

ARTICLE

Harmonic disruption eliminated from pasta plant with power conditioning technology



A pasta plant based in Jebel Ali, a business hub on the southern outskirts of Dubai, is achieving a reduction in energy consumption following the installation of ABB's PCS100 reactive power conditioner (RPC) to enhance power quality.

ABB's customer's industrial facility for pasta production is one of the largest pasta plants in the Gulf Cooperation Council (GCC). The facility is over 15,000 sq ft. and is split between a processing plant and a storage warehouse. The pasta plant consistently rolls out quality pasta with durum semolina such as spaghetti, penne, fusilli and macaroni for major international fast-moving consumer goods (FMCG) companies across Asia, the Middle East and Africa.

High levels of automation, monitoring and information systems are used when food is processed and packaged. This means that food processing companies must carefully consider their approach to power protection to avoid huge losses. Power outages, sags or other voltage disturbances can result in tripping or failure of critical equipment causing the cost of lost production, down time, quality and ultimately lost profit.

A professional electrical system audit highlighted issues with total harmonic distortion (THD) within the pasta production facility. Primarily negative sequence harmonics were emphasized,

which were effecting the performance and reliability of the processing equipment, reducing load efficiency, and therefore increasing operating costs. The solution proposed was to retro fit the low voltage main distribution panels with a tailor designed active harmonic filter from ABB.

To ensure a continuous flow of clean power in the facility, two of ABB's PCS100 RPCs were installed in December 2016. ABB's technology drastically improved the facility's power quality. The manufacturing cost vs output were reduced and the power factor improved from 0.8 – 0.95.

The PCS100 RPC is rated for applications from 100 kVA to 2,000 kVA. The technology is a hybrid solution that not only provides dynamic reactive power conditioning but also filtering of low order harmonics, all based on ABB's PCS100 inverter technology. Compared with other technologies, the PCS100 RPC has a number of benefits, including imbalance correction, fast dynamic power factor, and active filtering of harmonic currents.

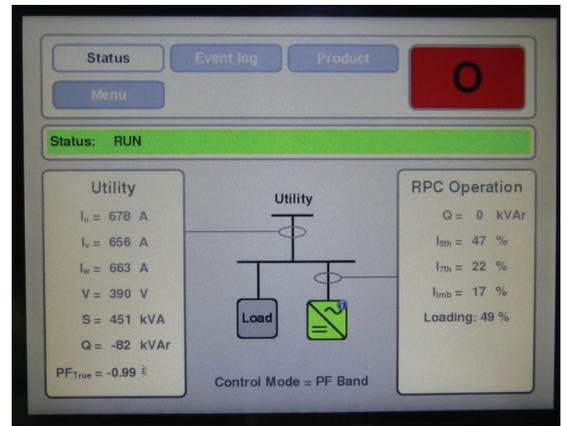
The turnkey project was installed by Energy Savers FZE whose industry qualified engineers provided a one stop point of contact throughout the project. The client chose ABB over its competitors due to the durability of the product and the reliability and performance of ABB solutions.

A spokesperson for the company, explains, “ABB’s RPC units were installed at our BMN facility at the end of 2016 and we are seeing a notable reduction in our energy consumption compared with last year. Energy Savers FZE provided a professional and punctual services throughout. Their after sales support and technical ability is an additional benefit”.

To find out more about ABB's power protection solutions:

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Additional information

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