

Title: A Novel Solution to Common Mode Failures in DP Class 2 Power Plant

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Abstract

This paper presents an overview of Transocean's Advanced Generator Protection (AGP) scheme and Advanced Thruster Control and Protection (ATCP) initiative and explains how this innovative combination of model based generator protection and grid inter-connector technology has produced a novel solution to well known common mode failures found in many DP Class 2 power plants. Such failures continue to cause DP incidents and are associated with faults in various systems including power management, power distribution and generator controls. The paper begins with a review of these failure mechanisms and discusses the advantages of the new arrangement in relation to earlier solutions. The information presented is based on experience gained from DP system FMEAs and proving trials on vessels equipped with these new technologies.

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