

REFERENCE Automotive

Transparent Production with real-time Monitoring



Witte Automotive

Since 1899 WITTE Automotive represents innovative and powerful know-how in the development and production of technical solutions for locking and latching systems. Today, WITTE Automotive is a globally operating company with production sites in the Czech Republic and Bulgaria. The WITTE group now employs some 2,500 members of staff who generate an annual turnover of approx. EUR 300 million. Among their customers are all well-known vehicle brands (both passenger cars and trucks) and system providers, such as BMW, Daimler, General Motors, Volkswagen Group, Ford, Mercedes Benz utility vehicles and SCANIA as well as Brose, Magna and Webasto. The components supplier's products meet the highest quality demands and safety standards. In Germany, subsidiaries within the WITTE group assume various special tasks: KROSTA Metalltechnik in the field of tool, stamped and Zinc-die cast-products technology, RIKU Kunststoff as a competence center for plastic components, PRINZ WITTE for the bending and welding of hood and tailgate hinges, and FINGSCHEIDT Automotive for locking and latching systems.

With SAP Manufacturing Integration and Intelligence (SAP MII) in connection with Best Practice solutions, supplied by Trebing + Himstedt and integrated into the application, the components supplier WITTE Automotive seamlessly connects its shop floor systems with SAP ERP. This enables the company to monitor manufacturing processes in real time and to maintain a transparent, comprehensive view of its key data at any time. Both are vital leverages to optimize production processes and render them more cost-efficient.



Anyone getting into their car today does not have to bother about searching for their keys and actually unlocking the car. Car doors virtually unlock by themselves when the driver approaches, and re-lock automatically as soon as the motorist gets out of the car again. Because intelligent latch and locking systems with the electronics embedded into the door handles automatically recognize the driver's key.

Such innovative keyless-entry-handle systems are the business of WITTE Automotive GmbH, based in Velbert/ Germany. In addition, the components supplier develops, produces and supplies safety and security systems and locks, hinge solutions for front and rear hoods, lock systems consisting of latch, striker and hinges for front and rear hoods, as well as door handle systems, lock sets and latches for rear seats.

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Leverages for Increased Productivity

As a globally operating components supplier, WITTE Automotive is under high competition and cost pressure. At the same time, supply chain processes with manufacturers are becoming ever more complex. To ensure the company's future sustainable and profitable growth, senior staff in charge uses a number of leverages such as the development and swift market launch of new and innovative products.

Another crucial challenge to be met is to continuously increase productivity by reducing malfunction periods, set-up and cycle times on the shop floor while simultaneously cutting costs. “We could only rise to the challenge by implementing shop floor integration and a real-time view on current production processes,” says Gregor Hanyś, Information Technology Application Management SAP (IT-AM) at WITTE Automotive.

Seamless Integration of Shop Floor and ERP

To achieve this goal, the enterprise seamlessly connected interfaces between production-related systems on the shop floor and business management solutions of the central SAP ERP system. The SAP Manufacturing Integration and Intelligence application (SAP MII) as the central data platform links shop floor and ERP data.

The application is completed by two pre-configured, SAP MII-based Best Practice solutions by Trebing + Himstedt, SAP Special Expertise partners for SAP MII. The MDA Best Practice solution enables recording and confirmation of machine data. The OEE Best Practice solution provides reliable monitoring of machine efficiency for all connected plants or per plant as well as exact analysis of KPI figures.

Clear View of Key Figures

The benefits of the uniform overall solution became noticeable very shortly after the go live. Fault collection charts, pay slips, daily log sheets, quantities produced as well as data on machine efficiency or downtime are recorded automatically by the MDA solution and forwarded to the SAP system and the OEE solution for real-time booking and processing. The OEE solution visualizes shop floor figures graphically in clearly arranged dashboards on a web-based and easy-to-use user interface. Management is thus always provided with a clear view of malfunction periods, set-up and cycle times, yield and scrap volumes or machinery failures. End users, from machine operators via quality managers to business management, can analyze the key figures virtually at the push of a button.

Shop Floor Monitoring in Real Time

This seamless vertical integration creates a closed-loop system, which in turn enables a complete overview of current shop floor processes as well as all data and confirmations from machine controls and quality management systems. “With the recorded data instantaneously available at the time of collection and not just hours or even days later, we can detect any machinery malfunctions or failures immediately and can quickly resolve the problem,” underlines Gregor Hanyś.

