

Seamless security. Flawless optics.

Glass inspection solution at Maxim Group

MAXIM
Markenprodukte GmbH & Co. KG

Founded in 1980, the Maxim Group has long been established as a capable and innovative manufacturer of cosmetic products, both for its own brands and for trade brands, on the European market. The company has been relying on METTLER TOLEDO inspection solutions in its quality assurance work for many years – and this is still the case now as it expands its North American business.

Let's go west! Expanding into markets across the pond requires cosmetics companies to take special protective measures for US consumers, as the risk of an expensive product recall would otherwise damage the success of the exports. In other words, manufacturers are well advised to do all they can to maximise the safety of their products, thereby ruling out the risk of liability to the greatest extent possible. In Maxim's case, they ensure their work is compliant with the guidelines set by Cosmetic GMP. They are also certified to HPC, the standard introduced in 2009 by the IFS. The IFS HPC standard is used to assess the safety and quality of the products made and processes implemented by suppliers and manufacturers of household and personal hygiene products.

20 million glass crucibles each year

Against the background of its expansion into the North American market, Maxim decided to implement an automated vision inspection solution for glass crucibles at its Pulheim site in the west of Germany. The company maintains 15 ultra-



Closely packed: the glass crucibles undergo the vision inspection

modern mixing and production plants across two shifts in Pulheim and has an annual production capacity of around 15,000 tonnes. Around 20 million glass crucibles are filled there every year. In other words, 20 million times the risk of a faulty crucible or glass splinters leading to an expensive product recall, or even endangering consumer health. For this reason, great importance is attached to quality control at the goods receiving stage for the glass crucibles. As part of this process, METTLER TOLEDO CI-Vision has implemented a glass inspection solution for Maxim which addresses these quality

METTLER TOLEDO

control requirements. Jürgen Lutze, Plant Manager at Maxim's Pulheim site, neatly sums up exactly what the system is expected to do: "The inspection solution has the task of checking the glass crucibles that come from our upstream suppliers and protecting our company against costly product recalls."

Staggered, two-stage inspection concept

The high performance of the METTLER TOLEDO CI-Vision inspection

solution for quality control on glass crucibles from suppliers has already led to further process and quality assurance measures being implemented. For example, evaluation of inspection data at

the goods receiving stage has resulted in the company being able to identify the source of fluctuations in quality as a supply-side issue, which in turn led to a realignment within Purchasing. This was thanks to a statistics module on the METTLER TOLEDO inspection system, which detects error patterns

and brings common errors in the glass crucibles to the attention of operators and production managers.

METTLER TOLEDO CI-Vision created a two-stage inspection concept for Maxim's quality control on the glass crucibles here: The glass crucibles are first isolated, then fed along a single lane to the inspection solution. The first of the camera modules in the system checks the base area of the glass crucibles for glass-in-glass contaminations, followed by two further camera modules, which alternate depending on the nature of the glass. The solution then moves on either to inspecting for possible glass splinters and chipping around the edges of the receptacles – so-called 'chipped tops' – or inspecting the sealing face of the thread. The inspection system immediately removes any faulty crucibles from the production line using a pusher. Around 5000 to 6000 glass crucibles per hour undergo this quality control prior to filling; doing so ensures only flawless glass crucibles enter the production process.

Quick product change

In addition to protecting consumers and avoiding costly product recalls,

the vision inspection solution is also enabling Maxim to successfully optimise the reliability of the filling process at the goods receiving stage, as the risk of stoppages in production – caused, for example, by broken glass – is reduced to a minimum. In view of the high rate of throughput of crucibles (several thousand every hour), it is particularly important for Maxim to be able to switch items quickly in production in order to minimise downtime. Thanks to CIVCore, the software around which the METTLER TOLEDO CI-Vision inspection systems are based, only a few touches of the screen are required for employees to switch between the individual product inspection profiles, meaning this can be done in no time at all. As the inspection solution is connected to Maxim's own company network, all data can be checked remotely from an external location too. Furthermore, there is the option to carry out remote maintenance via the network if necessary.

Summary

"The high quality of our products is our most important sales argument, which is why METTLER TOLEDO's inspection system is a critical control point on our production line when we are assessing risk," concludes Jürgen Lutze.



All current data can be accessed immediately on the clearly arranged user terminal.



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