

Pirelli | Printronix Helps Everything Run Smoothly at Pirelli

Corporate Profile

Pirelli Deutschland AG celebrated its centennial at the site in Breuberg im Odenwald, Germany in 2003. More than 7.6 million vehicle tires were manufactured here in the past year, primarily in the sectors of high performance and ultra high performance tires, in addition to around 1.8 million motorcycle tires. The company's customers for original equipment include all the well-known names in German vehicle manufacturing, including Audi, BMW, DaimlerChrysler, Ford, Opel, Porsche and VW, as well as General Motors and Jaguar internationally. The annual revenue of companies in the Pirelli Deutschland AG group is more than 700 million euro, and the number of employees is approximately 3,300. Since 1995, production has been running 24 hours a day, seven days a week at the Breuberg location. In 1997, Pirelli Reifenwerke became Germany's first tire manufacturer and the nation's second company to receive the international award for exceptional quality concepts and implementation in production, the Japanese "TPM Award." Pirelli Reifenwerke was the first non-Japanese company to receive the "TPM Special Award" in 1999.

Problem Met

In 2000, the groundwork was laid for the new Modular Integrated Robotized System™ (MIRS) production plant which Pirelli has used to completely revolutionize traditional technology and methodology in tire production. The new process is based on the concept of a highly flexible mini-factory which can be fully customized to the requirements of the marketplace. Six MIRS modules are already running 24-hour shift operations in Breuberg, seven days a week.

When deciding to use the printers, the first issue was to find the best possible way to support the production processes appropriately and flexibly, and at the same time utilizing the standards already established. The demanding requirements outlined for the new printers were primarily reliability and performance in 24-hour operation. In addition, downtime for maintenance was a concern. The decision was made to purchase 37 Printronix thermal printers.

Before the Printronix printers were installed, the identification process was carried out solely on the transport frames, using different formats and contents. Using the parallel port connection available on the Printronix thermal printers, the wait times were reduced from seven to three seconds.

Results

The thermal printers from Printronix have been in use at Pirelli in the car tire production plant since September 2002. There are 35 T5204 and two T5208 thermal printers in the production plant for printing material ID cards with bar codes. Used to identify all materials produced and used, the cards are attached to various semi-finished goods frames such as spools, rollers, palettes or trolleys, normally using clips. All goods movements are recorded by scanning the labels; on average, each bar code is scanned twice.

More than 3,800 barcode labels are printed each day, which means that every thermal printer produces up to 400 labels per day. The labels are printed in the formats 4" x 6", 4" x 12" and 8" x 12". In addition to the bar code, they give the material name, the storage location and the maximum storage period for each individual product. This ensures a "first in, first out" procedure for seamless production processes. Using this system, every transport frame marked with a bar code label can be identified at any time.

The printers are in a robust production environment, and the two T5208 printers are required to withstand temperatures up to 40° C in air with very high dust content in the mixing area during the manufacture of rubber mixtures. At Pirelli these printers are used for printing material ID cards in A4 format using code 39

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and standard fonts. Every material ID card is printed once, and the individual barcode labels are cut off using a cutting device located on the printer itself.

With the Printronix printers, the ink ribbon needs to be changed less often as all the ribbons from Printronix are exceptionally long at 625 meters. All staff members involved have been trained to change the paper and carbon ribbon, even though these are very simple tasks to carry out. The Printronix printers provide seamless integration with existing system infrastructure and allow for wireless communication to the network. The printers can be swapped over for short periods at any time as the printers are fully compatible with one another in terms of control. This shortens waiting times considerably and keeps downtime to a minimum.

Response

“We decided to use Printronix printers because these high-performance printers provide everything we needed from an industrial printer: They are robust, offer various connection options, can be remotely administered and provide a longer ink ribbon meaning that it needs to be changed less frequently,”

Wolfram Grulich
IT Infrastructure at Pirelli Deutschland

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