

# SINDUS HUMAN TECHNOLOGY COMPLEMENTS ANDRITZ'S PROCESS TECHNOLOGIES

In June 2007, Andritz acquired a 50% stake in Sindus Human Technology, a company specializing in maintenance services for pulp, paper, and other industries in Brazil. With Andritz's global scope, Sindus Andritz will be able to expand its business into other South American countries and beyond. With Sindus' expertise, Andritz has a closer connection to the Brazilian pulp and paper market.

## A humble beginning

It was 1987 when Luis Binotto, his brother-in-law, and four other engineers formed Sindus Human Technology in an empty laundry room in the Binotto family house. Their initial business was maintaining complex laboratory equipment. As the business grew, the company moved from the family house and the engineers began to develop a gas analyzer for environmental monitoring – the TRS analyzer. Today, Sindus is the only manufacturer of Total Reduced Sulfur (TRS) analyzers in Brazil.

## Outsourced maintenance

In addition to maintaining laboratory equipment, customers began to ask Sindus to maintain their analyzers. Sindus saw this as an opportunity to expand into outsourced maintenance contracts, where Sindus manages all the maintenance activities – recruiting and training specialists, scheduling and performing the work, analyzing the failures, and reporting on the progress.

In the 1990s, a pioneer in maintenance outsourcing for the pulp and paper industry was the Araucruz Guaíba mill (called Riocell at that time) near Porto Alegre. In 1994, Riocell asked Sindus to maintain all the instrumentation and electrical systems in the mill. As part of the process, Riocell employees became employees of Sindus. This was the company's first large contract.

What is a non-core activity for many manufacturing plants (maintenance) is the core business for Sindus Andritz. Customers rely on Sindus Andritz to perform the maintenance of instruments, controls, motors, and valves more efficiently than they could by themselves.

## Close association with Brazilian industry

Today, Sindus Andritz has major contracts in force and works with all the leading pulp and paper producers in Brazil. With Sindus Andritz employees in the mills every day, they know the customers' needs and priorities very well.

## Sindus Andritz today

Sindus Andritz has 680 employees. About 70 are located at the company's headquarters in Porto Alegre. The average age of an employee is 32 years. About 130 employees have university degrees or are in the process of obtaining their degrees. Of this number, about 50% are engineers. Field technicians typically have high school degrees plus some specific technical training. The average Sindus Andritz employee has been with the company over three years, though many have worked for 10 years or more. The average is distorted since the company hires from 50 to 100 employees each year to meet the growing demand for its services. Three employees who started in apprentice positions have now risen to managerial positions within the company. In general, pulp and paper accounts for about 80% of Sindus Andritz's annual revenue. The rest comes from other process industries such as steel, chemicals, and mining.

## Distributed communications and training

With employees spread out across Brazil (up to 5,000 km apart), Sindus Andritz relies heavily on technology to support its remote communications and training. The company uses video-conferencing, tele-conferencing, and web-conferencing regularly to link all the site managers together.

For employees, web-based training technology is being used. Every specialist has to have basic skills in math and physics, with a thorough knowledge of the complex electronic and control equipment installed in a modern pulp and papermaking facility. Employee training needs are prioritized based upon their impact on customer results.

New browser-based training modules are made available to employees in their job sites around the country. There are online 'chat sessions' where specialists can share their knowledge and compare notes. The training can be delivered online for individuals or small groups through the tele-conferencing and web-conferencing systems.

## New tools

OPP (Optimization of Process Performance) is a software package developed by Sindus Andritz that collects information from distributed control systems and programmable logic controllers to help specialists identify instruments that need attention and to better tune their control systems. This results in improved equipment efficiencies and higher production. Five mills in Brazil currently have the OPP system installed.

Another new development is to perform maintenance tasks on automation systems through an Internet link. In a pilot project, Sindus Andritz found it could do 90% of the automation maintenance tasks for one mill remotely. Technically, there are few limits. Customers gain access through a remote link to a group of experts with extensive experience who can improve the technical support of existing maintenance contracts. ○

**[1]** The Analyzer Division of Sindus Andritz has expanded over the years from the initial manufacturing of TRS analyzers to include all kinds of devices for gas analysis. Here, a technician assembles a total system, including sensor, sample handling, and system electronics.

**[2]** Based upon input from the OPP (Optimization of Process Performance) system, a Sindus Andritz engineer isolates a control loop problem to a faulty valve positioner in the pulp mill. By replacing the positioner, effective control is restored to the process.

**[3]** With nearly 700 people spread out up to 5,000 km apart, Sindus Andritz relies heavily on technology to support its remote communications. Here, business directors discuss a project's status during a weekly video-conference. For employees, web-based training technology is utilized to a large extent.

