



POWER GENERATION CEMENT PLANT AQUA POWER

OWNER
Aqua Power

LOCATION
Mtwara, Tanzania

PRODUCT
Three Titan™ 130 (15 MWe) Gas Turbines

CUSTOMER VALUE
Sustainability and Rapid, Reliable Power

Aqua Power, an independent power producer, needed to quickly replace expensive diesel power for Dangote Cement, the largest cement production plant in Tanzania. The cement plant was commissioned in 2015 and was forced to run on emergency diesel generators due to limited grid power (18 MW) and poor infrastructure (33KV, 15MVA).

To fulfill their requirement of fast and reliable power, Aqua Power contacted Solar Turbines and purchased three Titan™ 130 generator sets, each with a capacity of 15 MWe. Solar successfully deployed the units to the power plant location in Mtwara, a port city in southeastern Tanzania located near the border of Mozambique. The power plant was commissioned within a record time of seven months including a 70 bar gas connection and 4km transmission line. The power travels from the power plant through kilometers of underground cables to the cement factory where it powers the kiln, raw mills and crushers in standby mode. Aqua Power is

Solar® Turbines

A Caterpillar Company

Power Generation – Cement Plant



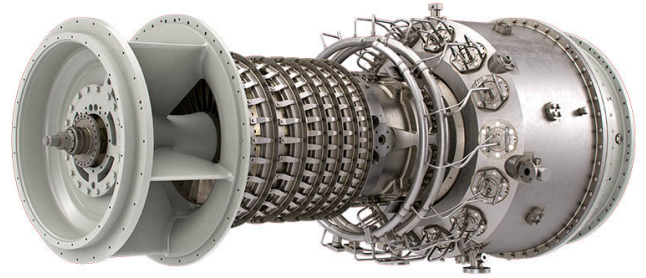
PLANT DATA

Three Titan 130 (15 MWe) Gas Turbines

One Pressure Reduction Skid (90 to 30 bar)

Advanced Scada Controls

Natural Gas Fuel



OUR PRODUCTS & SERVICES

Parts Supply

Relocation, Startup and Commissioning

Operating and Maintenance Training

Long-Term Service Agreement with InSight Platform™

capable of supplying power to both Dangote Cement and the national grid with two independent outgoing feeders.

The three Titan 130 gas turbines combined with auxiliary equipment (gas pressure reduction station, black start diesel generator, transformers and medium voltage auxiliaries) provide reliable power that enables Dangote Cement to run at

full capacity, producing two million tons of cement per annum. This solution allowed Aqua Power to cut costs resulting in approximately \$20 million USD per annum in savings.

Since the installation, production capacity at the cement plant has increased from 25% to 100% and emissions have been reduced. Another critical requirement for Dangote Cement is the ability to handle rapid power demand fluctuations and load steps. Due to their high inertia, the Titan 130 gas turbines are capable of adapting large load steps (both on-loads and off-loads).

To allow growth, Aqua Power positioned its gas power plant along a gas pipeline and 132KV transmission line, creating future opportunity to supply power into the grid. As part of the deployment, Solar provided Aqua Power with operations and maintenance training and a comprehensive service agreement which leverages InSight Platform™. This diagnostic technology from Solar Turbines provides the opportunity to minimize the downtime required to perform scheduled maintenance.

RAPID DEPLOYMENT

INCREASED PRODUCTION

AFFORDABLE POWER

Solar Turbines Incorporated
Tel: +1 619 544 5352
Mail: infocorp@solarturbines.com Web: www.solarturbines.com

Caterpillar is a registered trademark of Caterpillar Inc. Solar, Titan and InSight Platform are trademarks of Solar Turbines Incorporated.
© 2020 Solar Turbines Incorporated. Specifications subject to change without notice. All rights reserved.
CSPG-AP/0420/EO

Solar® Turbines

A Caterpillar Company