

END-TO-END STANDARDISATION IN THE GLUING PROCESS

WHY COVERIS SWITCHED EXCLUSIVELY TO GLUE APPLICATION AND QUALITY ASSURANCE SYSTEMS FROM BAUMER HHS AT ITS PLANT IN WISBECH, UK.

Maximum quality and reliability in glue application, uniform operating procedures on all gluers and just one representative for the entire gluing process – this was the aim for Coveris for standardising the gluing equipment at its plant in Wisbech.

From the outset, Coveris had chosen glue application and quality assurance systems from Baumer hhs

for three of its folder-gluers at its plant in Wisbech, Cambridgeshire, southeast England. The production facility subsequently converted its four remaining folder-gluers and a tray former to this technology as well. The driving force behind the decision was the machine operators.

“Our operators appreciate how easy it is to operate the glue application and quality assurance systems from



Even the tray former works with hot melt application systems from Baumer hhs.



Left to right: Adam Lessiter (Sales Manager at Baumer hhs) and Ian Bullen (Finishing Coordinator at Coveris Wisbech) have been working for many years.

Baumer hhs,” says Ian Bullen of Coveris. “They’re easy and efficient to work with and reconfiguring the systems takes no time at all. From the standpoint of our machine operators in particular, Baumer hhs is the ideal partner for gluing applications.”

Sophisticated Packaging

The plant’s Finishing Coordinator leads us up a stairway to a platform with a view of the entire folder-gluer department. It’s an impressive sight, with a total of eight machines lined up at the rear of the factory building. “We mostly manufacture packaging for the European food industry,” says Bullen, explaining why organisation and cleanliness are so important at the site.

The Coveris production facility specialises in folding cartons for ready meals and convenience food packaging, which combine premium printed cartons with film. The film-lined board solutions, based on



At the request of its machine operators, Coveris standardised its entire gluing process with equipment from Baumer hhs.

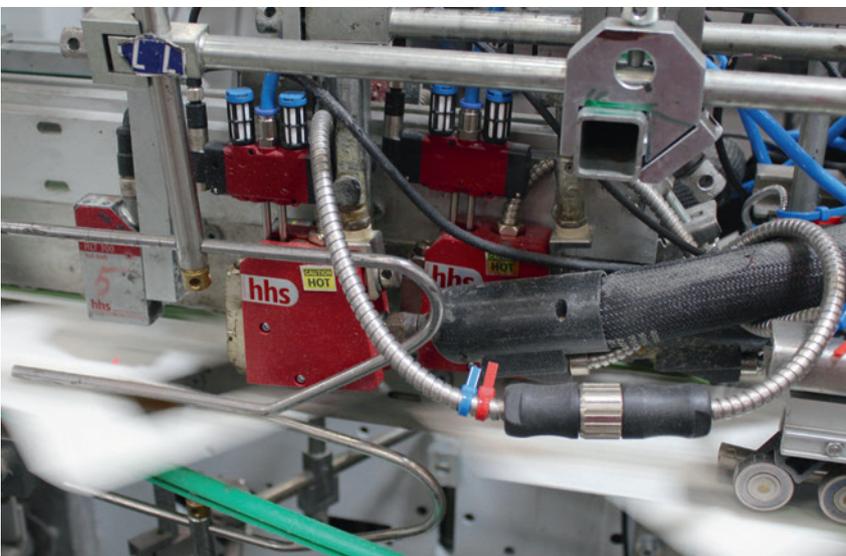
the company's patented Freshlife technology, offer advanced barrier protection, are suitable for direct food contact and guarantee freshness. Example applications include cold and hot food-to-go products, such as sandwiches, wraps and salads. Convenience food packaging of this kind typically incorporates generously dimensioned windows of transparent plastic film, to give consumers a good view of the products inside.

Coveris also offers customers design and engineering services for folding cartons, which it produces in countless variations. Some customers even have their packaging shipped directly from Coveris to destinations all over the world.

Flexibility in Gluing

It goes without saying that such wide product variety requires a flexible manufacturing process. "With its extensive range of solutions, and as a full-service supplier, Baumer hhs meets all our needs for glue application and quality assurance," says Bullen. This level of flexibility is now established throughout the entire gluing process.

Though the facility in Wisbech primarily works with hot melt, several of the folder-glueers are additionally equipped with cold glue systems. The individual machines have up to 16 application heads. Hot melt is applied by aerto application heads, Baumer hhs's latest generation of electropneumatic hot melt application heads.



Hot melt mainly is applied by aerto heads, which guarantee glue application in dot and line mode with virtually no tailing, even when working with difficult special-purpose adhesives and at high cycle rates.

