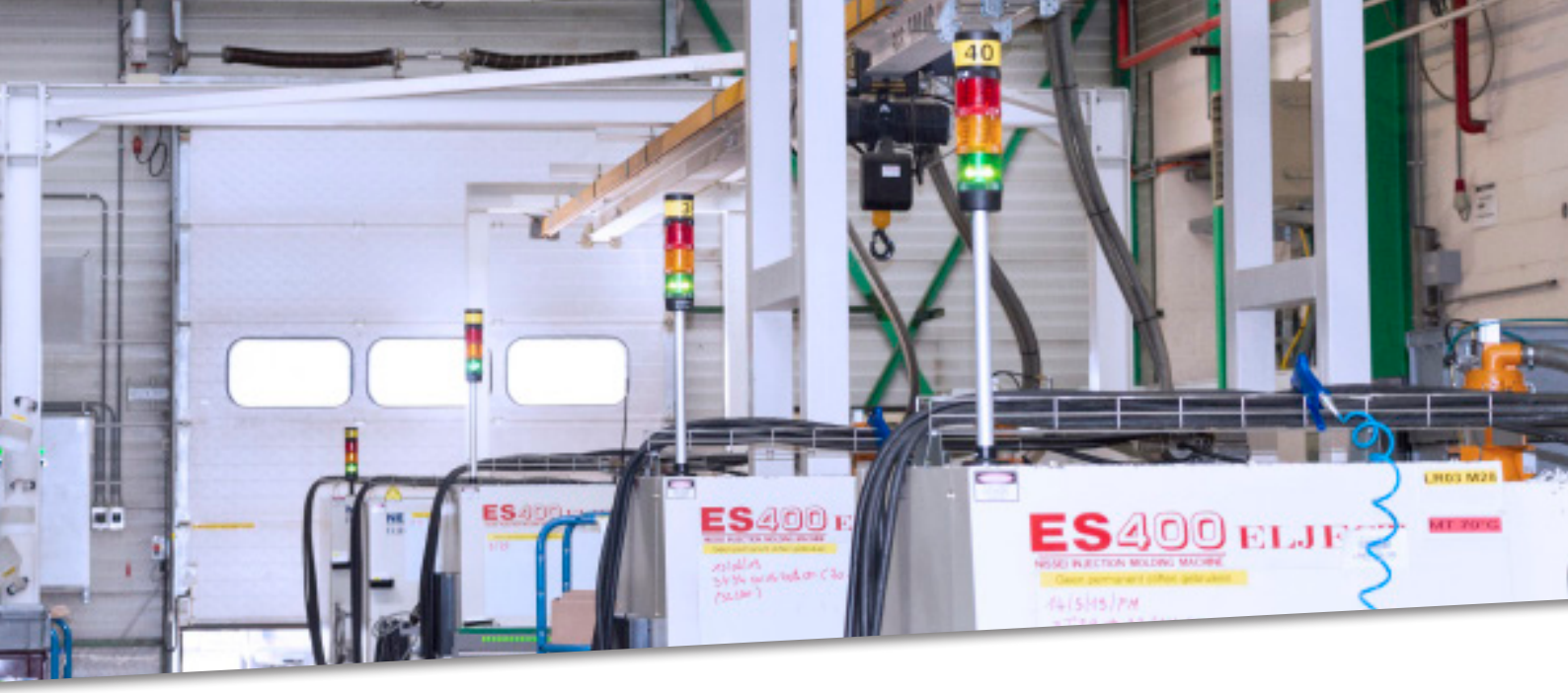



WERMA® *Success Story*

# Yamauchi relies on Industry 4.0

## For the Yamauchi Corp. N.V., the Smart*MONITOR* from WERMA is an essential element on the path to digitalisation

**The Yamauchi technology company in Hasselt, Belgium, has set itself the goal of continually optimising its own production process and of eliminating downtimes by focusing on Industry 4.0 concepts. Too often in the past, the company has been faced with machine downtime and disruption without knowing the exact cause. Looking for a solution the company came across the intelligent, wireless tretrofittable Smart*MONITOR* system from WERMA. As an alternative to conventional machine data logging systems, Smart*MONITOR* provides information in real time about the frequency and causes of downtime, thereby providing the basis for further investigation of the root causes of downtime and possible optimisation solutions.**

### FULL TRANSPARENCY OF THE MANUFACTURING OPERATION

The Yamauchi Corp. N.V. (Belgium) is a subsidiary of the Japanese Yamauchi Corporation. The joint-stock company, based in Hasselt, Belgium, specialises in the production of plastic injection moulded parts, including those for the automotive and battery industries.

The location in Hasselt (Belgium) produces more than 1 billion plastic components a year. To ensure the highest quality standards, continuous process optimisation is essential for the company. In order to ensure that high customer expectations can be met in the future, the company aims to be fully fit for Industry 4.0 by 2020. „We have 50 injection moulding machines spread over two workshops. All of the machines in these two shops are controlled by just three people," says Rudi Vermeulen, Yamauchi Plant Manager in Hasselt. The company faced two major issues when problems arose. The distance between the first and last machine is around 100 metres, and a solid wall divides the two shops. This often led to machine error and down time remaining unnoticed and unresolved for long periods of time. That's why Yamauchi was looking for a simple yet retrofittable machine monitoring system that not only reliably displays machine downtime but also logs the status condition data on a central control station and database.

