

Relative PRS – a reflection

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The laser based relative position reference had switched to another target – the reflective tape on the crane hook.

Quote

A PSV was conducting cargo operations alongside an FPSO which was moving around its moored position.

Selected into DP Control were two DGNSS absolute references and one Laser based relative reference, there were no other available relative references for the DPO to select. The DP control system was selected to 'Follow Target' mode.

During a lift from the deck of the PSV, the vessel thrusters suddenly ramped up and the vessel started to move off position. The DPO switched the DP control into joystick manual heading control to stabilise the vessel and move out of the 500m zone.

What happened?

The laser based relative position reference had switched to another target, in this instance the reflective tape on the crane hook.

As there was only one relative reference available and selected this caused the DP control to move the vessel off the original position.

What can be concluded?

The following can be concluded:

- There was no redundancy for relative position reference.
- The Laser target appears to have been positioned in the wrong location. Targets should be located clear of crane operations and personnel with reflecting jackets moving around.

Additional comments

- If the DP control system was in Follow Target mode, the DGNSS should have been in "monitoring" and Relative PRS in "Mobile" configuration. The actual setup during the event is unclear.
- The DP event report did not discuss the use of any decision support tools such as ASOG.
- Guidelines on position reference systems and sensors for DP operations (IMCA M252), Section 4.6, details specific operational considerations for laser position references including placement of the sensors and reflectors and the hazards to consider.

Related IMCA Guidance

The following IMCA Guidance would be relevant to this DP incident:

IMCA M117

IMCA M220

IMCA M252

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