



Albeniz, a global leader in printing and application systems for the tyre industry, has introduced its latest innovation, AST 4.0, to meet the requirements of growing automation and flexibility in tyre factories.

The new machine was introduced at the Tire Technology 2019 expo in Germany.

“The introduction of our AST 4.0 is in tandem with the growing emphasis on Industry 4.0 in tyre manufacturing plants worldwide. Our new machine meets the needs of automation, speedy production, and takes lesser space in tyre manufacturing plants. Being ready for Industry 4.0, the AST 4.0 has full connectivity with peripheral machines and provides online data on production, maintenance and services” says Joseba Albisu, sales manager tyre market & product development director at Albeniz.

The Spanish company has been in to manufacturing of labels for over 100 years, of which in the last five decades, it has collaborated with global tyre manufacturers – first as label manufacturer and then as label and labelling system provider. Albeniz Group recently was acquired by Reynders Label Printing, which operates globally with 9 production plants worldwide, and mainly serves labels for tires, pharmaceutical, cosmetic, food and beverage and house, car and garden sectors.

The AST 4.0 is a high-yield tyre labelling machine that uses up to four label rolls simultaneously, with different sizes or different background designs, and can also select the proper label and prints variable information in black colour.

A labelling machine works in a simple way, rolls are uploaded and on which the information is printed, and the label is pasted on tyres, but the challenge that most tyre companies face is the time that is needed to change the roll. Longer times to change rolls cause a toll on production. “After hearing this constant concern from our customers, we decided to tackle the issue. As the AST 4.0 provides four roll engines, even if one or two rolls are finished, the labelling process keeps going on with other roll engines, meanwhile the operator can upload new rolls. This advantage is only offered by our machines and it is patented worldwide,” says Albisu.

USER-FRIENDLY INTERFACE

The AST 4.0 machine has user -friendly interface with video tutorials and remote assistance function, and full proof assisted label loading and traceability. Its process inspection cameras help for real time inspection and fast troubleshooting.

As its previous version, the AST 4.0 is also equipped with tele maintenance application and quick replacement devices which provides remotely controlled tele maintenance services to its customers 24*7 . Due to tele maintenance applications and quick replacement devices, technical interventions have reduced drastically. "Our critical equipment of the machine, the printing engine, can be replaced by the operator easily within 30 sec with no tools which help to increase effective working hours," adds Albisu.

AST4.0 labelling machine may be integrated in different production-storage process like between final inspection and warehouse, during truck loading processes, with manual or automatic de-palletiser and in a local station.

In recent years, Albeniz has narrowed its focus on enhancing its technical capabilities to meet the specific tyre-labelling requirements. Over the years spent on the research and product development, by closely working with leading global tyre companies, Albeniz today provides solutions to most common problems found in labelling such peeling of labels from winter tyres, oxidation, adhesive sweat, quality and resistance of variable printing, adhesive remains on tyre, etc.). "Additionally, we have developed a range of printing and application systems that meet the labelling requirements of different manufacturing and storage processes," adds Albisu.

Today the company produces four types of labels, Marketing tread label, Vulcanised bead barcode label, RFID tyre labels and logistic tyre labels.

Under the vulcanised label, tyres are identified by its barcodes that are applied to the tyre bead before the vulcanisation process. "In this process, the label is embedded in the tyres and will identify it during its entire life. However, the material must withstand extreme conditions. The barcode must be printed with a resin ribbon specific to this application. This guarantees that the code is readable and long-lasting," says Albisu

The company uses high quality polyester for barcode process. The company works with a Japanese supplier for these type of raw materials.

PRINT AND APPLY MACHINE

In addition to vulcanizable barcode labels, Albeniz developed an advanced bead barcode Print and Apply machine, that offers to tyre factories a huge flexibility with 100% printed barcodes verification. "It solves a lot of barcode scanning issues during manufacturing, handling and storing processes" says Albisu.

RFID Inlay for tyre labelling helps to reduces administrative errors, labour costs and theft. RFID also helps to track work-in-process and achieve just-in-time manufacturing and improves the accuracy in logistic chains and increase overall efficiency by automating identification processes.

"We offer tailored antenna developments for each application. We collaborate with our customer in pilot projects, providing assorted quality inlay samples with different substrates and adhesives," says Albisu.

Logistic tyre labels are increasingly used to track tyres throughout the supply chain. The recording and monitoring of movements of goods is an essential part of supply chain management. "We understand the need for crucial parameters and flawless performance in logistics control and operation, and we can provide logistic tyre labels that meet all your warehouse and transportation labelling needs," says Albisu.

The company is also perhaps the pioneer in the automatic labelling machines. Around a decade back, tyre manufacturers used to stick labels by hands. “Though Labelling process in many other industries was automated in other industries but not in tyres business because strong adhesive and it was impossible to work with standard machines,” tells Albisu.

In 2007, the company took a strategic decision to develop its first automated label machine. The company took a couple of years to develop the machine. Albeniz introduced its first labelling machine with a telematic support in the market by 2009. The acceptance of its first automated machine was great, according to Albisu. “A decade back, only two companies, including Albeniz, were able to offer automated labelling machines to the European market,” says Albisu.

The introduction of Albeniz’s automated labelling machines was well timed as the European market was aggressively moving towards strict regulations. The demand for automated labelling machines picked up once the labelling on tyres was made compulsory in the Europe in 2011-12.

The European labelling, which was imposed to increase safety, fuel-efficient tyres with low rolling noise levels, for tyres brought a huge opportunity to the company, says Albisu. “The company took efforts to understand the new labelling and the consumers’ requirements for the new labelling regulations. We offered the solutions that will give return of investment faster,” says Albisu.

The different markets have different weathers and it may have an impact on the adhesiveness of the labels. When tyres are exported from Europe to other tropical countries, labelled tyres are supposed to send under control temperature, humidity and abrasion. “Our product development department has done an excellent job to solve this issue and develop labels, by using a specific raw material, which will sustain in diverse weather conditions,” says Albisu.

Europe was the first market to impose the tyre labelling and the region is also the headquarters of many global tyre major companies. Such big companies are also having plants in the countries which are in the process of the implementation or will implement tyre labelling soon. “We have been working with many global tyre companies who have plants in those countries. This gives us an advantage to gain share in those countries,” Albisu.

Source: <https://tyre-asia.com/2019/07/11/albeniz-introduces-ast-4-0/>