

# REFERENCE CASE POWER PLANT



## Assembly Supervision and Technical Support for Construction of Angra 3 Nuclear Power Plant, Brazil

Eletronuclear required an experienced partner that could provide on-site supervision services and technical consultancy support during the assembly phase of the construction of Angra 3 nuclear power plant. That's why they turned to TÜV Rheinland Ductor, our project management company in Brazil.

Basic facts	
Client	Eletronuclear – a subsidiary of Eletrobrás Holding S/A
Timeframe	January 2011 - January 2015
Project location	Angra dos Reis, Brazil
Main services	<ul style="list-style-type: none"><li>▪ Assembly planning and control</li><li>▪ Independent on-site assembly supervision and consultancy</li><li>▪ Quality, safety and environmental supervision</li><li>▪ Effective supervision team of 68 experts per month</li></ul>

### Initial situation and requirements

Eletronuclear, a subsidiary of the government-controlled Eletrobrás, was established in 1997 for the purpose of building and operating thermal nuclear power plants in Brazil. In 2010, the organization started the project to complete of Angra 3 nuclear power plant construction. As a result, they required professional support for the supervision of the electromechanical assembly and start-up tests.



## Solutions, results

After a long bidding process, Eletronuclear chose TÜV Rheinland, a provider of project management services for the energy industry with extensive experience in nuclear power plants.

Since January 2011, we have provided specialized on-site technical services, including team coordination, planning and control, design review control, contracts management and assembly on-site supervision during the construction of the Angra 3 nuclear power plant.

We supervised and approved a comprehensive range of construction testing, such as hydrostatic tests, non-destructive tests and x-ray, gammagraphy, and megger tests to ensure adherence to all quality, safety and environmental requirements. Evaluation of constructional deviations as well as welding seam faults were also conducted to enable our team to recommend the best corrective and preventive measures.

All our findings are regularly reported in construction journals and monthly construction progress reports. At the end of assemblage, the TÜV team will provide acceptance tests to ensure plant compliance to all quality and security requirements.

### Did you know?

Angra 3 is Brazil's third nuclear power plant, all of which are located at the same site beside the sea in Angra dos Reis, 100 km out of Rio de Janeiro City. It has a power capacity of 1.000 MW and was conceived thirty years ago, using Siemens/KFW technology.

### Benefits for the client

TÜV Rheinland provides Eletronuclear with:

- Extensive experience in nuclear energy projects and quality issues.
- Independent supervision and consultancy.
- Well-qualified, experienced management personnel on site.

### Your contact:

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### About TÜV Rheinland:

Founded 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.

We have been involved in the field of nuclear engineering since the beginning of the civilian use of nuclear power. We support atomic licensing and regulatory authorities, operators of nuclear plants, companies that build and install nuclear plants and equipment, and component manufacturers and service providers for the nuclear engineering market.

We offer you a comprehensive range of services, including quality management, process safety, radiation protection and condition monitoring of existing plants. We also offer you over 20 years of experience and knowledge, providing expert evaluation in shutting down and removing nuclear power plants of various designs, and other types of nuclear facilities.