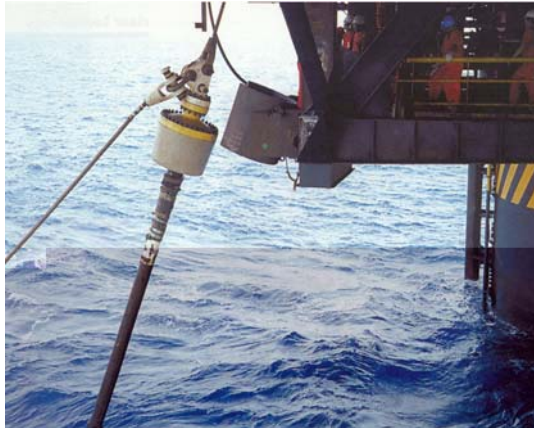


## Detailed Engineering of a prototype Steel Catenary Riser



The P-XVIII platform is located in the Marlim field in the Campos Basin Offshore Brazil, in a water depth of 910m.

Due to concerns regarding the technical and economic flexibility of using large diameter flexible pipe risers in deep waters, Petrobras decided to install a prototype steel catenary riser (SCR) off this platform.

Oil States Industries (OSI) were contracted for the supply of a flex point for the SCR. Their scope also included detailed engineering of the SCR, which they subcontracted to MCS.

### SOLUTION

- MCS performed the detailed design of the SCR for this application
- This included pipe specification, extreme response, VIV, fatigue and interference analysis
- Subsequently MCS also provided engineering support for the installation, and performed installation analyses during the actual installation using real time data on the environmental loads
- For a detailed description of this project, email us at the address below

### RESULTS

- The P-XVIII SCR was the first to be installed off a semi-sub production platform and represented a major break-through in SCR technology
- A comprehensive monitoring programme was implemented in the first year of operation and verified the MCS design for the SCR
- The riser was installed in 1996 and continues to operate successfully
- Based on the successful completion of this project, MCS was contracted by Petrobras to perform the detailed design of two 12 inch SCR's, for the P-36 platform (Roncador) and is currently performing the detailed design of 48 SCR's for the Roncador Phase 1A development

If you would like more details, please contact us at [Aberdeen@mcs.com](mailto:Aberdeen@mcs.com)

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