REFERENCE CASE POWER PLANT

Design Supervision and Project Management for a Thermoelectric Power Plant in Brazil

When one of the largest integrated energy companies in Brazil decided to deploy combined cycle in a thermoelectric power plant, an experienced partner was required to provide project management, and professional technical support. That is why they entrusted TÜV Rheinland with the comprehensive design supervision and project management.

Basic Facts	
Client	Leading integrated energy company in Brazil
Timeframe	2010 - 2013
Project location	Canoas, southern region of Brazil
Main services	Design supervision and project management services include: ▪ Contract management ▪ Design supervision ▪ Risk assessment ▪ Quality assurance ▪ Project management and monitoring ▪ Commissioning support

Initial situation and requirements

The deployment of the combined cycle at a thermoelectric power plant is a highly costly venture, but can significantly increase overall plant efficiency. By combining multiple thermodynamic cycles to generate power, power plants can achieve electrical efficiencies of up to 60 percent. The deployment of the combined cycle at the Brazilian thermoelectric power plant would add 90 MW to the initial plant capacity of 160 MW.

Ever-changing market conditions in Brazil demand tailored solutions for the energy industry. The thermoelectric subject of the planned project follows a bi-fuel plan, running both natural gas and diesel fuel in order to remain feasible while coping with unexpected increases in the regional natural gas price. This expansion at the power plant helps maximize generation capacity and lowers output costs.

Solutions, results

Due to the characteristic of the project, the client needed to contract specialists in many disciplines to participate during the project timeframe. The team of TÜV Rheinland experts consisted of ten engineers, two technicians and administrative personnel, performing a coordination role among companies involved in the project. Due to the complexity of the project, the appropriate flow of information was vital to its success.

Our specialists provided technical advisory services and project management. We began by assisting with planning the projects and the budget and preparing technical reports and statements of work. We also developed and implemented quantitative surveys of services performed and materials used and prepared the tender processes. We provided extensive technical assistance throughout the structural design phase, supervising design and, giving support in risk management, quality assurance and environmental licensing.

Did you know?

TÜV Rheinland was evaluated 14 times during its contract with the client on aspects such as organization, compliance with the deadlines, HSE and quality. A score of 93 out of 100 points rate TÜV Rheinland as excellent according to the clients grade policy.

Benefits for the client

TÜV Rheinland supported this project with:

- Technical advisory services and project management.
- Well-qualified, experienced management personnel.
- Comprehensive support throughout the planning, construction and supervision with extensive experience in major energy projects.
- Complying with design and technical specifications, occupational safety standards and environmental licensing processes.

About TÜV Rheinland:

Founded more than 140 years ago, TÜV Rheinland is a global leader in independent inspection services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

We inspect technical equipment, products and services, oversee projects and help to shape processes for companies around the world. Since 2006, we have been a member of the United Nations Global Compact to promote sustainability and combat corruption.

Our approach to project management is accomplished through the application and integration of appropriate processes throughout every phase of your project. We can provide general coordination, technical support, planning and execution supervision. We can also monitor cost, quality, time, communication, risk, safety and environmental impact for works carried out and the materials used.

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