



## Bonga Smart Choke Installation

Shell Nigeria Exploration & Production Company

Shell Nigeria Exploration and Production Company (SNEPCo.) planned to install two Smart Choke Valves to mitigate against slugging by maintaining a constant volumetric flow through the choke valves.

The riser/flowline system on Bonga experienced trips, especially compressor trips caused by slugging of the flowlines, thereby affecting overall production. Temporary mitigation was handled by gaslift, which keeps total production at a gas handling system limiting rate. A permanent solution based on Shell Feasibility studies showed that fast acting choke (Shell proprietary algorithm) is capable of mitigating slugging in the Bonga flowlines with minimal or zero gaslift.

Ariosh was awarded the contract to install the fast acting choke valves in 2016. Project Scope included Engineering, Procurement, Fabrication, QAQC, Transportation, Installation and Commissioning & Start-up as outlined below:

- Process Engineering Design
- Pipe Route Optimization
- Process Control Systems and software design
- Structural Engineering & Verification/modification of load capacity of existing members for additional load
- Workpack preparation, specifications and drawings
- Material Procurement and Fabrication
- Transportation of procured materials, fabricated piping spools, pipe supports and accessories offshore
- Offshore installation of choke valves with accompanying software integration, fabricated piping spools, pipe supports and accessories
- Commissioning: Preparation of commissioning dossier and procedures.

### Services

Detailed Engineering Design (DED) & Construction Support

### Location

Lagos, Nigeria

### Total Man-hours

Over 6,000

### Safety Record

Zero LTI, Zero MTI

### Status

Completed Q4 2013