

FLARE TIP, STACK AND SKID ERECTED IN GCC

Birwelco's flare stack and ignition skid package provides a reliable, fully integrated solution for safe and efficient flare system operation.

PROJECT

Birwelco's supply of a complete flare stack and ignition skid package highlights the company's expertise in delivering tailored flare system solutions for the energy sector. The project demonstrated Birwelco's ability to integrate robust engineering design, high-quality fabrication, and reliable ignition technology into a single package. By combining precision manufacturing with specialist flare system knowledge, Birwelco provided equipment that meets the stringent operational and safety requirements of modern industrial facilities.

Project Benefits

- ① Delivery of a complete flare package including stack, tip, and ignition skid.
- ① Reliable ignition performance through dual high-energy and FFG pilot systems.
- ① Use of 316 stainless steel for flare tip and skid, ensuring durability and corrosion resistance.
- ① Full integration of valves and instrumentation to enhance monitoring and control.
- ① FAT inspection completed with client representatives for verification of system readiness.



CONTACT

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Flare tip, stack and skid erected in GCC Case Study

Featuring a stainless steel flare tip, high-energy ignition, and advanced flame detection systems, this project showcases Birwelco's expertise in delivering safe, reliable, and fully integrated flare solutions.

UnitBirwelco, through its Birwelco division, was responsible for the design, fabrication, and supply of a complete flare system package consisting of a flare stack, flare tip, and ignition skid assembly. The flare stack was constructed from 24" NB low-temperature carbon steel with an overall height of 25 metres, and fitted with a 310 stainless steel flare tip to ensure durability under extreme thermal and environmental conditions.

In addition to the stack, the project scope included a pilot ignition skid designed with both high-energy ignition and a flame front generator (FFG) system. The skid and pipework were fabricated in 316 stainless steel and fully equipped with valves and instrumentation for pilot gas control and reliable flame detection.

To validate functionality and safety, a comprehensive Factory Acceptance Test (FAT) was carried out in the presence of the client. This was supported by a full package of documentation to demonstrate compliance with quality assurance standards and provide confidence in the system's operational readiness.



- ④ **Design & Engineering:** Flare system designed for capacity, safety, and thermal integrity, with materials selected for low-temperature and high-temperature service.
- ④ **Fabrication & QA:** Skid and stack fabricated in-house to industry standards, with inspections and documentation provided throughout.
- ④ **Testing:** FAT conducted to validate functionality of ignition skid, valves, and flame detection systems.
- ④ **Delivery:** Package prepared and delivered in line with client technical requirements.

The flare stack and ignition skid package was delivered to full technical specification. The FAT confirmed system performance, providing the client with confidence in operational reliability and compliance with industry standards.

This project highlights Birwelco's capability to deliver specialist flare systems, combining expertise in thermal design, materials selection, and skid engineering to provide safe, reliable, and fully integrated solutions for the energy sector.

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