river. As cooling is essential for the entire chemical plant, the piping could only be retrofitted during the 1-month maintenance period. This made it a time-critical undertaking even for the PE-experienced contractor S.C. Tibpet SRL.

Selected technical solution

Although the customer was not yet familiar with PE, the benefits presented by an engineering company were self-evident: PE is fully resistant to corrosion, has a considerably lower carbon footprint, and guarantees a long service life. But the most compelling argument was the fact that the tight construction period was only possible with PE. The simple and time-efficient construction of reduced outlets using large diameter ELGEF Plus branch saddles instead of reduced tees were the game changer in this project. Given the importance of the cooling process for the entire plant, the product quality and reliability of the jointing technique were key factors.

Accomplished improvement

The retrofitted PE process cooling lines ensure corrosion- and interruption-free operation and warrant a long service life. Thanks to GF Piping Systems, on-site training, high quality performance of butt fusion machines, and the service of branch saddle installation experts, the contractor S.C. Tibpet SRL was able to ensure high quality jointing and finished the challenging job on time. Based on this experience, the customer was convinced that PE and branch saddles are an ideal solution for this type of application. It now plans to replace another large diameter steel pipe by PE.



Reliable jointing quality with butt fusion machines from GF Piping Systems.



Fast onsite integration of a d1000 mm ELGEF Plus saddle with a d500 mm outlet.

Customer benefits

- **Safe and reliable jointing with high quality butt fusion machines from GF Piping Systems and ELGEF Plus electrofusion fittings.**
- **Onsite construction of branch-offs with ELGEF Plus large diameter saddles - highly time efficient installation.**
- **Excellent service package with locally sourced fittings, tools, trainings, documentation and technical support.**
- **Corrosion and abrasion-resistant PE intake and outfall lines guarantee a long service life.**

Your contact

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