

REFERENCE CASE REAL ESTATE



Energy Efficiency and Sustainable Construction Certification in Brazil

The 20th FIFA World Cup will take place in Brazil in the summer of 2014. The Arena Corinthians is currently under construction to welcome the world's best 32 teams and their fans. Since FIFA requires all arenas to have an international sustainable construction certificate, they turned to TÜV Rheinland for the commissioning process.

Basic Facts	
Client	Arena Corinthians (Odebrecht)
Timeframe	September 2010 – December 2013
Project location	São Paulo, Brazil
Main services	<ul style="list-style-type: none">▪ Energy efficiency assessment▪ Commissioning of energy consuming systems and equipment▪ Previous computer modeling of the project
Involved regulations/standards	<ul style="list-style-type: none">▪ ASHRAE 90.1▪ Brazilian regulations on energy efficiency

Initial situation and requirements

The Arena Corinthians is a Brazilian sports complex and stadium under construction since September 2010. The 140.000 m² arena is being built in the eastern district of São Paulo and will host up to 68,000 spectators during the 2014 FIFA World Cup. For such an event, stadiums need to meet the technical requirements of FIFA.

In fact, FIFA demands that all host arenas have an international sustainable construction certificate. This requires a commissioning process to be performed to ensure the energy efficiency concept and design of the building. This is the first time in Brazil that such a construction has to submit to this kind of analysis. The Arena Corinthians and other involved companies in the project (mainly ODEBRECHT Constructor) chose TÜV Rheinland to support them in the certification process.

Solutions, results

Thanks to our extensive international experience in energy efficiency testing and certification for constructions and our profound knowledge of international standards and quality of services, TÜV Rheinland was the preferred choice for the Arena Corinthians project.

In order to ensure the quality of the installations and operations and to guarantee that all systems in the Arena Corinthians operate within a sustainable performance, three experts from TÜV Rheinland provided commissioning services for the energy consumption of all systems and equipment. For this, we tested and assessed the construction in compliance with relevant energy consumption standards such as the ASHRAE 90.1 requirements for the energy efficient design of buildings. A computer modeling was previously carried out to ensure operations under optimal performance. During the project, the TÜV Rheinland experts supervised tests in the systems and inspected the manufacturing process of specific equipment, thus ensuring the sustainable construction of the entire arena.

Thanks to the collective experience and knowledge of the TÜV Rheinland team, all systems were approved and the Arena Corinthians obtained the required certification, allowing the stadium to host FIFA football games in 2014.

Did you know?

The Arena Corinthians will host six matches during the 2014 FIFA World Cup, including the opening match, three group stage matches, a round of 16 matches, and a semi-final.



Benefits for the client

TÜV Rheinland supported the Arena Corinthians by providing:

- Expertise from different fields and excellent project management skills to achieve project goals efficiently.
- Experienced experts with knowledge of applicable standards and regulations.
- Commissioning services and certification of energy efficiency to gain FIFA's approval.
- Certification of sustainable construction.

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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.

Due to our extensive knowledge in the field of energy efficiency, we can help you to optimize your processes and show you how to use energy-saving technologies and resource-conserving processes to build sustainable constructions. In addition, we can issue energy certification providing information about your building's energy efficiency.

We offer you a variety of services, including building simulation, construction sustainability and life-cycle assessments.