



IMAGE BANK ABTCP / SERGIO SANTORIO

Technology and commitment in favor of the sector

The supply of equipment, services and raw materials to pulp and paper makers calls for a long term commitment. When buying, companies analyze customer service, the level of innovation and how solid suppliers are

By Marina Faleiros

In a sector that's capital intensive and where even the main raw material, eucalyptus, takes an average of seven years to be harvest-ready, every commercial commitment is perceived as long term. This is why suppliers not only bet on the innovation of their services and equipment, but also the guarantee of customer service and aftermarket quality. "There must exist an alliance between the contracted party and the industry, where suppliers must understand that they are an extension of the business and actively participate in the company, having goals set and suggesting improvements, in a very proactive manner", says Luciano Fusaro, International Paper's (IP) Procurement Manager.

With the increase in business volume generated by the sector, competition among suppliers has also grown. As such, NSK's marketing executive Jacqueline Soares points out that, in addition to offering high quality products and technology, suppliers need to understand the customer's business and keep an eye out on its needs. "The services bundled with the products are fundamental in establishing a relationship of trust between the parties", she says.

At International Paper, the search for suppliers begins with an analysis of how financially and fiscally sound the company is, in order to determine just how perennial the company is. "The first prerequisite is to undergo this assessment, from which we produce a risk rating for the company. If it is within our parameters, we then conduct further analyses", explains Fusaro.

After this stage, we assess the technical capabilities of the products being offered, supply history in the market, benchmarking and references. "Another important point to be considered is the company's safety record, that is, in terms of occupational accidents, as well as the supplier's ability to suggest process improvements", he says. Lastly, we look at the final cost, since the supply cost must be in conformity with the amount projected by the company.

For chemical manufacturer Contech, the fact that the company has kept up with the sector ever since it began taking on greater importance in the domestic market, has resulted in it being prepared for the level required by today's producers and understand the importance of focusing on the return on investment made by the client. "We monitor everything we supply full-time, with a team that conducts case studies, identifying, defining strategy and implementing", says the company's Marketing Manager, Murilo Favari.

This type of partnership between supplier and client is already a constant in the sector, in view that most suppliers are a part of the day-to-day of production. On account of this, even new purchasing and pricing methodologies are being adopted. At International Paper, for example, suppliers already charge per ton of paper produced, rather than per ton of raw material sold. "Such concept is called Total Cost Ownership (TCO) and is now on the way to be applied here in the chemical sector. With this, the more we produce, the more the supplier earns, permanently fostering it to seek improvements too", explains Fusaro.

MACHINES CALL FOR RELIABILITY

Linked directly to the industry's end product, machine and equipment

manufacturers are the main players in the spotlight when talking about production. However, in addition to focusing on the quality of what's being produced, companies in this segment today need to pay attention to other factors, such as raw material and energy savings. "Everyone now wants to know their carbon footprint, so the focus when we develop machines is on reducing CO₂ emissions and reducing costs for our clients", says Nestor de Castro Neto, Voith Brazil's CEO. According to the executive, the company invests € 300 million annually in technology development worldwide.

Known for the quality of machines it supplies, Voith is now beginning to pave an individual path in the supply of pulp drying machines, which area it used to mainly do business through partnerships, especially with Andritz. In order to do so, in 2009 the company concluded the installation of a pilot pulp drying machine at its mill in São Paulo (SP), where before it also possessed a pilot plant to produce tissue paper. "The paper sector is demanding, so we need to prove that our equipment truly works. Just in terms of the pulp drying machine, more than 40 patent applications were filed in the last two years, which goes to show the project's level of innovation."

With the reduced need of vacuum and



Sew-Eurodrive machine: for the company, downtime is always a sign of money loss

without pressing, the equipment consumes between 20% and 25% less energy in the drying process. "The innovation resides in the sheet being dried in the vertical position, rather than horizontally, applying air pressure on both sides like a hair dryer, speeding up the process and reducing the area needed to install the equipment", explains Castro Neto.

