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AUTOMATED RELATIONS IN THE SECTOR!

Machines without men do not function. Men without machines lag in productivity. Keeping this in mind is fundamental to reflect on technological development with mankind, maximizing the intellectual capacity of humans interacting with cutting edge technologies.

When talking about automation in the pulp and paper sector and ABTCP's role within this context, the technical qualification and pursuit of solutions by professionals who work in this area stem from the work carried out by the entity's Technical Automation Committee. This is why it is important for engineers and technicians to participate in activities being developed as of late.

The reason is, without collectively acquired knowledge, our individual performance with the latest technologies becomes more and more invisible. It's the set – man and machine – that results in greater productivity, better quality and competitive costs. In the case of automation, it is variables like energy, water, raw materials, under precise control, that generate these results.

We are living in an era of innovations with artificial intelligence, robust and totally integrated equipment, from plant floor all the way up to corporate software applications. As such, one can no longer ignore projections about the future of our sector due to technological advancements.

Automation in today's pulp and paper industry is applied throughout the entire chain, from forest management to finished goods logistics. In the forestry area, the main innovations stemmed from a series of automations in Brazilian forestry nurseries, such as the production of baby plants in series using modulated and compartmentalized nurseries.

Brazil's forestry sector was equally benefitted by the possibility of plant propagation, or cloning, of the best eucalyptus trees. The cloning of "superior" trees is one of the main factors that led Brazil to achieve international notoriety in the production of high-quality low-cost eucalyptus.

Thus, automation is also present in the forestry area, starting with the planting process, as well as in studies aimed at developing the ideal trees to produce pulp and paper. At present, in the pulp production line, companies seek systems for analyzing wood quality with the objective of obtaining better cooking control, increasing pulp quality.

Instruments that inform lignin content, species, density and humidity of wood are being requested by companies to obtain better quality. Online analyzers that underwent technological advancements in recent years are playing a key role in cellulosic pulp quality, with chemical information on pulp and fiber morphology. With this, control systems are adding this information to advanced control applications with software that utilize multivariable controllers and artificial intelligence, such as fuzzy logic and neural networks.

The trend in automation shall lead mills to work with a minimum participation of operators in setpoints, opening or closing a valve and, with this, work in an intelligent manner, making recipes for the process with the objective of optimizing performance.

Suppliers of equipment and systems need to be aligned with the characteristics of plants, furnishing robust high-technology equipment, with asset management systems and seeing to that after the start-up of a mill, employees have ideal conditions to operate with efficiency, while maintenance teams have the maximum amount of information (status, diagnosis, etc.) to work with.

This is a result that's being made possible through the partnership between these suppliers and pulp manufacturers. They are trailing the same sustainable competitiveness path where automation plays a major role in this trajectory, making it viable in the best time possible. The end objective is to perfect industrial plants and reduce process variability in such a way that operational stability is achieved with minimal loss and with a high level of quality.

Without a doubt, achieving this status requires automation. Therefore, when talking about a modern mill from an automation perspective today is to talk about integrating processes, without which there is wasted time in relation to the competition, leading to future business losses. This is the comprehensive vision professionals from all areas of companies must develop.

In view of the above, I hereby extend an invitation to you, professional of the automation sector, to participate in our Technical Committee and share ideas on how we can arrive at this future as a much stronger pulp and paper segment. ■