



Offshore Dynamic Positioning (DP) System

Based on the SPECTRE autopilot, the Offshore Dynamic Positioning (DP) System is designed to provide Work Class ROVs (WROVs) with dynamic positioning (position hold or hover) ability.

The Offshore DP system includes various interfaces that enable it to communicate with vehicle sensors, vehicle actuators, and a Front End Workstation PC. It may be mounted on the WROV or may be installed in a top-side control station, and is capable of controlling forwards, lateral and vertical motions, and to control heading, roll and pitch. Joystick inputs may be used to drive the vehicle forwards, sideways or vertically, or a combination of these motions; and to control heading.

Dynamic Positioning / Hover Sea Trials

Tests in the Gulf of Mexico in 2008 demonstrated steady hands-off position hold to an accuracy of around 15mm. Hot-stab operations on a well head installation, at a depth of over 2,000m, were conducted using a combination of Dynamic Positioning and Depth Hold, with joystick input to drive the probe into the socket on the well head. This accuracy is readily achievable, subject to provision of accurate thrusters and position / velocity sensors.

Installation on ROV / UUV / AUV

If required, we can offer a complete package which comprises DVL, FOG (fibre optic gyro), depth sensor together with the Dynamic Positioning system.

The system is suitable for retrofitting into the customer's vehicle, installation typically taking 1 day (provided the wiring / interface is already present).

The system is designed to meld seamlessly with the existing operator's console, as the operator's existing joystick can be used to drive the DP unit.

Alternatively, a dedicated joystick can be used for the DP remote control, as shown here. Button controls select control modes, while the joystick movements control the vehicle.

Compared to other Dynamic Positioning Systems available, this is a relatively low cost retrofit installation which provides a significant improvement in performance.

