



Tideland Warning Systems for Indonesian Mooring Buoy

Tideland Signal, the international aids to navigation specialist, has supplied a package of safety measures for a CALM (catenary anchor leg mooring) buoy which will be deployed off the coast of East Java, as part of the Tuban Aromatic Project.

The buoy is a large structure designed and built by Bluewater, complete with its own control room. It is part of a single point mooring system, which also includes a 6km pipeline and pipeline end manifold, which will allow tankers to pump oil ashore to the new installations at Tuban, on the island of Bali.

The CALM buoy will be marked by a Tideland ML-155 lantern, an AB-560 fog signal, solar panels, batteries, a Xenon alarm beacon and a PC-based control system for the load pin monitoring system which allows the operators to monitor the load on the mooring hawsers. The whole package is certified for use in Class 1 Division 2 hazardous areas. Tideland can also offer packages certified under ATEX for Zone 1 and Zone 2 hazardous areas.

Tideland's ML-155 lantern features a one-piece acrylic fresnel lens designed to deliver maximum beamed light for the lowest possible power consumption. In this case, it is equipped with Tideland's TF-3B MicroPower OMNIBUS II flasher/lampchanger, which incorporates a timer circuit card to permit input voltages up to 36V and provides up to 256 user-selectable flash codes.

The Tuban project initially envisaged two plants - olefin and aromatic, but after running into funding difficulties, it was taken over by the Government of Indonesia, which decided to continue building the aromatic plant, and postpone the olefin plant. Work was resumed in 2004 and, when completed, the plant will have annual production capacity of 855,000 tons of benzene, toluene and paraxylene. In addition, it will also produce 280,000 tons of reformat and 637,000 tons of kerosene.

Indonesia imported aromatic products worth approximately \$546 million in 2003 and, with GDP accelerating, demand is expected to continue increasing as the economy continues to improve.

Approved to ISO 9001:2000, Tideland Signal Limited is a British-based member of the Tideland group of companies, which specialises in aids to navigation and solar generation. The Tideland group is independently owned and has its headquarters in Houston, Texas.

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