



Tideland warning systems for Aker's SMART 1 FPSO

Tideland Signal, the international aids to navigation specialist, has supplied a package of safety measures for Aker Floating Production's SMART 1 FPSO, which is to be deployed in India's MD-6 offshore field.

SMART 1 will be equipped with audible and visual warning stations, one at the bow and the other in the stern. Each consists of a light station with one main 15nm and one secondary 10nm ML-300 lantern and a 2nm AB-560 fog signal. There are also two red ML-155 subsidiary lights, batteries, racks and enclosures, power distribution and charger unit and a control and common alarm panel, which will be installed in the wheel house. All the equipment is ATEX certified for use in Zone 2 hazardous areas.

Tideland's ML-300 lantern is a lightweight, corrosion-resistant design featuring a one-piece acrylic Fresnel lens. In this application the main lantern is equipped with an FLMC-4 multi-code flasher and 400W lamp, while the secondary ML-300 and subsidiary ML-155 lights have Omnibus II 6-place multi-code flasher lampchangers, which incorporate a timer circuit card permitting input voltages up to 36V and up to 256 user-selectable flash codes.

The Tideland AB-560 fog signal incorporates five emitters producing 133.2 dB at 1 metre equivalent and with a usual range of 2NM. It broadcasts a 360° sound beam in the horizontal plane, with a pre-selected code and can be operated either from mains power using a battery charger and battery, or DC power using primary depolarized cells or a solar power system. The drivers/emitters are housed in robust GRP casings and are mounted in a galvanized steel structure designed to withstand severe storms. They operate at

NEWS

November 2007

Tideland Signal
Corporation



less than 25% of rated capacity, which results in exceptional efficiency and life expectancy.

The Tideland contract was awarded by Acel AS of Norway, the sub-contractor responsible for electrical systems on board the FPSO, which is currently being converted at the Jurong shipyard in Singapore. It will be chartered by Reliance Industries Ltd. of India for a period of between five and ten years and is scheduled to produce its first oil on 15th February 2008. Operating in waters between 1,100 and 1,400 metres deep, it has a daily production capacity of 60,000 barrels and gas compression capacity of 3 million m³ per day.

A part of the Aker Kvaerner group, Aker Floating Production owns, operates and charters out converted tankers equipped for offshore oil and gas production and storage. SMART 1 is one of three tankers currently being converted and the present contract is worth NOK 610 million. Another member of the group, Aker Kvaerner Process Systems, is responsible for the delivery of the vessel's two separation modules, one utility module and two skids for the flare system.

Approved to ISO 9001:2000, 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.

**For additional information regarding Tideland Signal Corporation, Aids to Navigation, and VTS and AIS solutions please contact Jonathan Tung at +713-681-6101.
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