

## REAL TIME MOORING LINE MONITORING WITH MOORASSURE™

Floating production storage and offloading (FPSO) deployed in deepwater offshore Brazil required a system to monitor the mooring lines.

### THE PROJECT

The vessel is moored using nine mooring lines bundled in three sets of three lines around the turret chaintable.

Pulse supplied a real time acoustic mooring line monitoring system MoorASSURE™ to monitor tension in each of the mooring lines.

### SCOPE OF DELIVERY

- Nine acoustically linked inclinometers (INTEGRIpod™-AF) attached to each chain hawse to measure inclination of the mooring line
- Three acoustic receivers mounted on the chaintable
- Specialised tension monitoring software used to convert measured angles from inclinometers into tension with line failure alarm capability
- System installation and offshore commissioning.

### THE RESULT

- Each inclinometer can communicate with each of the three acoustic receivers ensuring continuous connectivity regardless of turret orientation or position
- The system provides early warning of potential failures which aids planning of inspection schedules
- MoorASSURE software can present historical tension and angle data enabling informed conclusions regarding mooring line performance
- The devices are not in the load path and have a five year battery life allowing ease of maintenance.



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