DP Station Keeping Event Reporting Form

Revised January 2020

IMCA DP station keeping event reporting is secure and confidential. The reports are used to provide anonymous information to the DP industry so as to improve the overall safety of DP operations. See www.imca-int.com/dp-events for more details.

This report should be completed on the following occasions:

- **DP incident** – a major system failure, environmental or human factor which has resulted in a loss of DP capability
- **DP undesired event** – a system failure, environmental or human factor which has caused a loss of redundancy and/or compromised DP capability
- **DP observation** – an event that has not resulted in a loss of redundancy or compromised DP operational capability, but is still deemed worthy of sharing

Please submit your completed form (and supporting documents) to your vessel operating company.

IMCA members and non-member companies should forward reports to IMCA so that information can be anonymously shared with industry by emailing **incidentreports@imca-int.com**

Document details and issue record

This section is treated by IMCA as highly confidential

Vessel	
Location	
Client	
Date of event	
Reported by	
Rank/rating	
Report status (initial/final)	

1 Operation

Operation type	
DP event type *	
IMO DP equipment class	
Region	

* **Example events**

DP incident:
– A thruster fails incorrectly and acts as an undesirable force on the vessel, resulting in the loss of station keeping
– The DP network has failed with errors and all control is lost; the main DP system has lost position keeping capability
– Incorrect setup of an auxiliary system causes transfer of a fault on both redundancy groups
– A blackout leads to loss of position

DP undesired event:
– Failure of a DP controller causing a loss in redundancy in the main DP system
– A position reference has a valid signal input with interference and is not rejected
– A partial blackout, vessel holds position but has no redundancy

DP observation:
– Failure of a thruster which does not result in a loss of redundancy
– Circuit breakers in a distribution panel are incorrectly labelled
– An incorrect alarm description appears on the DP system causing momentary confusion

2 Environment

Initial heading set point (deg)		Water depth (m)	
Significant wave height (m)		Visibility	

Wind speed (kts)		Direct from (deg)	

Current speed (kts)		Direction to (deg)	
DP or real current?			

Swell height (m)		Direction to (deg)	
Swell period (secs)			

3 Equipment status

	DP	PMS
Control system state		
Manufacturer		

Bus-tie(s) status		Number of redundant groups	

	Total fitted	**Running, selected to DP**	**Available not selected**
Thrusters (inc. main props)			
Generators			

Position reference systems			
Type	**Total fitted**	**Selected to DP**	**Available not selected**

Sensors			
Type	**Total fitted**	**Selected to DP**	**Available not selected**
Gyro			
MRS/VRS			
Wind			

4 Sketch

Show vessel outline, environment, heading, location of position references and underwater assets

☐	Sketch attached

5 Sequence of events

Include detailed summary and timeline starting from operations prior to event and concluding once a point of safety is reached

The purpose is to provide an opportunity to learn and this can be greatly enhanced if you can include times of significant events.

6 Numerical description

Distance of uncontrolled movement	
Duration of event	
Time to regain control of the vessel	
Maximum riser angle (Drilling) in deg	
Disconnect distance (Drilling)	

7 Event findings and corrective actions

Initiating event What first alerted the participants to a potential or actual problem		
	Cause category	Additional information
Main cause *		
Secondary cause		

* It is important to understand the definition of 'main cause' and 'secondary cause'. This example will assist the understanding:

A DP equipment Class 2 vessel is configured with four thrusters, bus tie open with one stern and one bow thruster on each bus. One thruster stops. The root cause was found to be a power module failure on the thruster frequency drive.

Given this example, the IMCA reporting scheme would record the main cause as 'thruster failure', because that was why redundancy was lost. The reason the thruster stopped was a power module failure, and so the secondary cause, would be 'electrical'.

Potential causal or contributory factors
• Human factors that were identified as causal or contributory to the event Has there been a need to modify the content of drills or exercises related to DP operations? Has there been any causal or contributory factors identified related to training, familiarisation and competency? Did communication issues play a part in the event (change of shift/mode control from different locations/understanding of instructions given, etc.)?
• Processes and procedures that were identified as causal or contributory to the event Was there any requirement to modify DP specific documentation as a result of the event? (DP ops manual/checklists/ASOG/WSOG/ FMEA/proving or annual trials/field entry checklists or trials) Was the critical or task appropriate mode of operation appropriate or considered? Did the vessel's mission cause any contributory factors to the event (e.g. pipelay tensions, gangway inputs, regenerative loads, wind blockage, other external forces, etc.)
• Equipment and design that were identified as causal or contributory to the event Did any hidden failures or cross connections manifest themselves? Were there any issues with independence or segregation of otherwise redundant components or systems? Did protective devices and systems not operate as designed or specified? Were there and issues with incorrect or lack of alarms? Was there any need to modify or add any maintenance regimes? Were there any requirements to modify or update software for any systems?

Actions taken (select Yes/No from menu)	
Reported to shore management	
Repair required	
Software modification required	
Report submitted to supplier	
Procedures modified	
Standing instructions, such as activity- or well-specific operating guidelines (ASOG/WSOG), modified	
Additional training conducted	
Additional alarm installed	
Warning label or sign fitted	
Has the event been closed out with a satisfactory conclusion?	
Have lessons learnt been shared internally?	
Have lessons learnt been shared externally?	

8 Comments

Additional actions taken and details not fully covered in the report

9 Attachments

Tick if included

☐	Activity-specific operating guidelines (ASOG)/well specific operating guidelines (WSOG)	
☐	Damage report	
☐	DP event investigation report	
☐	DP history station printout	
☐	DP screen dump	
☐	Sketch	
☐	DP system alarm printout	
☐	Failure report	
☐	Malfunction report	
☐	Power management system (PMS) alarm printout	
☐	Supplier service report	
☐	Weather forecast	
☐	Other 1 (name):	
☐	Other 2 (name):	
☐	Other 3 (name):	

Lock form (finalise)

(Further changes to the form will not be allowed)

Name	
Signature	
Date	