

## CLIENT CASE

# INCREASING PRODUCTIVITY AND BOOSTING FACTORY OUTPUT

## MANUFACTURING SOUTH AFRICA

- UPS type: Dynamic UPS
- Power module: 2,000 kVA
- No-break rating: 2,000 kVA
- Engine rating: Standby rated at 1670 kVA
- Phase 1 install: 10 modules
- Total install: 10 modules in total
- Operating voltage: 6.6 V/50 Hz
- Configuration: Single
- Housing: Indoor, dedicated energy building

The client in this study is a leading manufacturer of packing materials in the African continent. One of their units produces glass bottles and jars for the packaging of wine, soft drinks etc. For the production the plant has 3 furnaces and 9 lines with a total capacity of 300,000 tons of glass. However, due to poor quality of the utility

power supply, the maximum capacity could not be achieved and demand could not be met. Even short interruptions in the utility power supply disturb the manufacturing process for longer period of times. Time is consumed by cleaning and restarting the process. Also, such interruptions cause high cost of scrap.

## Project Challenge

The challenge was to find a power protection solution that could not only cover the intelligent controls of the plant, but also the higher power furnaces. Besides that the plant is running on a 6.6kV network. So applying standard static UPS units was not a possibility, provided that a large scale (20MVA) UPS solution was required on

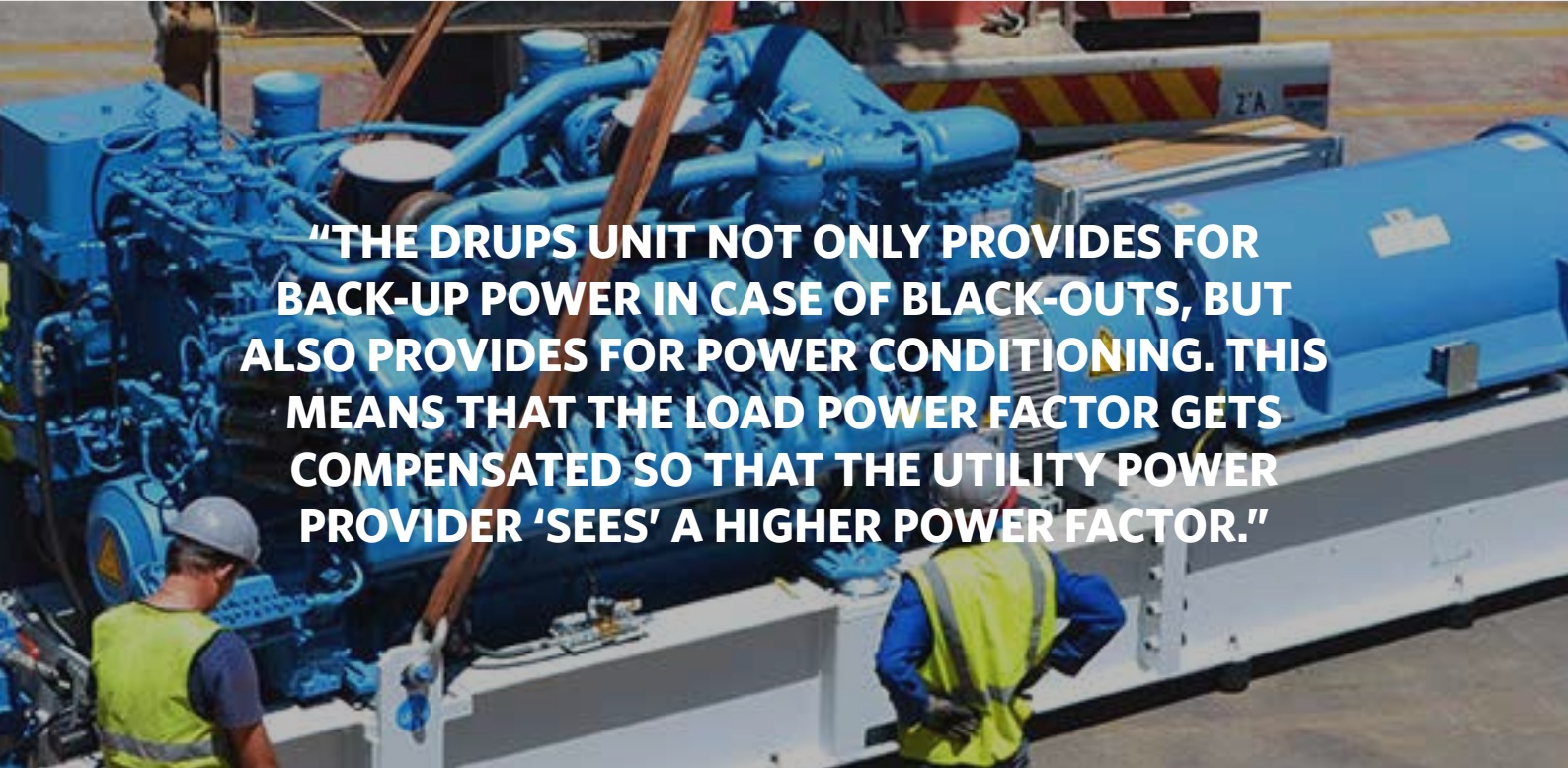
Medium Voltage level. Besides that there was no space available in the plant. Besides the size, also any UPS system that would be proposed would have to be very robust and suitable for an industrial application with a lot of variation in the load current.



## Project Solution

Together with the client and the local partner a turnkey solution with diesel rotary UPS systems was developed, including design, installation, commissioning and maintenance. First of all a centralized solution was chosen, upstream in the 6.6kV network. To that purpose a dedicated energy building was designed. In the energy building 10 units of 2MVA Diesel rotary UPS units were placed. The DRUPS unit not only provides for back-up power in case of black-outs, but also provides for power conditioning. This means that the load power

factor gets compensated so that the utility power provider "sees" a higher power factor. This generally reduces the electricity bill. Besides that the DRUPS units stabilize the incoming voltage to a tolerance of +/-1%. To the manufacturing plant receives stable, clean and continuous power. In case the utility completely fails, the Diesel engine on the DRUPS unit takes over and provides the power to the plant. A purpose designed SCADA system provides for the monitoring and control of the system, either on site or from a remote location.



**"THE DRUPS UNIT NOT ONLY PROVIDES FOR BACK-UP POWER IN CASE OF BLACK-OUTS, BUT ALSO PROVIDES FOR POWER CONDITIONING. THIS MEANS THAT THE LOAD POWER FACTOR GETS COMPENSATED SO THAT THE UTILITY POWER PROVIDER 'SEES' A HIGHER POWER FACTOR."**

## Customer Experience

With the HITEC Power Protection solution, the client was able to boost productivity and output of the plant and could meet the demand of their

customers and increase their profitability at the same time. Another project where HITEC lives up to slogan: Power and People to Rely on.



 AIR WATER GROUP

**CONTINUOUS POWER  
IN YOUR CONTROL**

HITEC Power Protection BV  
P.O. Box 65  
7600 AB Almelo  
The Netherlands

**Tel:** +31 546 589 589

**Web:** [hitec-ups.com](http://hitec-ups.com)

**E-mail:** [info@hitec-ups.com](mailto:info@hitec-ups.com)