

Title: Challenges of Protection and Control System Verification on DP3 Vessels with Focus on Ride Through Fault and Blackout

Authors: Rune B. Andersen and Inge Haukaas, *Siemens*

Abstract

Worst case system disturbances manifest themselves in the form of short circuits between phases and/or ground. Short circuits produce high fault currents. The fault may be symmetrical three phase (to ground) faults. Other fault types produce non-symmetrical fault current. The magnitude of fault currents is usually largest for three phase faults. The severity and potential damage that can be caused by system disturbances influence the selection of protection systems. There are also abnormal operating conditions that can lead to fault if not interrupted. These conditions are not associated with a fault current and involve:

- Over/under voltage
- Over/under frequency
- Thermal overload
- Unbalanced or asymmetric load

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