



## Transpetro - Petrobras uses Treetech Technology to assure the growth Brazilian national growth

To guarantee storage and transportation of oil and oil products, biofuels and natural gas from the North to the South of Brazil, Transpetro (Petrobras Transportes S.A.) has invested in the improvement of its electrical system. The company, controlled by Petrobras, has updated the capacitive bushing monitoring system, as well as temperature and voltage monitoring, using Treetech equipment. Treetech new monitoring systems are now monitoring the 69kV power transformers of the substation for electric power transmission São Francisco do Sul, in the state of Santa Catarina, and of the intermediate station in Itararé, state of Paraná.

"These improvements will meet the needs of the Santa-Catarina-Paraná (Ospar) oil pipeline, which carries oil to the Presidente Getúlio Vargas Refinery (Repar) and distributes products to both States", says Petrobras's maintenance engineer, Jorge Luis do Amaral.

The Company is considered the biggest natural gas processing plant in Brazil, with a processing capacity of almost 15 million cm/day, which, up to 2011, will increase to 23 million cm/day.

"Treetech, through its monitoring systems and Jorge, through his and his team's work, are contributing for Transpetro to do its duty for our country's development", concludes Commercial Manager Marcio da Costa.

Check out the full story [here](#).

More information? [Contact us](#).



## Elektro confirms asset monitoring efficiency

Elektro's Technical Planning Engineer, Gilberto Martins, presented, in the last 2010, IEEE/PES Transmission & Distribution Latin America, the technical article "Maximization of Power Transformer Use."

This paper showcases the results of the implementation of the power transformer use maximization pilot project, without compromising the service life of the equipment and the reliability of the electric system. The tool used was the online Treetech monitoring system, Sigma4web, which was proven to be the best solution.

The whole study by Eng. Gilberto is based on administrative and financial figures, proving the success of the application of the Treetech system at Elektro.

More information? [Contact us](#).

## Technical Tip



### The importance of the Type Tests

In order to guarantee the minimum quality requirements for the operation of sensors and relays in power substations, there are type tests which are prescribed by both Brazilian and international standards. These prove how rugged the equipment is and determine the limits of application in inclement conditions. It is paramount that all equipments pass through all the procedures and are approved, thus preventing that the assets and the engineers run any kind of risk.

See below the minimum tests which all sensors and IEDs must undergo. It is essential to stress that even if only one test is missing this compromises the application's reliability.

- Environmental Testing: (IEC 60068-2-14): ( -40 to + 85°C )
- Impulse Voltage (IEC 60255-5)
- Applied Voltage (IEC 60255-5)
- Surge Immunity (IEC 61000-4-5)
- Irradiated Electromagnetic Field Immunity (IEC 61000-4-3)
- Conducted Electromagnetic Disturbance Immunity (IEC62000-4-6)
- Electrostatic Discharges (IEC 60255-22-2)

- Electrical Fast Transient Immunity (IEC 61000-4-4)
- Electrical Transient Immunity (IEC 60255-22-1)
- Response to Vibration (IEC 255-21-1)
- Resistance to Vibration (IEC 255-21-1)

Due to the years of experience in the application of smart sensors and the know-how about the actual environmental conditions, Treotech offers throughout its whole lineup of products the extended supportability - that is, the manufacturing process and the components used go beyond the standard requirements, offering more reliability and safety for the correct performance by each equipment.

Treotech advises that all type tests and the quality system (ISO 9000) are required in the technical specifications with the purpose of assuring quality and fitness of the new sensors purchased.

More information? [Contact us](#).

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