

# FLARE GAS RECOVERY

Birwelco's Low-Pressure Gas Recovery (LPGR) package has played a crucial role in capturing and utilizing associated gas from crude production field.

## PROJECT

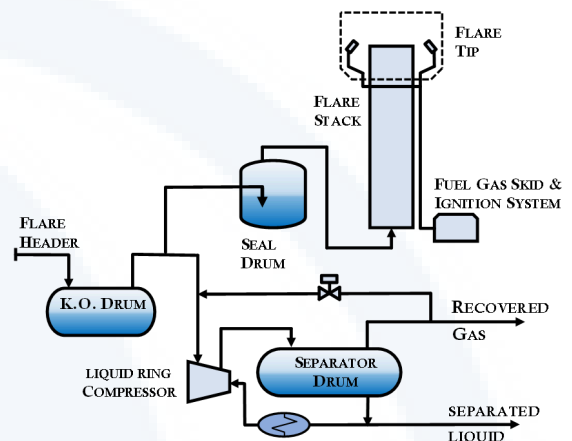
Birwelco's Low-Pressure Gas Recovery package provides an innovative and sustainable solution for offshore associated gas recovery. The project underscored UnitBirwelco's expertise in delivering tailored energy solutions that meet the evolving demands of the oil & gas industry. Through engineering excellence, high-quality manufacturing, and seamless integration, Birwelco successfully enabled the offshore operator to reduce emissions, enhance efficiency, and achieve long-term operational benefits.

## Project Benefits

- ① Environmental Impact
- ① Reduced gas flaring, leading to a significant drop in greenhouse gas emissions.
- ① Lower noise and visible pollution, enhancing environmental and operational conditions.
- ① Regulatory compliance with stringent emissions laws.
- ① Economic & Operational Advantages.
- ① Transformed wasted gas into a valuable resource for power generation and reinjection.
- ① Enhanced operational efficiency and energy utilization.
- ① Increased economic viability of offshore assets through sustainable gas recovery.



## FGR SYSTEM



## CONTACT

To discuss your requirements, please contact;

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## Flare Gas Recovery - Case Study



Flare Gas Recovery (FGR) is one of UnitBirwelco's most innovative and environmentally sustainable solutions. Delivered through our Birwelco division in Halesowen, which has over 50 years of expertise in flare system design, FGR provides a powerful combination of emissions reduction and cost savings for industrial operations.

Each FGR system is custom-designed to match the flare gas composition, liquid content, flaring frequency, and flow rate of a client's facility. To demonstrate the economic viability of our technology, we provide a detailed cost-benefit analysis, considering both equipment and engineering costs alongside the financial advantages of capturing and utilizing recovered gas.

Unlike many engineering firms that outsource fabrication, installation, and commissioning, UnitBirwelco manages the entire process in-house—ensuring cost transparency, streamlined execution, control and superior quality.

### UnitBirwelco Refinery Installation Includes:

- ① Skid-mounted liquid ring compressor for efficient gas compression.
- ① Seal liquid cooler and separator to ensure optimal gas quality.
- ① Instrumentation, piping, valves, and steelwork for seamless system integration.
- ① Fully integrated control system with local and remote monitoring.



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## Flare Gas Recovery - Case Study



UnitBirwelco, through its Birwelco division, played a pivotal role in the recovery of associated gas from the crude production field located in the Mediterranean Sea. The project aimed to minimize gas flaring, enhance resource utilization, and ensure compliance with stringent environmental regulations. Birwelco's scope included the design, engineering, and supply of a comprehensive Low-Pressure Gas Recovery (LPGR) package tailored to the unique challenges of offshore operations.

The project aimed to capture and process associated gas that would otherwise be flared, reducing greenhouse gas emissions and promoting environmental sustainability. It also sought to provide a cost-effective, energy-efficient gas recovery system while integrating seamlessly with existing offshore infrastructure. The Low-Pressure Gas Recovery (LPGR) package included a Liquid Ring Compressor for reliable compression, a Separator Drum to remove liquids and particulates, and a Seal Water Heat Exchanger for temperature stability. A Seal Water Pump ensured optimal circulation, while advanced instrumentation, interconnecting piping, and a Package Control System enhanced automation, monitoring, and overall efficiency optimization.

### Execution Strategy

- ① **Design & Engineering:** UnitBirwelco utilized advanced process simulations and computational modeling to determine optimal system specifications.
- ① **Fabrication & Quality Assurance:** All equipment was manufactured in-house at Birwelco's state-of-the-art fabrication facility, ensuring compliance with offshore industry standards.
- ① **Installation & Commissioning:** A modular skid-based design facilitated rapid, efficient installation. The commissioning process validated process efficiency, safety, and reliability, ensuring the system operated at peak performance.



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