

FOR IMMEDIATE RELEASE

## **ZEST WEG GROUP PROVIDES LOCAL SUPPORT SERVICES FOR INTERNATIONAL ORDER**

The Zest WEG Group is progressing toward the hot commissioning phase of the biggest medium voltage (MV) Variable Speed Drive (VSD) unit ever supplied by its holding company, the WEG Group, worldwide. The equipment was ordered from WEG Germany by The Linde Group, which is involved in a project at Sasol. Linde's order comprised a 9 MVA 18 pulse phase shift transformer, a 6.5 MW 4160 V MVW01 VSD and a 6.5 MW 4P 4 000 V MGF 800 L motor to run a production-critical compressor at Sasol.

WEG Brazil manufactured the equipment and Linde took responsibility for the logistics from Brazil to the Sasol site in South Africa. The shipment arrived on site in the third quarter of 2011 and the Zest WEG Group has provided all the necessary local support services in the form of arranging and managing all work relating to its installation including supervision of the motor, VSD and transformer assemblies as well as cold commissioning and, shortly, hot commissioning.

"The VSD is relatively unique because it uses the latest generation of MV IGBTs," Johan van Niekerk, Zest WEG Group Manager for drives and automation, says. "The drive is built along very similar lines to low voltage drives and also has a very low component count that translates into high reliability and high efficiency. I believe these were all deciding factors during the tender adjudication process.

"In addition, the fact that WEG Brazil supplied all the equipment for this installation meant that its Brazil factory team was able to conduct a full load test of the entire system as a package before the shipment was sent to South Africa. This test was attended by engineers from Sasol and Linde."

Training of Sasol representatives was also provided at the WEG factory in Brazil with further basic training carried out during the cold commissioning phase at the Sasol site.

Van Niekerk comments that this project has demonstrated the added value and cost savings customers are able to realise by doing business within the WEG Group's global footprint.

## **MVW01**

WEG's new MVW01 range, available through Zest Electric Motors, a Zest WEG Group company, is setting a new standard for MV VSD productivity by achieving 99% efficiency — the best on the market — as a result of an innovative design that employs multi-level topology using 6.5kV IGBTs that minimise component levels. The output also utilises optimal pulse pattern (OPP) space vector modulation (SVM) which reduces motor harmonic currents to extremely low levels.

WEG is a traditional supplier of solutions in speed variation, manufacturing all the parts of a system: input switchgear, transformers (dry-type or oil-type), frequency inverters and electric motors. The MVW01 is designed to control MV induction motors. It features unique innovations combining hardware robustness with simplicity, reliability and safety in a compact solution with few components and state-of-the-art technology.

Unlike many MV drives on the market with very complex topologies, the WEG MVW01 uses a neutral point clamped 3 level topology. This not only dramatically reduces the number of components in the drive in a similar manner to LV VSD technology but also achieves exceptional efficiency and reliability.

MVW01 drives incorporate new generation technology such as plastic film capacitors in the DC link, user-friendly interface and programming and state-of-the-art protection features. Maintenance is quick and simple.

The input transformer provides isolation from the supply, offering protection to both the VSD and the motor. The input transformer need only be a 12 pulse shift transformer with dual secondary winding. This creates the positive aspects of galvanic isolation and harmonic mitigation without the negative aspects of some complex multi-pulse designs.

In addition to exceptional reliability — with an MTBF (mean time between failures) exceeding 22 years — and several technological advancements, the WEG MVW01 is backed up by experienced local technical teams on hand at short notice and locally available spares.

These drives are compact and extremely robust, suitable for the tough operating conditions encountered across the spectrum of South African industry. The MVW01 is ideal for high-demand applications, such as mining, cement, shipping, iron metallurgy and petrochemical.

MV SYSTEM FOR SASOL PIC 01 : The Zest WEG Group is progressing toward the hot commissioning phase of the biggest medium voltage (MV) Variable Speed Drive (VSD) unit ever supplied by its holding company, the WEG Group, worldwide. The order comprised a 9 MVA 18 pulse phase shift transformer, a 6.5 MW 4160 V MVW01 VSD and a 6.5 MW 4P 4 000 V MGF 800 L motor to run a production-critical compressor at Sasol.

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