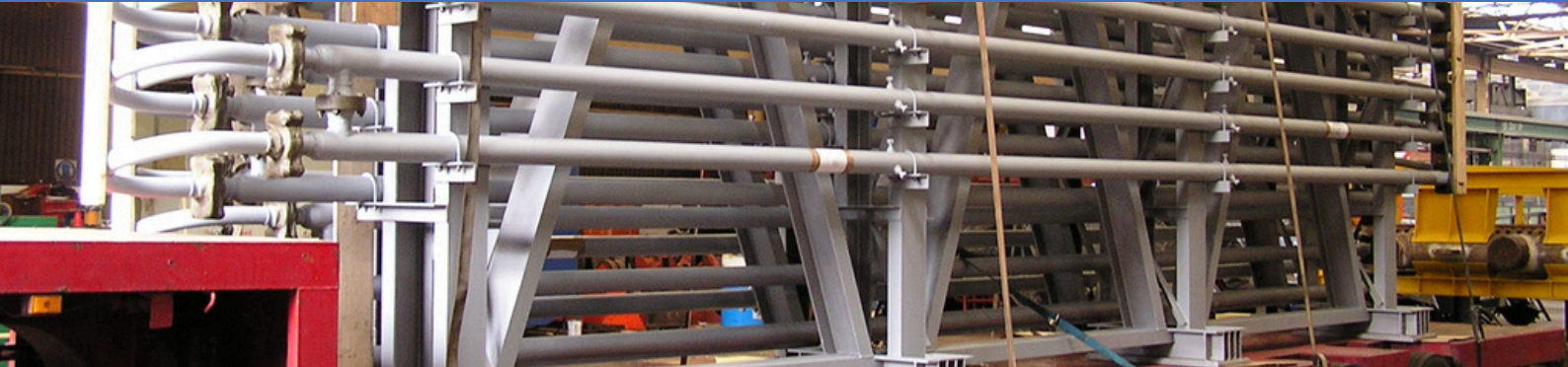




Jacketed HP Pipework - Case Study



Unit Superheater Engineering Ltd, a part of UnitBirwelco, is a leader in manufacturing jacketed high-pressure pipework for the LDPE industry.

We can offer -

- ① Design and manufacture of steam drums
- ① Superheaters/economisers
- ① Boiler tube/element manipulation
- ① HP boiler pipework
- ① Pipework Fabrication
- ① Shell and Tube Heat Exchangers
- ① Air cooled heat exchangers
- ① Heat exchanger refurbishment
- ① Pressure vessels
- ① NDT/heat treatment



USE stands as a reliable and proficient partner for semi-automatic tube-to-tube sheet welding projects. Our capabilities span across a diverse range of materials, tube sizes, and welding techniques, allowing us to deliver high-quality, precision-engineered solutions tailored to meet the unique needs of each client.

CONTACT For more information contact:

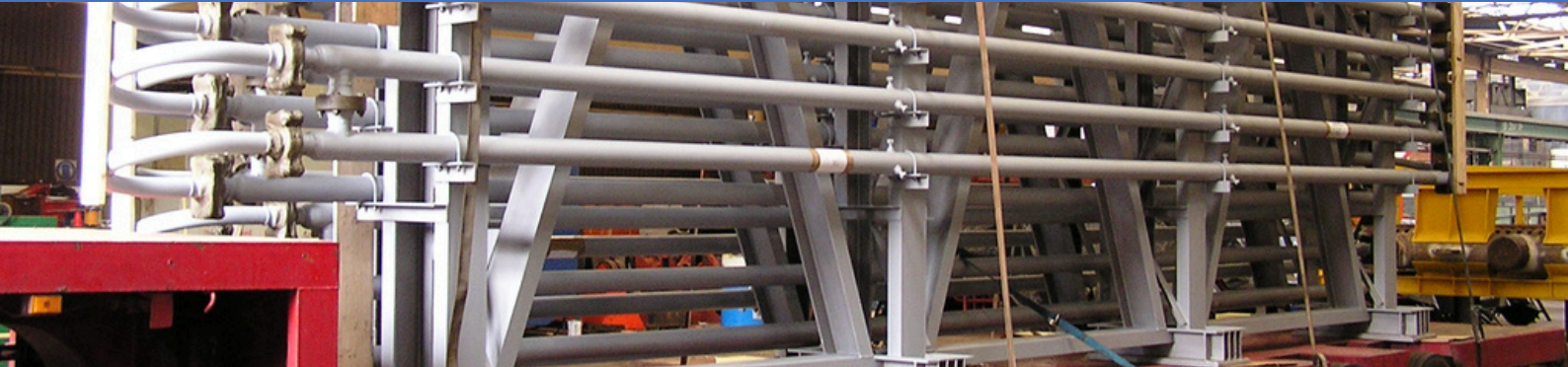
Steve Foligno on:

Tel: +44 (0)1792 654091

Email: s.foligno@unitbirwelco.com



Jacketed HP Pipework - Case Study



Unit Superheater Engineering Ltd is a leading manufacturer of jacketed HP pipework for the LDPE industry worldwide. Their expertise and innovative approach set them apart in the market, as evidenced by their recent fabrications adhering to the ASME B31.3: 2020 Design Code. By utilizing advanced materials like Nickel-Chrome for the inner tubes and Carbon Steel for the outer jackets, they ensure exceptional durability and performance.

