News from industry

Port of Gdynia AIS

The Gdynia Maritime Office has installed ten new buoy-mounted AIS aid to navigation units from Tideland Maritime Systems as part of a major refurbishment of facilities within the port.

These units are described by Tideland as ‘AIS AtoN’ because they are designed specifically for installation on floating and fixed marine aids to navigation such as buoys, beacons, light vessels and lighthouses and capable of full integration into port or coastal AIS networks. Gdynia, which has been operating AIS within its jurisdiction since 2003, has chosen the latest version of the system, the VO3 V-Track Informer. Designed to comply with a new IEC standard as well as all IALA and IMO recommendations, the VO3 Informer is claimed to offer extremely low power consumption (0.5Ah/day), coupled with a range of up to six nautical miles or more and a higher-rated protective housing.

It is understood the Gdynia authorities have also ordered a number of Tideland lanterns, which enables them to benefit from V-Track’s remote monitoring facility. Data, including on/off status, sunswitch status, battery voltage, active flash code, solar voltage and lamp current can all be displayed on the operator’s PC using display software supplied by Tideland. In addition, the system can also be used to broadcast data on weather, tides and sea states using message 8 or 14 or, as a text message, on 6 or 12. Tideland V-Track Informer broadcasts its name, type and MMSI number, virtual target flag and a warning if it goes off station (in the case of a buoy). This information can be received by all AIS-fitted vessels as well as land stations and will be displayed graphically and in real time on any AIS-enabled electronic chart or radar screen. Among its other advantages, the Tideland unit can be used for marking tracks, routes, areas and limits, including traffic separation schemes and for identifying offshore structures, such as wind farms and oil/gas installations. Tideland V-Track is supplied in a rugged, compact housing which is waterproof and suitable for use on any aid to navigation. Optimum efficiency is achieved when linked to a Tideland lantern, but the unit is equally compatible with other manufacturers’ equipment, once an appropriate integration system has been fitted.

Approved to ISO 9001:2008, Tideland Signal Limited is a British-based member of the Tideland group of companies, which specializes in the
design and manufacture of aids to marine navigation. The Tideland group is independently owned and has its headquarters in Houston, Texas.

**Mexico offshore oilfield radar**
Following the recent installation of the first C-Scope Frequency Diversity System on the American Continent, at the Dos Bocas station located in Tabasco, Mexico, Petroleos Mexicanos (PEMEX) has contracted Kongsberg Norcontrol IT to provide the same radar enhancing technology on six platforms in the Bay of Campeche oilfield, it was reported at the end of March.

Kongsberg has also been contracted to upgrade and extend the VHF communication systems for logistics and marine use in the Bay of Campeche. The new Frequency Diversity System at the Dos Bocas station is based on Kongsberg Norcontrol IT’s new C-Scope Extractor and Tracker technology. This sophisticated solution uses advanced signal processing techniques to extrapolate an even clearer image from the raw radar signal without the need for expensive new hardware. It enables high-resolution real-time vessel tracking for the VTS, higher performance out of existing radar sites and improvements to sites already using the best antennas and transceivers.

The new VHF and Frequency Diversity systems are a continuation of Kongsberg Norcontrol IT’s vessel traffic monitoring at the Bay of Campeche, the largest oilfield in Mexico and said to be the world’s largest offshore oil development project, which started with the installation of the company’s VOC 80 solution in 1981. The VTS is now based on Kongsberg Norcontrol IT’s VTMIS 5060 architecture and is responsible for monitoring 200 to 300 vessels each day in a high-risk maritime domain.

PEMEX had previously signed a long term maintenance contract with Kongsberg Norcontrol IT, reflecting the high requirement to ensure the ability of the VTS to efficiently monitor and track all vessels in the domain. There are a number of challenges to ensuring safety in the Bay of Campeche. It is 40 to 50 metres deep in most areas so there is a real danger to underwater infrastructure from fishing activity. Additionally, the numerous supply and personnel vessels in the field are generally fast moving targets, so PEMEX requires a solution capable of tracking these in an already crowded area.

Kongsberg Norcontrol IT has developed a total of seven radar sites and eight AIS base station sites to monitor traffic in the bay. Because it is so
large, with so many small vessels, two control centres were required, one
shore-based (with three VTS workstations and a supervisor station) and
another on a platform with two VTS workstations. The two control
centres are approx. 100 nautical miles apart and responsible for
monitoring the traffic in distinct areas.

Both control centres share VTS information and are connected by
microwave link. In addition to the developments in Frequency Diversity
Systems, the new contract to upgrade and extend the VHF
communication systems for logistics and marine use for the Bay of
Campeche oilfield, will provide an added level of safety and security.