

Evaluation of Positioning Methods Used to Fix Navigational Obstructions

Muhammad Algaamdi, Waleed AlMalki, Zeyad Ashanqity, Hamed AlMalki and Faisal AlShehri (Saudi Arabia)

Key words: Cartography; Hydrography; Positioning; Keyword 1; Keyword 2; Keyword 3

SUMMARY

The navigational obstruction is a broad term used to describe the dangers that could face the mariners at the sea. These dangers are varied based on the cause, nature of the sea bed, manmade installation, and the type and size of marine vehicle are used for transport and shipping at the sea. Generally, these danger and obstructions could be classified to two types' natural dangers and artificial dangers. The natural dangers could be due to the weather effects and water movement or type and depth of the sea bed, where the artificial dangers include overhead cables, bridges, submerged cables, pipeline and under water human installation.

Marine navigation and shipping require accurate and precise data to move from one destination to another. Hydrographic survey data acquisition technology and positioning techniques have significantly advance over the last decade, where most of nautical products still rely on dated data and observation of mariner during their passage at the sea.

This paper mainly reviews some positioned navigational dangers observed during mariner passage using conventional methods such as lead line and radar navigation, which latter was found far away of their actual position when the hydrographic survey completed using modern technology.

Furthermore evaluate positioning method of cover, uncover and submerged dangers and obstruction such as wreck, rock, islets, shoal (shallow) depths using recent hydrographic survey data and method of updating them based on notice to mariners, quality checks and their inclusion and presentation on the nautical products to enable safe navigation.

Evaluation of Positioning Methods Used to Fix Navigational Obstructions (12663)

Muhammad Algaamdi, Waleed AlMalki, Zeyad Ashanqity, Hamed AlMalki and Faisal AlShehri (Saudi Arabia)

FIG Working Week 2024

Your World, Our World: Resilient Environment and Sustainable Resource Management for all

Accra, Ghana, 19–24 May 2024