Using Doppler Logs for Safer DP in drilling

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Abstract

The paper describes the need for multiple, independent sources of measurement for use in dynamic positioning (DP). It examines some of the problems of existing solutions and proposes using Doppler log velocity measurements as an alternative, independent source of position information. The inclusion of the velocity measurements into the Kalman filter formulation is outlined and some of the problems that had to be overcome are described. Simulation results are presented to show the potential of the proposal and these are supported by data gathered from a full-scale vessel.

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