

AN HV POWER SYSTEMS STATCOM IN UGANDA IMPROVES INDUSTRIAL PRODUCTION



Most modern industrial plants have sensitive equipment to achieve precise control over the manufacturing process. Sensitive equipment needs very good power quality to ensure that it operates correctly. Poor power quality (e.g. harmonics and voltage dips) will cause this equipment to malfunction, causing significant disturbances to the production process. Poor power systems exacerbate poor power quality, so the impact on industrial plants in Africa, which has very weak power systems, is accentuated.

These dips cause critical equipment to trip out, which can cause the whole plant to shut down. Sometimes it takes a few hours to restart the process, costing the plant dearly in lost production time. These interruptions lead to customers becoming dissatisfied due to delays in delivery, degradation of the quality of the product and increased labour costs associated with the clean-up and restarting of the entire process.

Statcoms are the latest generation of dynamic reactive power compensation equipment that can be used to effectively mitigate voltage dips as well as other power quality problems.

HV Power Systems installed a 30MVAR 6.6kV Statcom at the UMEME's Roofings substation in Uganda. The project value was about R75 million.

This substation feeds the Roofings Cold Steel Roller Mill. The Roofings plant is very sensitive to voltage dips, causing the plant to trip. This leads to production and revenue losses.

HV Power Systems is able to compete successfully with major multinationals by using the best local and regional engineering talent to integrate technology from leading global technology suppliers.

- We have partnered with NR Electric from China, a market leader in China, for our Statcom technology. Successfully managing Chinese suppliers is an art which we have perfected over many years of working with NR.
- By attracting and developing the best local engineering talent, we are able to provide an engineering service as good or better than major European brands at a much more affordable price. Accessing the site is also much easier from SA than from Europe.
- As part of the project, we provide training and develop local labour, electrical contractors and client engineers so that they can properly operate and maintain the system.

We provided a complete turnkey solution for the client from design stage through successful commissioning and now onto after sales support. The Statcom was successfully energized in June 2018 and has been clearing an average of 5 to 6 dips every day since then.

The Statcom has therefore been able to significantly increase the Roofings Steel Mill production output by improving the power quality of its electricity supply.

