

Weg's New 11 Kv Variable Speed Drives In Ghana Mine

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According to Kirk Moss, senior manager: projects and engineering at WEG Automation Africa, the new WEG MVW3000 VSD is a valuable addition to its Medium Voltage (MV) VSD portfolio. The first two 11 kV units produced are for 850 kW ventilation fan motors in an underground gold mine in Ghana.

“In line with WEG’s ongoing innovation, the addition of the WEG MVW3000 system brings a range of benefits to customers,” says Moss. “It gives WEG Automation Africa even greater flexibility in our market offering, further enhancing our capability to provide customised solutions.”

The design is based on the well-known cascaded H-bridge (CHB) topology, using multiple low voltage power cells in combination to achieve the desired voltage output. The input switch, phase-shifting transformer and VSD are fully integrated in a single MV panel.

“The WEG MVW3000 is particularly suited to applications where there are standard motors with no special insulation,” he says, “or where existing motors are being modified for VSD control.”

This VSD delivers high quality input power using low harmonic multi-pulse transformers. Users benefit from a high efficiency of over 96.5% throughout the entire load range, and a power factor of more than 0.95 throughout the entire speed range.

“The design includes power cells with long-life plastic capacitors, which are more reliable and last longer than dry type capacitors,” he says. “They also have the advantage of not needing to be reformed after long periods of storage.”

In standard configuration, the 11 kV VSD is available from 40 A to 400 A – or 640 kW to 6500 kW – although larger sizes are also available if required.

Among the options on the WEG MVW3000 is an automatic cell bypass solution. This ensures minimal reduction in the output-rated torque so that normal operations can continue. Redundant power cells can also be added to the design to ensure that 100% torque can be maintained. Prior to delivery, all VSDs are fully load-tested in WEG's state-of-the-art facility in Brazil.

Captions

NEW 11KV PIC 01 : The latest addition to WEG's range of MV VSDs is the 11 kV MVW3000 solution.

NEW 11KV PIC 02 : The WEG MVW3000 VSD was tested extensively at WEG's state-of-the art testing facility in Brazil.

NEW 11KV PIC 03 : The power cells in the WEG MVW3000 VSD are easy to remove and exchange.

NEW 11KV PIC 04 : The WEG MVW3000 VSD installed underground at a gold mine in Ghana.

Hashtags

#mining

#gold

#technology

#variablespeeddrives

#VSD

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