

Double Compliance Checkweighing of Aerosols



Peter Kwasny GmbH is a German producer of spray paints with a production volume of 30,000,000 aerosol cans a year. The company mainly supplies industrial customers. The great number of different products demands a high degree of automation. To optimize its production line, Kwasny heavily invested in new automation technology and equipment, including an advanced inline checkweighing system from METTLER TOLEDO.

Compliance with the Aerosol Dispenser Directive and Packaging Regulations

As an aerosol processor, Kwasny must comply with the German Finished Packaging Regulation (FVPO) to ensure weight deviations stay within the statutory requirements. The Aerosol Dispenser Directive (ADD) implies that the maximum fill volume of a spray can has to be 90 percent at 50 degrees Celsius.

As spray cans are constantly under pressure, seal integrity testing is mandatory. In addition, every can is immersed in a hot water bath. The resulting pressure raises the spray paint inside the can to one hundred percent of the allowed fill quantity. In the case of an overfilling, the can could burst either further down the production line, in distribution channels or – worst case – in the hands of the consumer.



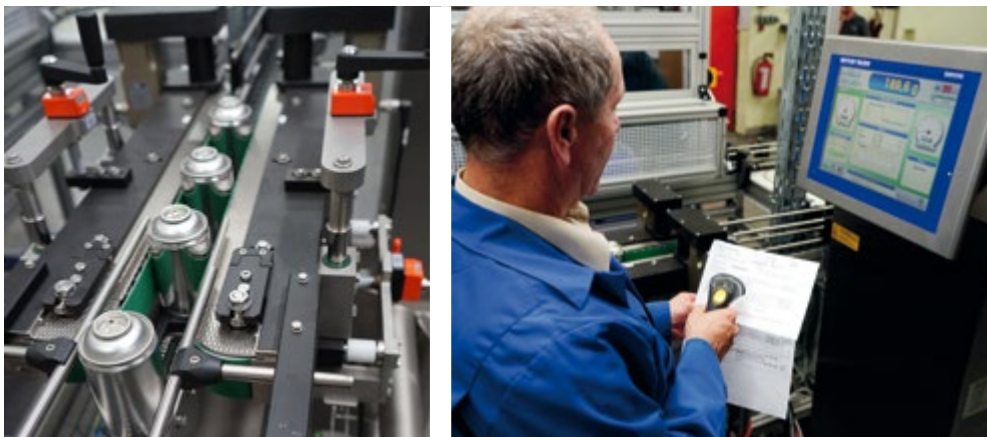
The chain checkweigher offers maximum stability for most accurate weighing results.

Peter Kwasny GmbH

Chain Checkweigher

Regulatory Compliance

METTLER TOLEDO



A chain instead of a conventional conveyor belt together with sidegrip conveyors ensures a smooth product transport (left image). Product parameters from the database are loaded to the checkweigher by scanning a barcode (right image).

the in-line checkweighing system to handle product changeovers quickly. Together with Kwasny's IT department, METTLER TOLEDO offered a flexible solution that connects the customer product database with the checkweigher. Now with a scan of a barcode, the product with all its parameters is loaded into the memory of the checkweighing system, and production can continue immediately.

A major responsibility therefore lies with the checkweigher. Through detailed determination of the upper and lower limits of the fill quantity, Kwasny is able to comply with the FVPO and ADD. Any non-conforming product which deviates from the predefined values is rejected, and fill quantity variations and their causes can be investigated immediately so that corrective actions can be implemented.

Benefits of Switching from Static to In-Line Checkweighing for 100 Percent Quality Control

Besides aiding compliance with legal requirements, the in-line checkweigher offers other advantages compared to the former manual spot checks on static scales. Significant increases in the production line's overall equipment effectiveness (OEE) can be attained and, most importantly, the system is capable of inspecting 100 percent of all products

produced. Before applying dynamic weighing technology, weight deviations could be detected only in a spot check, and if they were, each and every product had to be unpacked as a result and weighed one by one on a static scale.

"The in-line checkweigher plays an important role for our quality management," says Michael Seidler, Plant Engineer at Peter Kwasny GmbH. "By rejecting non-conforming products, the checkweigher ensures that every product leaving our facility meets the standard required. We have now eliminated manual spot checks. This saves us valuable time, significantly reduces extensive product rework and increases our overall product quality," he concludes.

A Standard Solution for Special Requirements

The large number of products, as well as small batch sizes required

Another challenge was the handling of the aerosol spray cans. Typically these products are tall with a small footprint, which makes them prone to swaying. However, stability is crucial to achieve an accurate weighing result. In this instance, METTLER TOLEDO supplied a chain checkweigher – a special solution that uses a transport chain in contrast to the traditional conveyor belt.

"This project was a true success for us and we equipped the first of four lines with a checkweigher from METTLER TOLEDO. Purchase orders for the other checkweighers are already sent and the roll out for the other lines will start soon," adds Michael Seidler.

More information:

► www.mt.com/pi-kwasny

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