

«Now, we no longer need to write everything down. We cannot do things more simply.»

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Everything is visible everywhere: Shop floor and machine data collection creates transparency

Sternberg is a leading manufacturer worldwide of special screws, special nuts, special turned parts, and other connection elements. The company with its 100 employees and 10 apprentices in the heart of Saxony has a tradition stretching back one hundred years. Over this time, it has acquired a fine reputation as a manufacturer in particular of special screws. For more than 100 years, Sternberg has ensured that engines run, cranes turn, and people can use the technology that they require.

The components produced in the Chemnitz-Zwickau economic region are used in energy generation, construction machines, the offshore sector, aviation and aerospace, ship diesel engine construction, and plant engineering. To ensure that it continues to grow in the future, Sternberg required greater transparency in its production division. The company thus decided in 2009 to introduce a time and attendance and shop floor data collection system. The shop floor data, machine data, quality reports and material bookings recorded were to be integrated automatically in the ERP system. Employee working times were also to be recorded.

Success Story

The managers at Steinberg ultimately opted for the company Nowisys IT-Service GmbH from Chemnitz as their partner for the SFDC/MDC area and for the overall integration. For Nowisys managing director Ronald Wilhelm was easily able to put himself in the shoes of a machine operator or fitter and adapt the existing standard solution to the conditions at Steinberg accordingly.

"This practical relevance was very important for us," emphasizes Wolfgang Naumann, the technical director at Steinberg. In a first step, the personnel time and attendance and access control system of the partner CompuTime Ausweissysteme GmbH was introduced in April 2009. Since then, the Sternberg employees have been recording their working times at Kaba terminals. To regulate access to the production hall and to the office wing, several doors were equipped with mechatronic CardLink components from Kaba.

It was thus possible to save on wiring. Access is only permitted for persons who identify themselves with their badges as authorized. The next step involved the production division. The solution h.Server, a middleware that combines the various modules, and the SFDC hardware were installed and initially put into operation at three pilot stations. At the end of 2009, the roll-out then began across all stations. At the beginning of 2010, the shop floor and machine data collection system was fully operational. It consists of 13 SFDC stations with Kaba multi-touch terminals, 13 MDC stations with 13 Kaba terminals and a total of 35 machine connections and 27 Bedanet 90 80 I/O modules, 6 foreman workplaces and 3 mobile devices.



These consistently record all warehouse transactions with batches. At the foreman workplaces, the foreman is always kept up-to-date about the status in his area of responsibility. He therefore knows who is working on which job at which machine and what the specific processing status is. In addition, various analyses are available as help in the decision-making process.

The solution is integrated into the existing ERP system.

In addition to the "normal" SFDC reports (job sign-on/sign-off, set-up, processing, quantity reports, etc.), additional functions are available to the employees at the SFDC terminals. Managing director Wolfgang Naumann explains this as follows: "As a fundamental principle, we are pursuing the goal of providing the production employee with all the information that can have a positive influence on the process. Showing initiative is explicitly requested!"

The same functional scope is available for the MDC terminals as for the SFDC terminals. Additional functions are made possible by the Bedanet 90 80 machine connection: counting of the numbers produced, classification of the numbers

(good, scrap, post-processing), automatic recognition of machine statuses through digital or analogous inputs. Reasons for faults can be reported and automatically recorded quantities (good, scrap, post-processing) can be subsequently rebooked. The Sternberg employee at the machine can therefore call up all the information that he needs. It is thus made possible for him to make decisions quickly and autonomously if irregularities occur.

Because only complete usage makes the processes transparent, all workplaces in the production division at Sternberg have now been integrated into the system.

"Now, we no longer need to write everything down. We cannot do things more simply," says Wolfgang Naumann, enthusiastically. The machine data collection system simplifies and shortens the processes from ordering and storage of the material via production to administration and sales. "The sales person sees for himself what stage the processing of the job for his customer is at," says the managing director of the 100-plus-year-old company with satisfaction. "Everything is visible everywhere." Sternberg thus meets the requirements of all audits, certifications and product liability as the manufacture, refining and testing of each product can now be monitored and documented seamlessly and without great effort. It is thus detected immediately when certain parameters cannot be complied with. "An auditor now sees straight away at our company that we have superbly managed operations," says Wolfgang Naumann, with conviction.