

## IMCA Safety Flash 12/06

October 2006

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learned from them. The information below has been provided in good faith by members and should be reviewed individually by recipients, who will determine its relevance to their own operations.

The effectiveness of the IMCA safety flash system depends on receiving reports from members in order to pass on information and avoid repeat incidents. Please consider adding the IMCA secretariat ([imca@imca-int.com](mailto:imca@imca-int.com)) to your internal distribution list for safety alerts and/or manually submitting information on specific incidents you consider may be relevant. All information will be anonymised or sanitised, as appropriate.

A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at [www.imca-int.com/links](http://www.imca-int.com/links). Additional links should be submitted to [webmaster@imca-int.com](mailto:webmaster@imca-int.com)

### I Wire Break in Wind Sensor Caused DP Drive-Off

A member has reported an incident in which one of its vessels suffered a DP drive-off during valve monitoring operations in open water. The wind was light – 5-10 knots – and there was good visibility. The vessel was on DP, with 2 x DGPS, 2 x taut wires and two wind sensors selected in the system. An ROV was in the water and the diving bell was on the surface with diving operations completed.

The DP operators noticed an increase in the thruster pitch followed by an ‘off position’ warning, whereupon both DGPS were deselected. The operators then noticed that one wind sensor was reading 60 knots – clearly an error – while the wind speed registered on the DP console was 35 knots as an average of the two sensor speeds.

The errant wind sensor was deselected immediately and the vessel position then stabilised at 17m from the original set-point.

The following points were noted on completion of the investigation:

- ◆ The cabling for the failed wind sensor had been routed through a junction box which had suffered water ingress due to a failed seal, effectively leading to a wire break;
- ◆ Tests showed that the errant wind sensor failed to zero or failed to maximum (60 knots) dependent upon where the wire was broken. The other wind sensors were wired differently and failed to zero at all times;
- ◆ One wind sensor had been deselected automatically as a function of the DP software, as it was registering less than 5 knots. Had three sensors been in the system, the DP would have rejected the errant signal;
- ◆ There was no alarm for the operators and the location of the manual readouts was poor in relation to line of sight for the DP operators;
- ◆ This particular failure mode of the sensors was not covered by the failure modes, effects and criticality analysis (FMECA).

The company concerned took the following actions:

- ◆ Changes to wiring of errant sensor (a filter) to prevent recurrence of ‘failure to maximum’;
- ◆ DP software upgrade to include a discrepancy alarm;
- ◆ Wire break tests conducted throughout the company’s fleet to see if the problem exists elsewhere.

The potential for a serious accident has led to this DP incident being distributed as a safety flash.