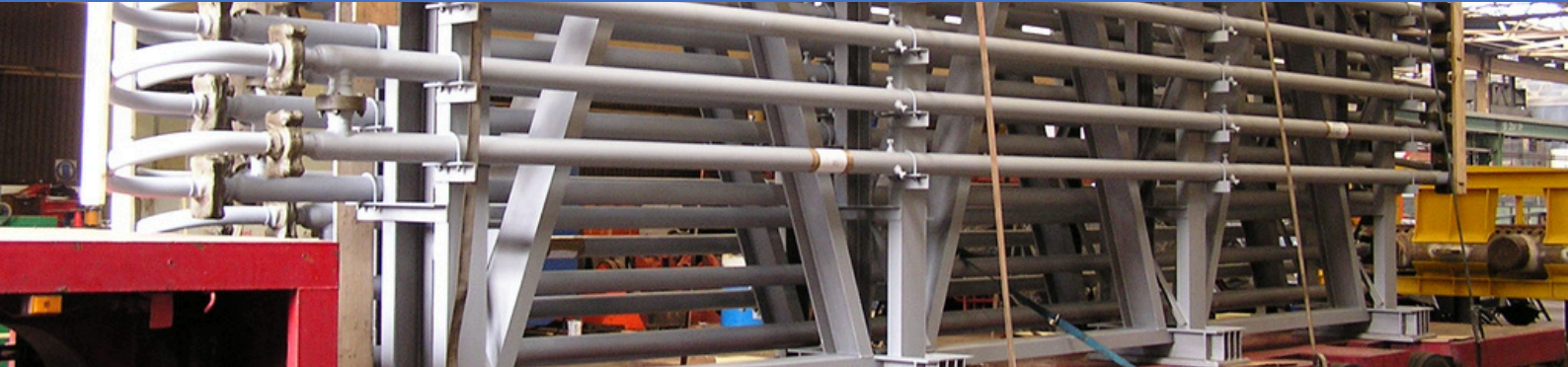
Project Profile-

- ① Project title: Jacketed HP Pipework
- ① Year of Manufacture: 2024
- ① End user country: Turkey
- ① Industry: Petro Chemical
(Polyethylene)
- ① Design Code: ASME B31.3: 2020
- ① Unit Weight: 13t
- ① Design Pressure: 59,738 PSI
- ① Design Temperature: 100 C





Jacketed HP pipework - Case Study



The Low-Density Polyethylene (LDPE) industry plays a crucial role in manufacturing a wide range of products, from plastic bags to packaging materials. One of the pivotal elements in ensuring efficient and safe LDPE production is the use of jacketed high-pressure (HP) pipework. This specialized piping system is designed to handle extreme pressures and temperatures, making it indispensable in the LDPE manufacturing process.

Jacketed high-pressure pipework consists of a primary pipe enclosed within a secondary outer jacket. This design provides additional insulation and protection, allowing the system to handle higher pressures and temperatures, crucial for processes in the LDPE industry.

Jacketed HP pipework is used extensively in LDPE manufacturing, particularly in high-pressure polymerization reactors where temperature and pressure control are critical.

The robust design of jacketed HP pipework ensures it can withstand the rigorous demands of high-pressure LDPE production, reducing the risk of leaks and failures.

The sequencing of these activities was critical to achieving the aggressive schedule required by the Client while still maintaining a safe work environment. Despite a number of additional in-progress requirements, the project was completed, with zero weld repair failures and with an outstanding safety record.

The company's manufacturing process includes:

- ❶ Cold Bending: To shape the pipes without compromising their structural integrity.
- ❷ Silver Brazing: For strong and reliable joint connections. Autofrettage
- ❸ Pressure Testing: Ensuring the inner tubes can withstand pressures up to 4,200 BarG, affirming their reliability under extreme conditions.



Jacketed high-pressure pipework is a vital component in the LDPE industry, providing the necessary safety, efficiency, and durability for high-pressure operations. As the industry continues to evolve, innovations in pipework systems will play a crucial role in meeting the increasing demands of LDPE production. Unit Superheater Engineering Ltd exemplifies industry leadership through their commitment to quality and innovation, ensuring their products meet the highest standards of performance and safety.

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