

PROJECT OVERVIEW #123

Chevron Angola

LOCATION:

GS-Kilo, Offshore Cabinda

APPLICATION:

Gaslift Compressor

ENGINE/COMPRESSOR:

Cooper Bessemer GMVA-12A

DISTRIBUTOR/REP:

Quimex S.A.

Isaac Perez, Esther Parthon,
Randy Ridgeway

ALTRONIC PRODUCTS:

Exacta 11, CPU-2000,
GOV-10, EPC-200, ETM,
DSM, 45PHL

OVERVIEW:

Chevron wanted to improve the overall reliability of the control system for a GMVH-12A engine by using current best practice technology including end devices, electronic and pneumatic inputs to the controls system, and performance and outputs from the control system.

Additionally, they wished to provide automation for the complete compressor operation process including pre-start-up procedures, safety warnings/shutdowns, stop procedures, post-stop procedures.

To meet these requirements, Quimex installed the complete set of



above-listed products packaged in a stainless steel control panel built at Altronic Controls. The installation presented Chevron with a turn-key controls retrofit and mechanical overhaul. Quimex S.A. specified the mechanical scope and controls upgrade scope in its entirety and provided the control panels and complete set of end devices, installation materials, installation tooling, and all mechanical overhaul parts required for the project.

Quimex provided the complete mechanical overhaul and controls installation team for a turn-key upgrade of the compressor set:

- A team of nine Cooper Bessemer mechanics
- A process tubing specialist
- A wiring specialist
- An I&E/mechanical technician
- An installation supervisor (I&E and Mechanical)
- A Quimex project manager
- Altronic representatives at various stages
- A commissioning engineer

The installation efforts and logistics were coordinated in conjunction with Chevron's mechanical overhaul team.

The focus was to minimize down-time for this asset, which is critical to Chevron's operation.

The commissioning process consisted of the following:

- Visual review of the completed installation work
- Visual review of the control panel wiring – including continuity checks
- Power-up of the panel
- Configuration of the various Altronic modules
- Review of the Exacta program
- Loop checks against every end device
- Various test activities to ensure panel
- Upon readiness of mechanical team , start-up attempts and troubleshooting of various standard commissioning issues.

The main obstacle was coordinating two crews (day crew and night crew) who were subject to Chevron logistics, and still complete the job in the required timeline.

The planned major overhaul for this year was able to be extended by over 18 months thanks to the wonderfully executed overhaul and precise operating control system.

According to Jimmey Clark, Malongo Asset Mechanical Advisor, "Having the proper fuel/air ratio (GOV-10) we are able to finally run this engine as designed. So far, I am pleased with the improved operation of the engine. We have needed this control for some time."

Mike Harvey, Malongo Asset Team, added, "The power cylinders are doing well. We've had a few low cylinder temperature issues due to fuel valve failures, but the unit has been operating at rated capacity. The new governor (GOV 10) is the most appreciated part of the upgrade from my standpoint."

Chevron is to standardize to Altronic products for all reasonable applications: CPU-95 and EZ Rail for their entire fleet of reciprocating gas engines.

