

## ICOS STRENGTHENS MECHANICAL INTEGRITY AND RELIABILITY AT THE NGC PROJECT IN SOYO



At the heart of every successful energy project lies a team capable of transforming precision into performance. Since September 2025, ICOS has been supporting Saipem and Azure Energy at the NGC Project in Soyo, where the company has been entrusted with delivering high-criticality mechanical and hydraulic services in one of the region's most sensitive gas-processing environments.

The work carried out by the ICOS team is fundamental to ensuring the integrity, safety, and reliability of the plant's operations, a responsibility the company embraces with rigor and professionalism.

## Ensuring Seal Integrity Through Advanced Leak Testing

One of the primary scopes assigned to ICOS is the execution of leak tests on critical flanged joints across the gas-processing system. Leak testing is an essential activity in gas environments, where even minor seal failures can lead to operational interruptions, safety risks, and environmental impacts.

The ICOS team follows a structured and meticulous workflow that includes:

## 1. Precise Verification of Leaks

Pressurization techniques are applied to detect potential points of loss across flanges and high-risk connections.

## 2. Controlled Flange Disassembly

When a leak is identified, technicians dismantle the flanges with caution, ensuring no additional stress is placed on the system.

**PROJECT:** QUILUMA & MABOQUEIRO (Q&M)  
PROJECT GAS TREATMENT PLANT (GTP)

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#### 3. Thorough Cleaning and Preparation

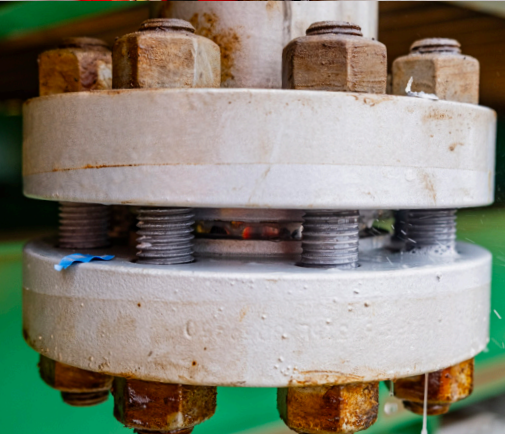
Faces, grooves, and O-ring housings are cleaned to remove debris and imperfections that could compromise sealing.

#### 4. Replacement of Critical Sealing Components

O-rings are replaced strictly following client specifications and material requirements.

#### 5. Reassembly With Certified Torque Methods

Reassembly is performed using hydraulic torque wrenches for high-capacity flanges and battery-powered torque tools in restricted areas always in alignment with Saipem's procedures and Azule Energy's standards.



This end-to-end process guarantees full restoration of seal integrity and contributes directly to the plant's operational security.

#### Flushing Operations for Over Head Compression Lines

Beyond leak testing, ICOS is also responsible for flushing operations on critical lines within the Over Head Compression (OHC) system. Flushing is essential for maintaining the cleanliness and performance of hydraulic and mechanical systems, especially in high-pressure environments.

#### The objectives of the flushing process include:

- \* Removing solid residues and metallic contaminants
- \* Ensuring internal line cleanliness
- \* Protecting high-pressure and rotating equipment
- \* Meeting international hydraulic contamination standards



Using controlled flow, temperature management, and continuous cleanliness monitoring, ICOS ensures the OHC lines are restored to optimal operational conditions.

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#### The ICOS Advantage: Expertise, Precision, and Discipline

The ICOS team deployed in Soyo has consistently demonstrated:

- \* High technical competency
- \* Strict compliance with client and industry procedures
- \* Proficiency in certified mechanical tools
- \* A strong commitment to operational safety
- \* The ability to work in high-sensitivity gas environments

Their performance has played a key role in preserving the mechanical integrity of the NGC Project's systems, supporting Saipem's execution and Azul Energy's long-term operational objectives.

#### Conclusion

ICOS's participation in the NGC Project highlights the company's capacity to handle complex mechanical and hydraulic operations with precision and responsibility. From guaranteeing flange seal integrity to restoring cleanliness in compression lines, each service reflects ICOS's dedication to safety, reliability, and technical excellence.

As the project progresses, ICOS remains committed to delivering solutions that strengthen the performance and integrity of Angola's energy infrastructure.

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