



Tideland buoys and lights for Madagascar's new minerals port

Tideland Signal, the UK-based aids to navigation specialist, is supplying buoys, solar-powered lanterns and range towers to guide shipping into the port of Ehoala currently under construction on the south-eastern tip of Madagascar to service the new ilmenite mine near Fort Dauphin.

The Tideland equipment has been supplied to Daiho Corporation of Japan, which is building the port for a joint venture company set up by Rio Tinto Group and the Madagascar government with financing from the World Bank. The nearby mine will extract ilmenite for the production of titanium dioxide pigment from the mineral sands and the estimated US\$400 million project is expected to have an annual output of 750,000 tonnes.

The Port of Ehoala will have two quays of 15m and 8 metre draught protected by a breakwater of over 500 metres. Dredging has involved the removal of 750,000 cubic metres of sand, silt, rock and sediment from the seabed to provide a deep water approach channel. The channel will be marked by three Tideland SB-285P fairway buoys, five SB-138P lateral marking buoys, two SB-138Ps carrying special, yellow marks, six tower-mounted fixed beacons and two sets of range towers, each of which carries a pair of Tideland RL-355 solar-powered range lanterns with a daylight range of 5nm.

The majority of the buoys are equipped with Tideland ML-140 lanterns and TF3B flasher lampchangers, although one is certified for deployment in a hazardous zone and carries an ML-155 UL certified light. Tideland's SB-285P and SB-138P buoys feature a robust, maintenance-free construction of rotationally moulded, UV-stabilised, self-coloured polyethylene filled with expanded polystyrene.





25 May 2009

Ballast is internally located in the SB-138P and mooring/lifting eyes are moulded into the buoy body to ensure a smooth, easily maintained external profile. There are no external corrodible parts on either buoy. They are corrosion-resistant, never need painting and are virtually unsinkable. All the buoys for Ehoala are supplied complete with mooring systems, solar arrays and batteries.

Both the ML-140 and ML-155 MaxLumina lanterns feature a one-piece acrylic fresnel lens designed to deliver maximum beamed light for the lowest possible power consumption. In this application they are equipped with Tideland's TF-3B MicroPower Omnibus flasher/lampchanger equipment, which incorporates a timer circuit providing 256 user-selectable flash codes with input voltages up to 36VDC.

The six fixed beacons have ranges from 4nm to 5nm and vary in height from 4m to 10m. The range towers are of the monopole type and are supplied complete with solar arrays, batteries and aviation obstruction lights. One pair measures 16m and 32 metres in height, the other 13m and 46m. The RL-355 lanterns they carry were originally developed for the U.S. coastguard as a high efficiency lantern requiring no field focus adjustment. They have a maximum range of 15nm and feature MaxLumina optics that produce maximum beamed light for the lowest possible power consumption.

The first stone of the QIT Madagascar Minerals (QMM) Project was laid by the President of the Republic in June 2007 and it is expected to be complete by July 2009, It is the largest project in the country's history and the mine will have a productive life of 60 years.

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.

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