



Project:	Bouri	Contractor:	Mustang Engineering	End User:	Mellitah Oil & Gas
Product:	Fuel Gas Treatment Package	Location:	Libya, Offshore	Year:	2010

### Application

The contract was placed by Mustang Engineering on behalf of the Libyan Mellitah Oil & Gas for the Bouri asset in Libya. The Fuel Gas Package was one of the last major systems to be purchased by the client and so there was limited space available on the platform. OGS had to design the package to fit into a footprint 7.2m (l) x 5.1m (w) with a height restriction of 3.6m.

### Description

The scope of supply included:

- 6" 300# LTCS, Fuel Gas Conditioning package
- 1 off 100% Inlet KO Drum
- 2 off 100% Shell & Tube Heaters
- 2 off 100% Dry Gas Filters
- Special isolation Ball valves, with Duplex materials and Inconel Overlays, and Tungsten Carbide coated Seats

### Challenges

The package had a lot of design and engineering challenges to consider with regard to fitting all the equipment into a limited foot print. The solution featured many design changes to the standard production for these kinds of process packages including:

- The project faced delay due to the political turmoil in Libya.
- Review of the pipework routing to fit all components in and still allow for maintenance.
- Split level access ladders and flooring with pipework underneath.
- High level nozzles to connect to client pipework requiring more structural steel design work to manage blast loads.

- Double stacked pipelines with associated structural steel.
- The base of the package was split in two to allow for ease of transport for the finished package.
- A large range of materials and coatings were required including Low Temperature Carbon Steel, Stainless Steel and Duplex Stainless Steel, ENP Coated Balls, Inconel Overlays for Seat Pockets and Tungsten Carbide Coated Metal Seats.
- The end result was multiple material configurations across valves of even the same size and pressure rating. This required careful management and expediting by OGS throughout the project.

