

Title: Machinery Systems for DP Vessels with Increased Efficiency and Reliability

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Abstract

Offshore support vessels (OSV) have increasingly developed into larger and more powerful ships responding to new operational requirements and the need for more flexible designs. For DP classed vessel it is crucial to have propulsion machinery solutions with high degree of redundancy and reliability. Also, efficient utilization of the power plant in the different operational modes is becoming more important with increasing fuel prices and environmental concern. This paper will address Wärtsilä's diesel electric machinery concepts, with special emphasis on advantages for DP classed vessels. The Wärtsilä Low Loss Concept (LLC) will be presented. This diesel electric system has a number of advantages compared with conventional concepts. The main characteristics of the LLC system is reduced electrical losses meaning better fuel efficiency. In addition, the system gives substantial weight and space saving for the installation. Finally the architecture of the switch boards and power distribution system gives less single failure consequences, meaning higher safety and reduced risk for the DP vessel operation

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