

INCREASES EFFICIENCY: TXT SOLUTION IN ALL FACTORIES

VALUE OPPORTUNITIES

- *Improve service level*
- *Reduce production costs*
- *Increase plant efficiency*
- *Standardize planning and production systems, reduce local running costs*

TXT E-SOLUTIONS RESPONSE

- *A software solution for planning and production control and materials tracking*

RESULTS

- *Greater plant productivity with reduced stock breakages, and guaranteed correct product mix*
- *In Germany, increased productivity in line with expectations, from the first year of the system's implementation*
- *Reduction of production costs through better use of resources*
- *Greater visibility in the production stages in terms of development and work in progress*
- *Strict monitoring of materials that avoids the risk of obsolescence and guarantees high qualitative standards*
- *Reduction of local running costs through implementation of a single centralized system*

Corporate Profile

The Pirelli Group has a long industrial tradition and a leading position in all of the sectors where it operates. With more than 100 years of experience, Pirelli is a real multinational player, with deep roots in all of the countries where it is present. Some examples of the Group's technological excellence are represented by the activities of the Pirelli Labs in the fields of photonics, broadband, new materials and by the Mirs (Modular Integrated Robotized System) for tire manufacturing. In this industry, Pirelli has 24 plants in 12 countries and about 21,500 employees. It is a worldwide leader for car high-performance tires.

The Supply Chain Environment

The Pirelli Pneumatici factories run between 10 and 20 work phases, in accordance with the type of plant and the tyres produced: car, motorbike, or industrial vehicle. The challenge, in planning terms, is to ensure a smooth, continuous production flow with the right mix of incoming materials at each phase: all this in an environment where stock control of semiprocessed materials is critical. This is because semiprocessed rubber has a limited life (the time limit on the mixes varies from 2 to a maximum of 30 days). In addition, some

work phases are not completely automated and therefore cannot be as easily monitored. Synchronization of production phases, and therefore of the availability of the right amount of incoming semiprocessed materials, is a key element in plant productivity. Production can be neither too late (because the material blocks the next phase) nor too early (to avoid the risk of obsolescence of the semiprocessed materials).

The Pirelli Challenge

The project was started up to improve integration between the information systems that managed these problems. While a whole series of integrated systems was being developed centrally on a global scale – from management to marketing solutions – Pirelli's tyre factories were managing production flow and stock control with legacy solutions based on the AS400 system. These were technically efficient but had a low integration level with the central solutions. Besides this, the high level of dependence on local suppliers for development and maintenance had a big cost impact on the management of the software park. This is the background to Pirelli's decision to choose a single system for all factories that would

Pirelli Tires

mean integration with all other corporate applications – management, logistics and costing – resolving all tire manufacturing problems. This choice has led to the definition of a model, which brought on the one hand an increase in product and plant qualitative standards, and on the other hand a guideline for starting and managing new production plants, as in China and Romania. Above all in China, where cultural and linguistic differences could have been an obstacle, Pirelli's choice has made it possible for all the parties involved to speak the same language.

Why TXT?

There were two different but extremely important elements that played a fundamental role in choosing TXT: their experience in the sector and the size of the company. TXT's size enabled it to take an industrial approach to the project and to the software and, at the same time, compared with larger vendors they guarantee greater flexibility in allowing for customizing and future corporate growth. Another important factor in

the choice of TXT was its international coverage, which matched Pirelli's multi-plant and multinational reach.

The solution

The factories in Italy, Germany, Spain and Great Britain are the first to have implemented the TXT solution, which will soon be set up in all plants.

The winning model adopted by Pirelli to increase production efficiency is based on the kanban electronic system.

The final production phase is vulcanisation, when the cover is baked and creates a finished product.

This phase drives the planning of the phases further upstream of the production process, using a pull process.

The solution spreads out behind the planning to the upstream phases, monitoring the amount absorbed by the subsequent phase and the level of stock produced.

This decides the correct production mix on the basis of urgency. All this occurs in real time and with the help of a set of graphic rules that the operator can readily understand. The operator can now concentrate more on individual aspects of the

process and less on the overall operation.

The solution brought immediate advantages for Pirelli Pneumatici in terms of production efficiency.

It helps prevent stock breakages, aligning the semiprocessed materials in the various phases.

In Germany, there was increased productivity in line with expectations, from the first year of the system's implementation.

The system has also allowed the introduction of a purpose-developed warehouse management solution for labelling and materials tracking. All the qualitative parameters for every individual semiprocessed product can be quickly identified: when it was made, in which machine, and under what conditions. In this way, the materials in circulation are strictly monitored, avoiding obsolescence.

Running a single system for the various factories has produced global savings per Pirelli Pneumatici in terms of maintenance contracts and local resource allocation.