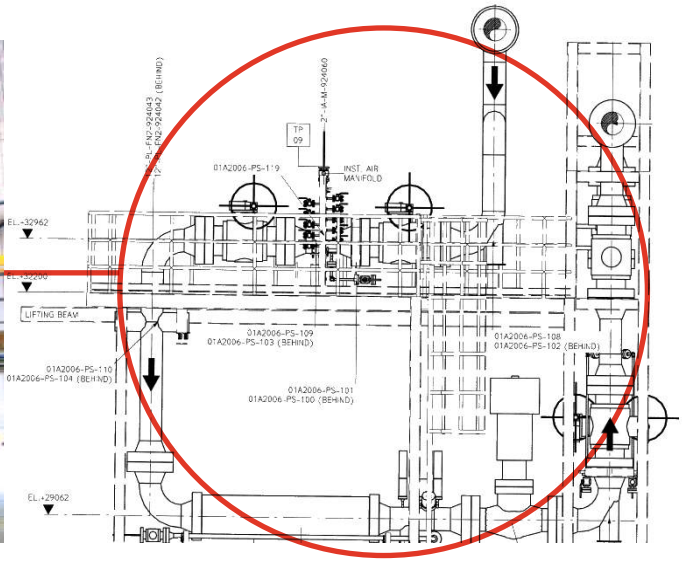
# C205 | BP | Clair Phase I

## Oil Export Metering System

Oil & Gas Systems Limited

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| Project: | Clair Phase I | Contractor: | Wood Group PSN | End User: | BP |
| Product: | Oil Export Metering System | Location: | Offshore, UK | Year: | 2011 |

### Application

The scope of this project included an Oil Metering Skid complete with Sampling and Analyser Systems. This was an upgrade to the Clair production platform, West of Shetlands. The Oil Metering System utilises a Coriolis (MicroMotion) meter as its primary flow element.

The package offered comprised the following main elements:

- Oil Metering Section
- Automatic Oil Sampling System
- Metering Panel Modifications
- Client trial assembly/disassembly activities
- Supervision of re-assembly and commissioning activities offshore

The overall dimensions of the system were 8m x 5.8m x 7.95m and weighed approximately 71,000kg.

### Description

The on skid pipework was Low Temperature Carbon Steel (LTCS) for high pressure, class 1500# service. The system comprised:

- 2 off 100% Coriolis Meters streams with 12" pressure control valves and an inlet static mixer.
- Pumped Fast Loop Sampling System with dual densitometers, single Water-in-Oil monitor and a heated GRP cabinet with daily and weekly automatic Samplers.

### Challenges

Some of the challenges OGS faced and overcame during execution of the project included:

- The package had to be designed to fit into the available space in the cellar deck of an existing platform.
- There was limited access because of the cellar deck location which made a conventional skid installation impossible. Therefore it was designed as 'kit' form for reassembly offshore.
- The complete system was trial assembled and FAT tested in the OGS workshop to mitigate the offshore assembly risk.
- The package was subsequently disassembled, each part identified, match marked where necessary and packed into offshore containers for delivery to the platform. The containerization was carefully sequenced to minimize the offshore container inventory whilst maintaining workflow.
- The offshore construction and commissioning was supervised by OGS during the arduous Northern winter.