

Raising to the occasion

PREMIER heavy lift and relocation specialist, Vanguard, made history in Port Elizabeth in May when it used its latest major capital investment, the sophisticated GTK 1100 crane, to install a windturbine as part of the first phase of the first commercial wind farm in South Africa.

"The GTK 1100 was ideally suited for this assignment and is a major breakthrough in the heavy lift crane market," says Bryan Hodgkinson, managing director, Vanguard.

The crane arrived in the country just in time to erect the windturbine. It was designed to lift ultra-heavy loads to extreme heights and its potential lies in being deployed in facilities such as windturbine farms, power stations and refineries.

The V90 2.0MW windturbine boasts a blade diameter of 90m, a hub height of 95m weighing 97 tons, and has three blades, each 44,5m wide. It arrived at Coega harbour on Saturday, 8 May 2010, upon which it was loaded onto four trailers and transported to site.

On arrival, the windturbine was lifted in sections, starting with the four tower sections being positioned on a pre-set platform.

The nacelle and hub were connected on the ground, creating the heaviest weight of 97 tons. It was then lifted into position as a complete unit and lastly, the blades were lifted separately into position.

Lauded for its economical edge and extreme flexibility, the GTK 1100 features a number of unique innovations, which made it possible to complete the entire lift in just three days, excluding the preparation time.

A key benefit of the GTK 1100 is its fast set-up. The vertical rigging of the self-erecting tower, it can be operational in just four to six hours.

The crane has a small footprint of 18x18m (including the boom set-up) for a minimised job site area, and its self-leveling function results in minimal ground preparation.

Where other large super lift cranes need between 20 and 40 truckloads of parts to be mobilised in order to perform such heavy lifts, the GTK 1100 only needs four.

The seventh crane of its kind in the world and the first and only one on African soil, the GTK 1100 can lift 100 tons to heights of more than 100m and has a 56m working radius, centre operated. In addition, it can operate at these heights with loads of up to 100 tons, without a counterweight.

As the GTK 1100 is a first for the country, Vanguard brought out a specialist from Germany to provide operational training to its staff.

The GTK 1100 crane hoists the nacelle and hub to the top of the V90 windturbine tower.

Enquiry No: 1

