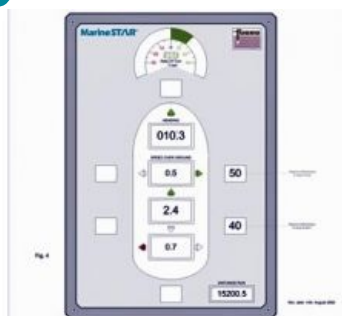


Precision Satellite Navigation System



Fugro Seastar AS has announced the introduction of the MarineSTAR Manoeuvring System. The system provides a highly accurate, stable position reference for ship's bridge systems such as ECDIS. Fugro Seastar claims the data to be of the highest integrity and reliability available in this industry.

In addition to position data, MarineSTAR can provide an alternative to conventional navigation aids such as gyro compass and rate of turn indicator. As well as heading, the system displays and outputs speed over the ground in both the fore and aft and athwartships directions.

The system utilises differential navigation sensors located in the bow and stern of the ship to calculate full ship vector data. This information is then displayed on user-friendly marine approved displays which can be located in the wheelhouse and on the ship's bridge wings. The system can also be installed embedded within a ship's Integrated Bridge System.

Following successful engineering sea trials on Fugro's own survey vessel the Fugro Mercator, the system has been installed onboard a passenger cruise ship for trials. In addition to installation on cruise ships it is expected that MarineSTAR will be suitable for other large ships such as crude oil tankers, large bulk carriers, container ships and car carrier's to assist navigation and berthing in confined waters.

Additional system functions still under development include quay distance measurement for berthing assistance and fore and aft trim measurement to aid in bunker fuel optimisation.