

Case Study

Flour Plant in Tlalnepantla, Mexico Gets a DECS-250 Upgrade

Grupo Minsa is the second-largest corn flour producer in Mexico. The company makes four different types of corn flour for industrial, commercial, and home use.

Grupo Minsa's customers include food retailers, markets, distributors, and wholesalers, as well as supermarket chains and foodservice companies in Mexico and the western and southwestern U.S. It also supplies the Mexican government with flour for its foodservice operations. Minsa owns and operates four plants in Mexico and two in the U.S.

Scope

- Upgrade a 21-year-old excitation system in order to comply with updated regulations of the Mexican Energy Department "CENACE" (Centro Nacional de Control de Energía), which manages the transmission grid in Mexico as part of the Federal Electricity Commission (Comisión Federal de Electricidad or CFE.)
- The existing SSR 125 had to be fully removed and replaced with a new DECS-250 Excitation System.

Schedule

The Basler Excitation System was placed into operation in December, 2020 and all system upgrades were completed in three days.

Design and Solution

The plant uses a gas turbine generator which also functions as a cogeneration unit. It increases the plant efficiency by utilizing exhaust gases from the turbine in the production processes. In addition to providing the energy needed for the plant's production as well using hot gases to dry the flour, the generator is also used to improve the plant power factor and avoid fines from CFE. By installing a DECS-250 and working in conjunction with the current SCP 250 plant regulator, a control efficiency was achieved in order to maintain PF=1.0 in the plant's steady and transient states.

Utilizing a drop-in solution, Basler provided backward compatibility provisions for replacing the SSR. Modern microprocessor controls now provide accurate

performance not subject to change due to environmental conditions like some analog devices. Auto Tuning and simplified commissioning tools reduce downtime, preventing costly system upgrades, while the added functionality increases productivity.

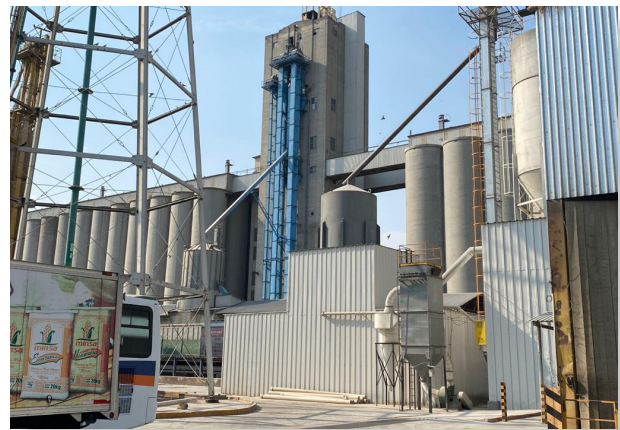


Figure 1 - Grupo Minsa Flour Plant

Wrap Up

The new system has significant additional tools for more effective management of the generation system, including Event Logs, Oscillography Logs, Programmable Alarms, UEL and OEL. These tools make the technician's job much easier and create more stable power delivery for the plant. The client was extremely satisfied with the Basler DECS-250 system and appreciated the ease of the installation and commissioning.



Figure 2 - DECS-250 Installation