

## **Abstract 004 – Shell Projects and Technology**

### **MTS DP Conference 2018 - Thrusters**

#### **Title – ‘Unwanted Thrust – Have we done enough?’ - ABSTRACT**

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Despite clear unambiguous rules and guidelines from all the major classification societies and other industry bodies, failure of thuster systems continues to be a significate causal factor in DP loss of position incidents. Review of incidents reports confirms that thusters are failing in ways that do not comply with the guidelines (resulting in loss of position incidents) despite the requirements of Classification Society rules. Mitigations relying upon operator intervention are proving to be ineffective and unreliable.

The DP committee of the Marine Technology Society Recently Published a Learning From Incidents (LFI) that was submitted on a DP loss of position incident involving a Diving Support Vessel which occurred when a controllable pitch propeller (also used for main propulsion) failed to full ahead causing ~70m drive-off. By good fortune, the drive-off occurred just before diving operations commenced and there were no consequences beyond the time lost to restoring confidence in the fail-safe condition of the thrusters.

This paper builds on the LFI and analyses the issue of DP loss of position incidents caused by ‘unwanted thrust’ using a ‘systems thinking approach, through the lens of Design, Operations, People and Process. In particular:

- Lessons learned from a long history of DP drive-offs associated with unwanted thrust
- What could be done better in mitigating the risks of DP drives-offs from unwanted thrust
- The need for greater transparency in the validation and verification process
- The challenges for those charged with proving the fail-safe condition of thusters
- The focus that is needed across the whole process. As examples:
  - Selection of vessels
  - Understanding of the Industrial Mission
  - Incorporating lessons learned.
  - DP incident investigation and classification of incidents
  - Enhancing awareness through training drills and exercises
  - Communications across a diverse group of stakeholders