

The new powerful excitation system UNITROL® 6000 X-power was installed in a coal power plant in Indonesia

UNITROL® 6000 X-power was installed in a coal power plant in Indonesia to replace a non-ABB excitation system to optimize the production capacity of the power plant.



UNITROL 6000 X-power

The Story

In 2016, Pacitan planned a retrofit of the excitation systems of a non-ABB company in a coal power plant located in the Sudimoro District, Pacitan Regency, East Java Province in Indonesia. The power plant, which is operated by Pacitan and has a gross capacity of 630 MW (2 units x 315 MW), since then only produced 50 per cent of its total capacity. A fast replacement was necessary and therefore Pacitan contacted ABB.

A steam turbine had to be shut down, which led to a power interruption for Pacitan. Within a short time the Excitation System had to be renewed.

Customer needs and ABB's solution

PLTU Pacitan and PT.PJB Stockist asked ABB to visit the site in order to check and find the best solution to make the turbines run again. After the visit, ABB concluded that the existing unit should be renewed. It needed to be fully replaced. Customer concern was to find the best and fastest solution to replace the complete excitation system. ABB analyzed the technical needs of the project in coordination with the local ABB Discrete and Motion team in Indonesia in order to fully understand the scope.

As a result of an on-going OPEX improvement of the production process within the ABB excitation systems department and owing to successful teamwork between the engineering, factory and management teams, the production time efficiency of UNITROL 6000 units were increased

and at the same time the supply period was drastically reduced. A complete UNITROL 6000 X-power unit was delivered in about 7 weeks without having compromised the quality of the product.

Our customer received a new UNITROL 6000 X-power unit capable to deliver 2500A continuously with UNL14300 bridges with online maintenance for the Pacitan station that was part of the fast track program of 10'000 MW launched few years ago by the Indonesian government.

The previous system did not provide active damping and in fact it experienced unrepairable failure during non-stable generator operation. ABB UNITROL 6000 Excitation Systems



Pacitan coal power plant in Indonesia - Sudimoro District, Pacitan Regency, East Java Province

is continuously increasing in Indonesia and the Southeast Asia region.

Therefore, ABB was able to certify a team member of ABB Indonesia to commission and perform maintenance on UNITROL 6000, in order to be closer to the customer and reply quickly to demands for services.

UNITROL 6000 X-power is designed for large power applications and brings a new benchmark in flexibility, reliability and connectivity. UNITROL 6000 X-power uses well-proven functional modules. With single/double channel control configuration (additional back-up controller on request) and a wide selection of thyristor bridge modules, the system can be configured to meet all field data and availability requirements.

UNITROL 6000 X-power systems can be built with up to three control channels: two fully featured channels and one backup channel for emergency generator control. ABB delivers highly reliable excitation systems and carries out all the relevant certifications so that the systems comply not only with international rules, but also with the local standards.



Entrance Pacitan coal power plant in Indonesia

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