

## 290-Ton Stator Changeout at Duvha Power Station



Duvha Power Station needed to change out one of its Generating Stators which had run to failure. As part of the project, the old stator was moved from the Turbine Hall at Matla Power Station in a massive bunker. With Duvha Power Station already being a generating unit down from a recent incident with regard to one of their boilers, it was critical to get this old stator out and the new stator in as quickly as possible.

At 290 tons each, these stators require serious engineering to lift and move them around. Eskom has a purpose-built gantry system with which they use to lift and lower stators from the turbine hall to the ground and vice versa. But it required a few tweaks, carried out by our engineering team, to allow our two 180-ton Strand Jacks to do the lifting and lowering of the stators.

Vanguard rigged the system into place, mechanically assembled it, tested it and, through the help of an independent structural engineer, signed off on the system ready for work.

The scope of this project utilised just about all of our disciplines in ensuring the project was carried out efficiently and safely.

Once again, when the call to Vanguard was made, a quick reaction by the team ensured that the change out of the stators took no more than three weeks. Well inside the 12-week timeline.

### OUR WORK

- x Item: Gen Stator
- x Weight: 290 ton
- x Dimensions: 10.01 x 3.92 x 3.94 m
- x Quantity: 2

### OUR TOOLS

- x 500 ton Hydraulic Gantry System
- x 20 axle, 3 file Transport Trailer
- x 12 axle, 2 file PST combination
- x In-house designed Jack and Slide System
- x In-house designed Turn Table System
- x Various stools and stands



### OUR SERVICES

- x Assemble specialised gantry Strand Jack lift system at Duvha Power Station
- x Lift out and lower old stator at Duvha Power Station onto PST trailer
- x Move old stator on-site to temporary lay down area and offload
- x Slide out new stator at Matla strategic stores and rotate 90 degrees
- x Load new stator onto 20-axle, 3-file trailer at Matla and prepare for transport
- x Transport new stator from Matla Power Station to Duvha Power Station and move into Turbine Hall
- x Lift new stator using Strand Jack system up to the Turbine Hall floor and place in position
- x Load old stator and transport back to Matla strategic stores
- x Offload, rotate 90 degrees and slide into position

