Title: **DP Dependability**

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Abstract

The Rolls-Royce portfolio of products for the marine market includes vessel designs, deck machinery, propulsors and thrust devices, power production and electrification, automation and control systems.

Development of integrated system solutions is a strategy to offer high performance, dependable vessel solutions. Product development and maintenance is a continuous lifecycle process, supported by Rolls-Royce quality management system, industry standards and guidelines, see Figure 2.

IMO rules and guidelines, classification society rules, IMCA guidelines, and standards such as ISO 17894 define the basic requirements for dynamic positioning systems. The concept of dependability, as defined in dependable computing (see Figure 1), has been a useful tool in the development of control system solutions. In particular in the design and development of redundant DP control systems for DP class 2 and DP class 3 in an integrated solution context, with emphasis on DP control, thruster control, manoeuvre mode and command control. This paper explores DP dependability in the framework and definitions of dependable computing.

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