



SUSPA launches MES by ORBIS: a real-time overview of production key figures

Seamlessly integrated in the central SAP ERP system, the ORBIS MES solution was launched by SUSPA GmbH with a view to optimizing shop floor processes as well as the productivity and capacity utilization of its facilities. The company wants to process customers' orders faster, improve delivery reliability, increase machine capacity utilization, and reduce costs on a permanent basis. The company is also using MES as a basis for an „intelligent factory“ based on the concept of Industry 4.0.

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SUSPA GmbH's gas springs, dampers and adjustment systems perform their duties in the background: they ensure that the tailgate of the Mercedes E-Class closes automatically, that the rear spoiler of a Porsche 911 Turbo extends smoothly, that washing machines spin quietly and that refrigerator doors close virtually without a sound. The system partner for customers from the automotive sector, mechanical engineering and the furniture, medical technology and electrical device industry manufactures roughly 70 million parts for 1,500 variations on 50 different products a year – and that figure is growing by the day.

SUSPA GmbH

Head office: Altdorf

Sector: manufacturing industry, automotive supplier

Production sites: Germany, the Czech Republic, the USA and Asia

Employees: 1,720 employees

Annual turnover: 200 M euros

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Improvement potential on the shop floor

But customer requirements are growing too. They want fast and flexible order processing and even greater delivery reliability at lower prices. *“That’s why the ongoing improvement of the quality of operational processes across all divisions with a modern and consolidated IT landscape is one of the cornerstones of our business strategy,”* explains Jürgen Nothof, Head of Global IT at SUSPA GmbH.

The company-wide standardization and harmonization of business processes in one central SAP-ERP system represents a huge step forwards on this path. But it's in manufacturing in particular that the decision-makers at SUSPA want to achieve a sustainable boost in productivity and a permanent cost reduction; they aim to do so by optimizing the use and capacity utilization of facilities and speeding up throughput times.

Real-time overview of manufacturing

“For that, we need an up-to-date overview of production operations and – in real-time where possible – exact key figures relating to finished, yield and scrap quantities, downtime, disruption and set-up times and overall equipment effectiveness (OEE),” explains Jürgen Nothof. That is why, as of recently, the company has started recording data from production-related systems using the modern Manufacturing Execution

System (MES) solution provided and implemented by ORBIS AG. *„What makes ORBIS consultants stand out is their process and consulting expertise. What’s more, they’ve already run several successful SAP projects in our company and, as such, are familiar with our business processes,”* explains Jürgen Nothof.

The key factor that made us opt for ORBIS was that the MES solution is 100 percent-based on SAP technology and that it can be fully integrated in the ERP software. This eliminated the costs of setting up and maintaining a separate IT infrastructure. There's also a high acceptance rate among our end users. The application is equipped with modern and easy-to-use interfaces, which are based on the ORBIS Multi-Process Viewer, a component of the ORBIS Multi-Process Suite (MPS). Another advantage is that the key performance indicators (KPIs) in ORBIS MES are supplied standardized in accordance with VDMA Standard Sheet 66412.

Running machines at optimum capacity

The advantages of the ORBIS MES are already clear to see, with production key figures now recorded electronically and automatically further processed. This provides end users, i.e. machinery operators and production and plant managers, with a real-time overview of goings-on in the manufacturing division.



Since data is available as soon as it is generated, not hours or days later, the deployment and capacity utilization of machinery and staff can be planned as best possible. These KPIs from production also make it possible to determine whether the times calculated in the SAP working plans, i.e. for setting up and dismantling equipment/machinery or for staff deployment, are right.

Measuring improvements with accuracy

The IT-supported processes also ensure an end-to-end flow of information from the production hall right through

to plant management and overall management. The KPIs from the shop floor can be accessed conveniently at the touch of a button and are graphically visualized on a clear web-based cockpit interface. Traffic light functions allow end users to immediately tell whether a machine is in excess of a target, on target or below target when processing an order; disruption times as well as yield and scrap quantities are also shown. This enables abnormal situations to be identified immediately, allowing the user to take action to remedy this without delay.

The causes of disruption, downtime or excessive machine set-up times are also logged in the ORBIS MES, where they can be analyzed in detail by a production supervisor or engineer and compared with historic data. *“For instance, this tells us if a machine is exhibiting a specific fault pattern. We can use this information to derive measures to improve running time and the quality rate,”* explains Jürgen Nothof. Production and plant management can access the analysis results in aggregated form in the MES solution at plant level while management receives the analysis results from the plant controlling staff in processed form.

Running IT-supported maintenance

Even maintenance work can be carried out quickly and ahead of time, avoiding expensive downtime. As soon as a fault message appears, regardless of whether it originates from the machine control system or from a manual entry at the terminal, the SAP maintenance message will be created in the MES solution, before being transferred directly to the SAP software for maintenance.

There, a maintenance order is generated and added to the backlog of orders in ORBIS MES, where it can be worked through flexibly as required. All repair-relevant information, e.g. relating to the workstation, serial number or any handbooks are summarized clearly in a cockpit. Once a maintenance technician has completed a task, they log the time taken to do the work and the materials used in the MES application, which then transfers the data to SAP ERP, where this is registered straight away.

Forward-thinking maintenance planning

The MES solution also allows for continuous monitoring of planned maintenance intervals, enabling optimum scheduling of technician capacities and ensuring spare parts can be obtained on time. Proactive maintenance reduces the risk of unscheduled stoppages or defects and avoids costly repairs.

Since the MES solution also reports the completion of production orders back to SAP ERP automatically in some cases, the company obtains a clear overview of the current stock of material in production. This makes it

possible to quickly identify material shortages and initiate counter measures promptly.

Laying the groundwork for Industry 4.0

Currently, all 25 machines at the SUSPA plant in Sulzbach-Rosenberg are connected to the ORBIS MES. Machines that produce high-demand parts are connected fully automatically, the other machinery manually. The solution is currently being introduced at the main headquarters in Altdorf and is already running productively with the first machines. 2016 and beyond will see the new Czech plant in Bor and, later, the production location in China connected to the MES solution. In the medium term there are also plans to launch the SAP software for quality management and to transmit data from the measurement systems directly to the MES.



“ORBIS MES is helping us keep a closer eye on goings-on in our production halls, to run our production processes more efficiently and more flexibly, and to increase delivery reliability for our customers,” concludes Jürgen Nothof. *“What’s more, we can now link key figures from production seamlessly with business data and operations in SAP ERP.”* This vertical integration has also seen SUSPA lay the foundations for an intelligent factory based on the Industry 4.0 concept.



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Manufacturing industry
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