

DGNSS Position Quality Information for DP Applications

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Abstract

Surface positioning is fundamental to DP operations within the offshore oil and gas industry. The systems are required to be simple to operate plus provide robust and stable positioning because these systems are critical to vessel operation. Typically, other reference systems such as acoustics or taut-wire are used to provide greater redundancy and minimize the reliance on one positioning system. However, the trend of developments into deeper water means that the reliance on GNSS systems becomes greater due to the restrictions on other positioning reference systems. There have been advances in positioning technology that are now delivering position solutions with decimeter accuracy. When these are combined with systems providing a differing level of accuracy problems can occur if the weighting is not correct within the DP system. This will become more of a problem in the future with new satellite navigation systems and different position solutions available to the operator/user. The objective of this paper is to highlight the advances in positioning technology and to describe the different position quality standards currently available. It also presents some considerations for use in DP applications.

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