



BILFINGER

Case Study

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Perfect chemistry: Breakthrough maintenance concept for production plants

- **Pharmaceuticals producer Siegfried relying on Bilfinger as an outsourcing partner for maintenance and engineering**

Reliable plant technology is indispensable for manufacturing companies. This also applies to Siegfried AG, which is headquartered in Zofingen, Switzerland and produces active ingredients and finished formulations for pharmaceutical purposes among other things. In a sensitive business such as this, quality management in the interests of patient protection plays a crucial role. Help is provided by the “Good Manufacturing Practice” (GMP) guidelines on quality assurance, which summarize the binding requirements defined by government health agencies for marketing pharmaceutical products. In August 2010, Siegfried AG outsourced the maintenance and engineering activities for its production plants to Bilfinger Services Schweiz AG, a subsidiary of Bilfinger SE.

This allowed the pharmaceuticals producer to concentrate on its core business, namely the development and production of active pharmaceutical ingredients. At the same time, it is able to comply with the strict GMP criteria reliably and in full. The upshot of the successful maintenance partnership is a more than 30 percent reduction in the annual maintenance budget from CHF 12 million to less than CHF 8 million.

The most important lesson learned is this: “Maintenance must be organized hand in hand with production. For this reason, an on-site presence is crucial,” explains Peter Gehler, head of the pharmaceutical park at Siegfried, explaining one of the challenges facing a maintenance outsourcing partner. “For this reason, we started seven years ago to look for an external partner that combines expertise and efficiency in the areas of relevance for us.” It was precisely this requirement that Bilfinger addressed with its three-step service package. The industrial services company organizes maintenance, engineering and safety services. Bilfinger has developed a 24/7/365 service system to ensure plant availability. To this end, up to 40 specially trained employees - including experts in electrical engineering, automation, mechanics, pipe engineering and administration - are permanently on site at Siegfried AG’s pharmaceutical park in Zofingen. From the outset, the prime goal was to pool as much expertise on the site as



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possible to execute all work on the plant systems directly and without the involvement of third parties. Moreover, Siegfried requested a clear allocation of tasks and responsibilities to ensure that the maintenance team not only coordinated the necessary activities but also assumed responsibility for them. Many production companies use external service providers even for minor repairs. Instead of this, Siegfried sought single-source maintenance so that the service partner was able to gain an extensive working knowledge of the plant.

Well-oiled process management and transparent costs

As the provider of maintenance services, Bilfinger responds to any disruptions by sending out an expert within a maximum of 60 minutes to analyze and solve the problem. This allows considerable savings potential to be tapped as it does away with the previously usual duplicate costs. Normally, the Bilfinger maintenance experts are called in by a standardized electronic reporting system that is embedded in an e-business system based on the SAP PM module. This generates, manages and invoices all maintenance, repair, inspection and also improvement jobs. On top of this, all relevant information on Siegfried's plants, such as maintenance plans and checklists, are stored in the system. In this way, it is possible to instantaneously see at any time when scheduled maintenance is due and the costs caused by each individual plant. This approach gives Siegfried AG optimum cost transparency as well as maximum control over plant productivity without any need to install and operate its own frequently very costly maintenance software. In day-to-day operations this means that the company's plants can operate more efficiently and that availability is significantly higher.

Full traceability in accordance with GMP standards

One particular challenge is the documentation of all production processes and plant parameters in accordance with the applicable GMP guidelines. This particularly entails the calibration of all measuring points. Siegfried's main factory alone has around 4,000 measuring points, which the Bilfinger maintenance team oversees with a calibration manager. This IT-based calibration database has replaced the Excel lists that Siegfried had been using for a long time, thus doing away with a largely opaque and frequently error-prone process. Via software validation and with the support of two Bilfinger GMP officers, it is now also possible to document all the measuring points within the company in accordance with the current GMP requirements and to record the data in full and on a traceable basis. In addition, it has been possible to optimize the calibration schedule to achieve considerable time savings compared with earlier processes.

By working with Bilfinger, Siegfried AG has been able to revise antiquated processes and, hence, lower its costs. New machinery equipment, for example, has been acquired to lower resource requirements and ease employees' workloads. One example is a new lapping

machine for inspecting safety valves more quickly and reliably. At Bilfinger's initiative, a pump pool has also been implemented to store all pumps at a single central location, with inventory management handled by Siegfried's SAP system. This has replaced the previously non-centralized system. The problem was that efforts to acquire the new pumps were very time-consuming and expensive. In addition, Bilfinger is training Siegfried employees who are assigned to the plant fire brigade or operate lifting equipment such as forklift trucks. They are taught in special sessions how to react calmly and competently in emergency situations.

"We have been working very closely with Bilfinger in the company-wide areas of maintenance and engineering and have managed to build up a very solid basis of trust," explains Peter Gehler. "Bilfinger is willing to accept our requirements and wishes in very great detail regardless of whether these are short-term matters or fundamental changes to existing processes. In this way, we have been able to secure enormous savings. This is one of the main reasons why we renewed our partnership by a further seven years back in 2013 and are planning to continue working together in the future.

Infobox

Bilfinger Maintenance Concept

Bilfinger has documented and structured its industrial maintenance expertise in a detailed compendium known as the [Bilfinger Maintenance Concept](#) (BMC®). It describes more than 30 maintenance methods and tools in 16 modules. The concept incorporates the experience gained from more than 400 maintenance and optimization projects executed for customers. It is systematically oriented to international quality management standards. The implementation of BMC® at Siegfried AG by Bilfinger as an outsourcing partner is particularly successful in view of the intensity of the joint activities as well as the measurable results.

Captions

Image 1: Zofingen pharmaceutical park

Bilfinger has implemented a 24/7/365 service concept to ensure that an expert is always available on site.

Image 2: Comprehensive industrial services

Under the partnership, Bilfinger organizes maintenance, engineering and safety services for Siegfried.

Picture 3: Well-coordinated process management

In the event of any disruption, a Bilfinger employee is at the site within 60 minutes to ensure continued plant availability.

Bild 4: Successful partnership

Thanks to Bilfinger, Siegfried has lowered its annual maintenance costs by more than 30 percent.

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Bilfinger is a leading international industrial services provider. The Group enhances the efficiency of assets, ensures a high level of availability and reduces maintenance costs. The portfolio covers the entire value chain from consulting, engineering, manufacturing, assembly, maintenance, plant expansion as well as turnarounds and also includes environmental technologies and digital applications.

The company delivers its services in two business segments: Engineering & Technologies as well as Maintenance, Modifications & Operations. Bilfinger is primarily active in the regions Continental Europe, Northwest Europe, North America and the Middle East. Process industry customers come from sectors that include chemicals & petrochem, energy & utilities, oil & gas, pharma & biopharma, metallurgy and cement. With around 37,000 employees, Bilfinger upholds the highest standards of safety and quality and generated an annual output volume of €4.2 billion in 2016.

Further information, photos and videos can be found at

