

PRESS RELEASE

Line efficiency

Inspection technology from KHS: precision and early detection for holistic line concepts

- Machine management system localizes faulty filling valves
- Can inspector examines empty cans for damage
- Fill height control supplemented by X-ray technology

Dortmund, November 26, 2024 – KHS GmbH is continuously further developing and modernizing its inspection technology. Operators benefit from KHS inspection systems three times over: they boost efficiency, increase production reliability and can directly and cost-effectively integrate the modules into their existing lines.

Inspection technology that enables the best product quality, gives users a maximum of information and can be flexibly integrated into existing systems at any time – this is what the market wants and what KHS provides with its attractively-priced Innocheck series. The Dortmund systems supplier offers a convincing and extensive portfolio for the canning segment in particular – right down the line. Its intelligent KHS Innocheck MMS machine management system is just one example application designed for can filling and seaming. It localizes faulty filling valves and closure elements and evaluates these. "The Innocheck MMS allows entire parameters to be precisely read out," explains Henrik Kahrmann, who is responsible for labeling and inspection technology product support at KHS. "Through the evaluation thereof, canners and bottlers can trace faulty fillings back to individual valves and intervene in good time."



Cutting-edge camera technology for perfect empty cans

In addition, KHS supplies a number of control options for the analysis of cans scheduled for filling with its Innocheck ECI empty can inspector. Using cutting-edge cameras, this tried-and-tested inspection unit quickly and thoroughly checks for the tiniest foreign bodies and indications of damage in the millimeter range, so that only perfect empty cans are fed to the filler. It examines the inner side wall and base area as well as the top edge of the can. Should the system detect any soiling or defects, the container is correctly rejected. "This step is important, as filling and seaming flawed containers can cause problems that hold up the entire production process," says Kahrmann. The high-performance machine has an inspection rate of up to 135,000 cans an hour. What's new here is the retrofittable ECI+ extension that can be easily integrated into existing systems as it takes up so little space. This permits additional monitoring of the inner shoulder area in an empty can, previously a blind spot in inspection.

Precise fill height control with X-ray

KHS has also expanded its range of fill height control equipment. To date, the modular Innocheck FHC fill height control worked with two systems — one to check for overfilling and a second to scan for underfilling using X-rays, states Kahrmann. "Up to now, we could only make spot checks of the fill height. With our new spatial-resolution system, we can now measure an entire fill height area using just one unit." The optimized inspector isn't just more precise and less elaborate; it also has one further key advantage, states Kahrmann. "Besides information as to whether the can is over- or underfilled, it also gives us the fill height as an absolute value. This is computed by an algorithm that's insensitive to interference such as sloshing liquids. This enables our customers to see that their filling valves may still be functioning but are starting to show a drop in performance." This makes it possible to maintain the individual valves affected in good time.



KHS inspection technology also includes the Innocheck CIC-R code inspection can reader. This examines printing and production codes on the can base with the help of state-of-the-art Al. If these are incomplete or incorrect, the inspection unit indicates this immediately. Affected containers can thus be ejected before they enter the downstream production steps.

For more information go to:

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Pictures and captions

(source: Frank Reinhold and KHS GmbH)

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Picture captions

Henrik Kahrmann (KHS GmbH)

"Through the use of our inspection technology, downtime can be noticeably reduced while line efficiency is increased," says Henrik Kahrmann, responsible for labeling and inspection technology product support at KHS.

KHS inspection technology

KHS GmbH is continuously further developing and modernizing its inspection technology – and in supplying turnkey systems offers bottlers everything from a one-stop shop.



CUB - control unit big

The CUB (control unit big) is the central controller that monitors and operates all control systems. It forms the heart of the Innocheck MMS machine management system and enables the corresponding software to be run.

Innocheck ECI

Using cutting-edge cameras, the Innocheck ECI empty can inspector thoroughly examines containers scheduled for filling for foreign bodies and damage.

Innocheck FHC fill height control with X-ray

The new, spatial-resolution system on the Innocheck FHC fill height controller not only enables inspection by X-ray using just one unit; it also gives the fill height as an absolute value. KHS customers can thus see that their filling valves may still be functioning but are starting to show a drop in performance.



About the KHS Group

The KHS Group is one of the world's leading manufacturers of filling and packaging systems for the beverage and liquid food industries. Besides the parent company (KHS GmbH) the group includes various subsidiaries outside Germany, with production sites in Ahmedabad (India), Waukesha (USA), Zinacantepec (Mexico), São Paulo (Brazil) and Kunshan (China). It also operates numerous sales and service centers worldwide. KHS manufactures modern filling and packaging systems for the high-capacity range at its headquarters in Dortmund, Germany, and at its factories in Bad Kreuznach, Kleve, Worms and Hamburg. The KHS Group is a wholly owned subsidiary of the SDAX-listed Salzgitter AG corporation. In 2023 the KHS Group and its 5,400 employees achieved a turnover of around €1.517 billion.

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