

SealScope™ Case Study



SealScope™ increases line output and improves packaging quality at Lutèce

Thanks to SealScope™, Engilico's in-line seal inspection and monitoring technology, Lutèce was able to improve the performance of its newly installed Leepack pouch filling machine. Since the integration of SealScope™ on this machine, the packaging quality and machine output have increased significantly and the amount of rework and scrap has been considerably reduced.

Lutèce, a leading Dutch mushroom processing company, decided in 2014 to launch stand-up pouches as a new packaging type for its mushrooms, in addition to its existing packaging types including tins and glass jars. Today, this strategic decision has proven to be a commercial success. However, the use of stand-up pouches as an alternative packaging form was not without its technical challenges. The expertise of packaging partner Selo, a European market leader in pouch and horizontal packaging lines, and Engilico's SealScope™, turned to be essential factors in solving this packaging equation.



A new step for Lutèce: mushrooms in stand-up pouches in addition to the known glass jar

Optimizing process performance

Packaging cooked mushrooms in stand-up pouches is by no means an easy undertaking. Due to the sticky nature of the product, the timing of the filling turned out to be a challenge. When the filling is either late or too slow, product might get caught in the seal. This can cause open packages, contaminated sealing bars and consequently reduces machine output due to standstills for cleaning. Also, when filling is not done at all, empty pouches are produced which strongly reduces the line's effective output.

SealScope is able to objectively measure the repeatability of the packaging process. When adjusting the filling parameters, SealScope™ easily quantifies whether the adjustment improves the process



SealScope™ Case Study

(higher repeatability) or not (lower repeatability). Also, empty packages are shown in the statistics and can no longer be ignored.

It turned out that with the original multi-head weigher and machine settings, the packaging process could only run repetitively and reliably at a much lower than specified speed.

While continuously measuring the process repeatability by SealScope, the weigher and machine parameters were fine-tuned by Lutèce and Engilico engineers. This allowed to gradually increase the packaging speed until nominal specification was reached, while maintaining excellent product quality and minimal empty bags.

Continuous monitoring of process

After successfully optimizing the packaging line for quality and speed, it is important to keep this process running within its narrow optimal performance tolerances. Unfortunately, every process will sooner or later show drift which will reduce the productivity and packaging quality. Drift can be caused by e.g. dirt accumulation on the sealing jaws, wear on moving parts, clogging filling nozzles, etc.

SealScope™ today continuously monitors the sealing process for drift. The system also generates early warnings allowing the operator to take corrective actions (for instance: preventive cleaning of the sealing station) avoiding any further deterioration of the process.

Rejection for increased overall quality

In addition to continuous monitoring, SealScope™ also identifies compromised packages due to product in/on seal, wrinkles, tapered seals and too low/too high seals. Rejecting these packages has reduced the number of defective packages leaving the factory by over 90%, increasing overall product quality and customer satisfaction.



Rejected pouch, due to product in seal

Results

The benefits of SealScope at Lutèce are measurable in both higher machine output and better package quality. Process output has grown with 20% and the remaining number of compromised packages that leave the factory is steadily below 1 in 10,000 while keeping the overall reject rate well below 1%.

“Thanks to SealScope™ we are in full control of what we are doing. We have increased both our machine output and package quality. The technology is easy-to-install and inspects every single pouch over the full seal length without slowing down the packaging process” says E.B., production manager at Lutèce.

Also watch the explanatory movie on how SealScope™ works at Lutèce:

<https://www.youtube.com/channel/UCSAarmGblzu70zSr1vHR7ow>

Engilico is an innovative technology company that specializes in developing, manufacturing and marketing sealing inspection and monitoring solutions for flexible packages in the food, pet care and pharmaceutical industry. Engilico's products improve packaging quality, increase machine output and reduce scrap. Engilico is based in Rotselaar, Belgium and is operational worldwide via a combination of direct sales and a growing distributor network. See www.engilico.com for more information.

Selo BV supplies and implements processing and packaging machinery, equipment and systems for manufacturers of food, pharmaceutical, animal feed and non-food products. Selo's activities range from installing a single, stand-alone machine to the design and realisation of complete, turnkey production lines. See www.selo.com for more information.

