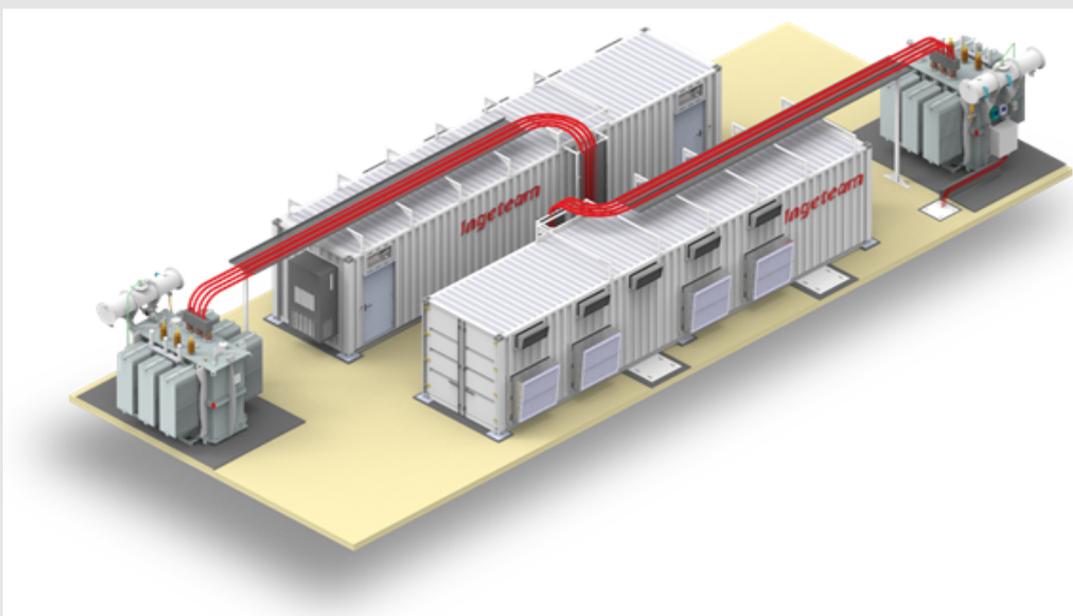


CASE

STUDY

Solutions for Energy Stabilization



Ingeteam supplies solutions for energy stabilization favouring significant savings in production costs. These solutions are essential to adapt to the new rules from the European Union that will come into force in 2021.

Ingeteam is a specialist in analysing and implementing customized solutions in network quality for industries where there is high energy consumption, ensuring an improvement in efficiency and energy savings. Additionally, these solutions increase the performance of the machines and extend the lengthening of the useful life-cycle of the plants, enabling significant savings in production.

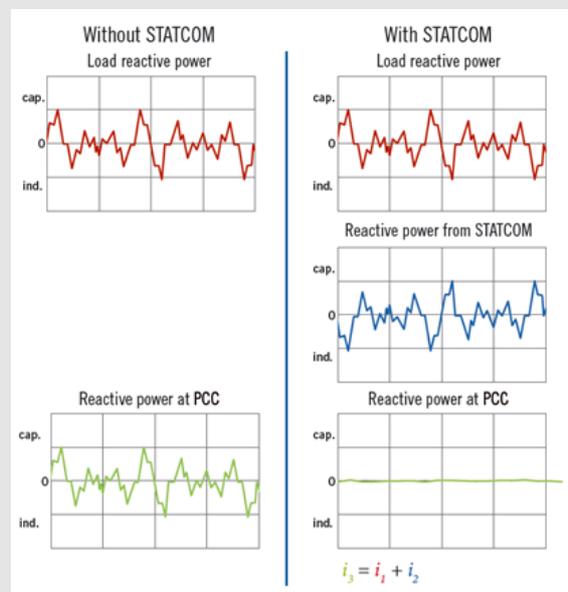
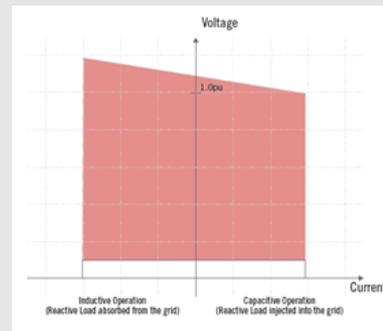
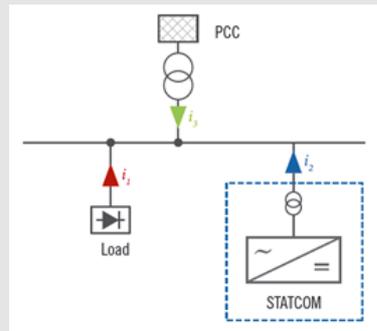
In addition, in 2021 the new European Union rules for the internal electricity market will come into force, for which it will be essential to have energy solutions so as not to fall into the penalties foreseen in the new regulation published in 2020 in the Official Spanish State Gazette. These penalties will affect large companies that demand high reactive power, for which reliable energy stabilization solutions are necessary.

The static compensator (STATCOM) supplied by Ingeteam is the most efficient solution for sectors such as mining or metallurgy. When starting a large machine such as an electric arc furnace, there is a drop in the working voltage, since the machine requires reactive power to work. The STATCOM maintains the grid voltage by injecting the reactive power required by the machine, making all equipment work with a constant voltage and at the appropriate power. In addition, by working at the proper voltage, there is no slowness in the process, which means savings in time and electrical power.

STATCOM

How does the static compensator work?

This static compensator works both in inductive mode (reducing the grid voltage) and in capacitive mode (increasing the grid voltage). It also supports hybrid solutions in which capacitor and/or inductance banks are added to increase power. In addition, it has the capacity of voltage regulation, load balancing and active harmonic filtering.



The STATCOM is configured in compliance with national network codes according to regulatory requirements of the country. It is used in electro-intensive sectors such as mining or metallurgy.

Its installation is versatile, since it can be installed both in electrical room and in transportable container. Each container can have a reactive power capacity of up to 14 MVar, admitting configurations of step-down transformers with several secondary windings and multiple stacking levels, which allow the handling of powers well above 100 MVar and at a voltage of 3,65 kV.

Although other reactive power compensation technologies such as SVC have been used in the past, the STATCOM allows faster compensation, being able to operate at lower grid voltages, guaranteeing reactive compensation and optimizing space. In other words, the STATCOM is faster, more capable, more flexible and more compact than the SVC.

What are the advantages of Ingeteam's STATCOM?

- Avoid network code penalties.
- It allows the network to work at a constant voltage even when starting large machines, eliminating harmonics and unbalanced loads. As a consequence, losses are reduced and the life of the plant lengthens.
- Increases the performance of the machines, which translates into productive savings and rapid amortization of the equipment.
- Instantaneous reactive power compensation, both inductive and capacitive.
- Constant reactive power capacity, even under low voltage conditions.
- Excellent in offset accuracy and flexibility.
- Possibility of containerization, capacities up to 14 MVar (ISO 40-foot container) with multiple stacking levels.