Last but not least, both shop floor KPI and analyses provide executives with vital starting points to monitor production processes and render them even more efficient. As reports Gregor Hanyś: “The bottom line is that all these things together





contribute to our continuously improving the quality of our manufacturing processes, thus our products and in turn customer satisfaction.“

Automatic Collection of Fault Positions

Due to today's integrated data transfer, WITTE Automotive was able to replace and automate formerly largely manual and paper-based processes. With regard to the transfer of fault collection charts into the SAP system in particular, this resulted in substantial time and cost savings. Machine operators can now concentrate on their key tasks – such as optimization of machine cycle times.

To illustrate this in more detail: Formerly, machine operators had to write down the data collected in the machine controls on a sheet of paper at the end of their shift. They then had to type them in manually into the SAP quality management application at the SAP work station, which took about 45 minutes per shift. At the Velbert premises alone, machine operators in this way transferred some 225,000 fault characteristics positions into the SAP system annually. Today, in contrast, more than 50 percent of the positions are automatically booked within 30 to 40 seconds.

20 Percent more Data, Better Analyses

In addition, with the electronic logging and processing of the fault collection charts, the number of these charts transferred into SAP work plans has increased by about 20 percent. Due to the now considerably larger data pool, the company improves its data quality as well as the accuracy of its analyses, because the latter also include fault positions which are not transferred into the SAP system.

The enterprise also streamlined processes to analyze machine downtime. Every plant downtime of more than four minutes which is not due to real machinery failures but to missing material or packaging has to be accounted for by machine operators in retrospect. This always was a very time-consuming task. Today, operators enter these downtime cases at a PDA work station. The data are directly transferred into the SAP software and imported into the OEE application.

Key Figures at your Fingertips

There, the information can be comfortably analyzed according to various criteria with just a few mouse clicks. The information thus available provides essential indications of plant efficiency, which the company uses for better maintenance scheduling, optimization of capacity utilization or better organization of supplies.

Important key figures for plant performance are also provided by target-actual comparisons, which display deviations between actually produced quantities and target values per hour and shift. The OEE application queries the respective data both from machine controls and from SAP work plans. Due to specifically tailor-made templates, target-actual comparisons are additionally available for plant cycle times or for per-minute stroke rates of automatic cutting presses. In the future, the internal IT department aims to create any additionally required OEE templates themselves.

Customer Requirements met Promptly

Last but not least, the OEE application today enables the components supplier to provide its OEM customers with requested audit files for keyless-entry-handle



“To render production processes more efficient, we need to discover weak spots on the shop floor and take swift and flexible action. SAP MII and integrated Trebing + Himstedt Best Practice solutions provide us with significant, conclusive performance figures in real time and enable us to do just that.”

Gregor Hanyś,
Information Technology
Application Management
SAP (IT-AM),
WITTE Automotive

systems promptly when needed. For each of these systems produced, correct operation of the electronics is measured automatically and an XML audit file with up to 50 audit positions is generated.

The OEE application automatically reads these files and provides a clearly arranged display. If an automotive manufacturer requires a certain audit file, possibly because of a malfunctioning keyless-entry system, quality management staff can quickly track the file with a comfortable search function. Whereas in the past, they had to search through the files one by one – an enormously time-consuming effort considering the several thousand such systems produced per day.

ROI within three Years

WITTE Automotive has already achieved a great deal and, true to the company's motto "Key Concepts for the Automotive World", has implemented a coherent IT approach with SAP MII and integrated Best Practice solutions. Right now, the components supplier is connecting further installations to the SAP MII overall solution – both at the Velbert plant and at plants of its German subsidiaries KROSTA, FINGSCHIEDT and RIKU. "As we are able to monitor and analyze ever more plants and installations in real time, as well as to optimize them rapidly, we are anticipating to achieve Return on Investment for this project started in 2008 within three to maximally four years," Gregor Hanyš sums up.

Speedy Implementation of Ambitious IT Project

Thanks to the cooperative and close collaboration between the Witte Automotive IT department (IT-AM) and Trebing + Himstedt consultants, the ambitious implementation project could be completed speedily and within the agreed cost budget. The IT service provider supplied the technical concept for the integration of shop floor and ERP level according to the functional requirements. For the first three plants, the implementation concept was realized with Trebing + Himstedt support; further plants have been integrated independently by Witte Automotive.

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