With Smart*MONITOR*, all the relevant data froml machines and manual workstations can be viewed with a simple

YAMAUCHI CORP.
*Kunststof spuitgiettechnieken*

**Yamauchi Corp.**

TThe Japanese Yamauchi Corp. was founded in 1918, and is specialises in the production of rubber and plastic based industrial products. Today, Yamauchi supplies high-quality industrial components to manufacturers in various industries, such as those for audio and visual products, copiers, printers, hard drives, paper and textile machinery. In order to meet the diverse needs of manufacturers around the world, Yamauchi operates dynamic business activities in collaboration with other companies in the Yamauchi Group.

**Yamauchi Corp. N.V.** is a subsidiary of the Japanese Yamauchi Corporation. The NV, which is based in Hasselt (Belgium), specialises in the production of plastic injection moulded parts for, among others, the automotive sector, connection specialists and the battery industry. The Yamauchi Corp. N.V. has two business areas: the sale of textiles and calendar rolls on the one hand, and the production of plastic injection moulded parts for, among others, the automotive sector and the battery industry on the other. In the future the company will focus strongly on energy and the environment, household appliances, printers and the medical and healthcare industries. The automotive sector will continue to be important, however. In addition to the Belgian operation, Yamauchi also has subsidiaries in Malaysia, Singapore, China and the USA.


Image, left: A signal tower in the canteen indicates whether there is a machine fault, and, if so, in which area of the workshop.

Image, right: A problem up to now: The solid wall between the two workshops prevented seeing if machines were not working as planned. The wireless monitoring system was able to provide complete transparency of all of the areas of the workshop.

click of the mouse. Smart*MONITOR* from WERMA consists of wireless transmitters retrofitted to the existing signal tower which transmit status change data of the machines or stations wirelessly to a receiver plugged into the client LAN network.

The Having collected the data it is then stored on a database within the software from where it can be displayed on client PCs in a variety of displays and charts enabling further analysis of the causes of downtime and disruptions and thus enabling process optimisation counter measures to be identified and implemented.

## 20% LESS MACHINE DOWNTIME ON AVERAGE

At the Belgian Yamauchi plant, WERMA signal towers have already been providing information about the current status of the respective machine for many years. The company heard about the easy-to-retrofit machine monitoring system Smart*MONITOR* through a trade magazine, and plant manager, Rudi Vermeulen, was immediately enthusiastic about it. The contact with WERMA already existed, and, soon afterwards, Kurt De Pauw, Technical Account Manager at WERMA, was able to provide a demo set for an initial trial.

„After installing the demo set, it quickly became clear where one of the problems of many downtimes lay: in the raw material!" says Vermeulen. There were more than 96 alarm messages during the 21-hour test phase. On the basis of the Smart*MONITOR* evaluation, it could be reliably determined that these error messages were being triggered in connection with a new batch of production material. The first problem could therefore be localised and promptly resolved after only a few hours.

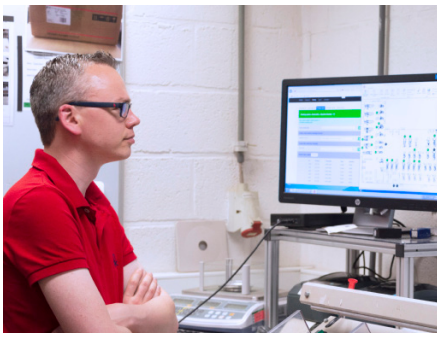
As a result, all the 50 injection moulding machines at Yamauchi were equipped with a Performance-Slave wireless transmitter. Thanks to the supplied software, Yamauchi can view the current state of the machines at any time on client PCs. Networked signal towers that visually and audibly alert the responsible member of staff to a disruption to production have also been installed in the canteen and in the outdoor area, where there are no client PCs to view the machine status. In this application a status change on a machine triggers another signal tower in the canteen or external area to be illuminated thus showing that a status change has occurred and requires intervention. This meant that the reaction time could be reduced leading to a reduction of 20% in machine downtime.

## A COST-EFFECTIVE ALTERNATIVE

„Another alternative would have been an extensive machine data logging system from the respective machine manufacturer. The cost of acquiring such complex systems would have been many times higher, however, and their integration would be much more time-consuming," says Vermeulen. For Yamauchi, the simple and fast integration of the wireless Smart*MONITOR* System was a significant advantage.

Smart*MONITOR* has paid for itself after only a short time, and has proved to be the right decision. „We are also carrying out piece counting with the system now.

This allows us to forecast the completion of orders, and thereby better prepare the set-up times, or we can also monitor target/actual comparisons during order processing. From now on, we will also be equipping all new machines with signal towers and the WERMA Smart*MONITOR* right from the start. This will further optimise our production and enable us to serve our customers even better!" says Rudi Vermeulen with a smile.



Everything under control: The managers can check the status of all machines at any time and on any PC.

Each machine already had a WERMA signal tower, which was quickly and easily kitted out with a Smart*MONITOR* module.

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