ENGINEERING IN FAVOR OF SUSTAINABILITY

A new pulp mill today cannot be built with an investment lower than US\$ 1 billion. Considering the capital at stake, consulting and engineering companies are being contracted to maximize gains of the new mill, spending the least possible in the set-up and without risk for the business. "A client who is going to invest R\$ 2 billion in a mill will not do it in an imprudent manner, so we need to have the best team to execute the project", says Carlos Farinha, Vice-president of Pöyry in Brazil. The company is one of the best known in this market, having been responsible for building Fibria's mill in Três Lagoas (MS), the last pulp mill to start up in Brazil.

According to Farinha, Brazil is now on the sector's global radar on account of its advantages as a fiber producer. "There exists a major growth platform and this results in major responsibility for us, as we are involved in the main projects planned for the future and we have the duty to research and provide technology", he says. The executive explains that it's not only the physical part, of setting up the mill, purchasing equipment and infrastructure that's important, but also the entire analysis of the business, logistics, concept, which involves environmental, legislation compliance and sustainability factors. "This new way of envisioning projects has yielded us some unique responsibilities, since we now build thinking about the future ... How to eliminate fossil fuels? How will the truck fleet run on? What are my chemical products and forest concept? And so forth", he describes.

For consultants, Farinha explains

that the challenges are shared with the company, and that working side by side is fundamental. For a company looking to build a new mill, in-depth studies of the project, people training and even the willingness of local politicians are taken into account. The company's strategy today no longer focuses only on pulp and paper, but also in integrating other areas also within the group, like energy and industry, diversifying its portfolio and exchanging experiences with subsidiaries abroad. "We are in the beginning of this synergy, seeking energy solutions and project mobility", he says.

CHEMICALS: A DAILY PARTNER

If it weren't for the presence of wood, pulp and paper production would be a purely chemical process. The materials of this segment are present in everything from the pulping of the wood to the final stage of coating paper, leading chemical suppliers to innovate the entire time. "We invest roughly 2% of revenues in research and development every year and our research center comprises a team of professionals with master's degrees and PhDs, who account for 6.3% of the staff", says Favari, from Contech.

The company supplies additives and programs for stock preparation, felts conditioning and machines cleaning agents, as well as the chemical and continuous treatment of felts and fabrics, with the current focus being on sustainability and biodegradability. "Our research has advanced in the areas of nanotechnology and biotechnology which, when applied to products and services, offer greater control and take on different properties", he says. Examples include two recently developed technologies registered as Dept® and Fentox®, created in partnership with universities.

The Dept® technology, explains Contech's Research Coordinator Odair Ferreira, is a nanoecomaterial with unique sorption properties, aimed at decoloring textile and pulp & paper wastewater containing natural and synthetic anionic dyes. "In turn, Fentox catalyzes advanced



IMAGE BANK ABTCP / SERGIO SANTORIO

Farinha says that sustainability is now important for every new mill project

oxidative processes and eliminates persistent organic and inorganic contaminants, present in soils and industrial wastewater", he says. With this, the company has been able to reduce the toxicity of industrial wastewater and also allow water from the process to be reused. "These are solutions that focus on high efficiency, cutting edge technology, short lead-times and quick results", he says. In the pulp and paper area, Contech will be introducing in 2010 a series of anti-scaling, pitch and white pitch dispersants, antifoaming and biocide product and solutions.

AUTOMATION TO SPEED UP PROCESSES

In the automation area, the development of software applications that control production and reduce losses for companies is essential. In addition, the aftermarket is also part of the business. "A stilling machine is a sign of money lost, that's why we have application engineers on our team to verify the functioning of equipment, propose improvements and new products, making our relationship with the client very close", explains Alexandre dos Reis, Marketing and Sales Director at German multinational Sew-Eurodrive.

The company does business in the drives area, which includes speed-reducers, motor reducers and frequency converters. "We synchronize the entire machine to, for example, not to disrupt the fibers network and cause sheet to break", he explains. According to him, the pulp and paper industry is very demanding and has the same characteristics as large-sized companies like Petrobras and Vale, where what counts is customer service. "We even have service centers for assistance to large clients, such as one in Espírito Santo that services Fibria (formerly Aracruz)."

