



## OVERVIEW

Invertek Drives gives South African power station a boost!

Global Solutions...

wireless control for hundreds of applications

with Invertek Drives the solutions start here!

- easy to use and incredible performance
- leading edge design and technology
- highly committed to innovation
- products you can rely on
- global support and suppliers

For more information, visit [www.invertek.co.uk](http://www.invertek.co.uk)

## COMPANY

**MORRIS CRANES**

Turbine cranes for power stations

South Africa

The 3<sup>GV</sup> technology delivers 100% torque at 0.0Hz allowing this unique open loop product to be used without any feedback device in traditional closed loop applications. The latest success story from South Africa concerns the complete retrofit of 2 x 100/25 tonnes turbine cranes for Grootvlei power station, where the main hoist has a maximum lifting capacity of 100 tonnes and the auxiliary hoist has a maximum lifting capacity of 25 tonnes. Morris Cranes undertook the project with Invertek Drives SA providing the variable speed drive technology.

The project required an upgrade of every crane in the power station so that all the motion elements, including main hoist, auxiliary hoist, cross travel and long travel, would be controlled through variable speed drives. Introducing variable speed drives allows the cranes to be operated at different speeds, even when single speed motors are fitted, and minimises maintenance costs by eliminating shock loading. The drives can also be used to prevent load swinging during start up and stopping.

With a gantry length of approximately 400 metres, a span (width) of 30 metres and a lifting height of 40 metres, these cranes provide an ideal application for variable speed drives.

Used to maintain the steam turbines within the power station, the running speeds of these cranes was previously very low. With an Optidrive Plus 3<sup>GV</sup> fitted the crane operators were given a choice of 3 different speeds and they had greater confidence in being able to move the extremely valuable cargos with a greater degree of control

By far the most challenging part of the project however was using the Optidrive Plus 3<sup>GV</sup> to maintain total control throughout a 105 ton load test over a lifting distance of 40 Metres. The most impressive part being able to demonstrate the 100% Torque from Zero speed without an encoder.

Mark de Beer, the Managing Director of Invertek Drives SA, confirms:

Being able to offer 100% torque from zero without the use of an encoder is most certainly a major benefit for hoisting applications and we have shown that the results that can be achieved with this drive are truly amazing.



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