The company has 50 people who exclusively develop products and innovations. In terms of new products, we have the Series X Speed-reducers, which may be used in paper machines and possess high thermal capacity. "We used modern calculations in its development in order to yield more with a smaller machine", says Reis. The product results in cost savings and less weight due to the power density and close distribution of the equipments size, in addition to possessing efficient cooling systems and design planning tools in 2D and 3D.


MAINTENANCE ENSURES PRODUCTIVITY

Whether a gigantic paper machine that can be dozens of meters long, or parts with a few centimeters diameter, the role of suppliers is to offer safety and boost productivity of companies. For bearings manufacturer NSK, one of the main challenges of doing business in the pulp and paper market is to develop high tech products that anticipate the sector's needs, as well as develop a highly qualified team to quickly resolve problems experienced by clients. "For such, NSK continuously invests in research and development, creating new training centers and training its people. In Brazil, the company periodically sends its engineers to undergo professional development at the company's headquarters in Japan", says Jacqueline.

NSK currently produces roughly

50 million bearing annually at its unit in Suzano (SP); its newest launchings are the HPS and TL bearing series used in the paper industry. "The self aligning roller bearings HPS Series improve the performance of equipment like conveyors, diffusers, chippers and grinders, as they offer a higher rotating limit and load capacity than conventional self aligning bearings", he explains. The series also possesses the high resistance cage that incorporates the function of guiding the rolls, substituting the guide-ring and

optimizing the configuration of internal and external rings.

In turn, the TL series aims to offer outstanding performance under high temperature conditions and extreme environments found in the paper production process, where internal ring fractures can result in machine stoppages. "They possess a resistance superior to the internal ring fracture, providing for a longer useful life and excellent dimensional stability, resulting in better productivity and lower costs for the user", he concludes. 

ECONOMIC CRISIS REQUIRED A PARTNERSHIP FROM SUPPLIERS

With the difficult period faced by the global economy since the end of 2008, the pulp and paper sector suffered a drop in demand and prices. Even though production and sales stabilized in the second half of 2009, some investments were put on hold and suppliers in the sector became apprehensive, but guarantee that maintaining investments and the partnership climate were fundamental for everyone to come out winning in this period.

At Sew-Eurodrive, for example, the crisis led to a reduction in business and the company ended up working even closer with its clients. "While several companies dismissed employees, we went the other way and continued investing, since the trend is for the market to resume and, as a result, we'll be very well positioned for a new period of high demand", says the company's Marketing and Sales Director Alexandre dos Reis. On account of this, the company introduced several products and is concluding the construction of a new equipment plant in Indaiatuba (SP), which will be responsible for producing certain parts in Brazil that were imported until recently, such as large-sized reducers.

For Jacqueline Soares, NSK's marketing executive, the crisis is the best period to show which suppliers are true partners. "Even during the crisis, we maintained all support services such as customer service and training, which are cost free. The majority of companies underwent cost reductions, however, at NSK, this cannot reflect in the quality of products and services offered", she says.

In 2009, Contech also did not stop. "We maintained customer service full time for our systems, our pricing policy stabilized and we invested in improvements for our installed systems, such as automation and telemetry", says the company's National Sales Director Jonathas Costa. In addition, new administration installations were inaugurated, production units were modernized and our analysis labs were expanded. The company posted a 4% growth in 2009, which year the chemical industry in general registered a 9% drop.

At Voith worldwide, new orders suffered a drop from €0.9 billion down to €0.95 billion. "In Brazil, we did in fact experience a drop of around R\$ 500 million in new orders, but we did have an opportunity in the beginning of the year when the US dollar went up and we sold to Korea and Switzerland, with orders from the tissue line", says Nestor Castro Neto, Voith's CEO. However, for him, equipment manufacturers who first felt the crisis were those who make smaller-sized and less expensive machines, since this type of investment is easy to postpone. "In our case, supply is what we consider medium term, so we had orders from 2008 that were only processed in 2009, which helped keep the company going", he says.