Apart from this new equipment, the plant also has several, older hot melt heads from Baumer hhs still in operation. Immediately after the hot melt has been applied, HLT 300 sensors thoroughly check the quality of application. The heads are supplied by 12 kg Xmelt hot melt units.



The hot melt heads are supplied by Xmelt hot melt units, which are very energy efficient in liquefying the adhesive granules and pumping the glue through heated hoses to the application heads.

Thanks to the 'Plug & Glue' concept, the hot melt systems are easy to setup and reconfigure. Both the hot melt hoses and glue application heads are equipped with data carriers that store component identification codes. With this data, the hot melt unit's controller automatically detects connected components and accordingly adjusts the control parameters. In other words, a machine operator need no longer enter the settings manually, ruling out the risk of data entry errors. In addition, the data carriers store operating data that facilitates preventive maintenance.

Cold glue is applied in a non-contact process by P-500 heads and the quality immediately checked by ULT 300 sensors. The electric P-500 heads apply either dots or lines to the package flaps. In dot mode, they are capable of applying reduced amounts of glue to minimise glue consumption.

The systems from Baumer hhs run stably and reliably. But still, it's good to know that we can get prompt support when we need it.

Zero-defect Production

"Our customers expect fast and reliable delivery of consistently high quality packaging," continues Bullen. "Baumer hhs's technology makes it much easier for us to fulfil such demands in the brand-name product industry. In fact, we are now very close to our goal of zero-defect production combined with high cost-efficiency."

He continues, "Customers today also won't tolerate any product mix-ups." Most gluing machines at the plant are equipped with at least two code readers from Baumer hhs, including sensors for reading the two-dimensional data matrix code and a Scan-300 laser scanner for the one-dimensional EAN code. Customers can rest assured that shipments contain only the products they ordered.

The technology operates strictly in line with the fail-safe principle, meaning that all cartons are considered rejects during the gluing process until identified as good by all machine sensors. If sensors identify errors in glue application, or cannot clearly read the codes, they send this information to the Tracking & Ejecting module of the Xtend controller, which ejects all defective folding cartons. "Work in the gluing department has become much more efficient and safer for our 26 machine operators," says Bullen.

On top of that, the gluing department is also achieving higher productivity and machine availability. The glue application and quality assurance systems can be reconfigured rapidly. Furthermore, because the sensors reliably control glue application, even at maximum machine speeds and with cartons of complex design, the plant can fully exploit the production

capacity of its gluing machines.

The reporting function on the Xtend2 controllers helps to identify the root cause of errors in the gluing process and avoid them in future. In addition, the plant can use the reports to document the level of quality achieved for customers. "In today's market environment, end-to-end quality control is a must," adds Bullen. "We haven't even exhausted all the possibilities; we still have some options open to us for the future."

Generation to Generation

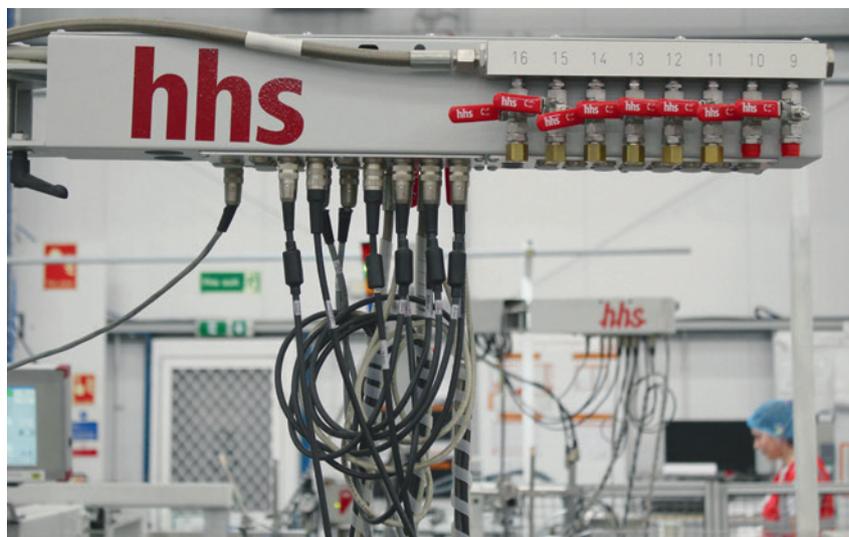
All the gluing machines are now equipped with Xtend2 controllers, meaning that all glue application and quality assurance equipment is operated via a central touchscreen. It is used to enter the hot and cold glue patterns, the pressure curves for cold glue and hot melt delivery and the temperatures for the hot melt tank, hoses and application heads. "All our gluing machines now have the same intuitive user interface, meaning our machine

operators can switch flexibly between machines if necessary," adds Bullen.

Soon, the plant will be upgrading to the new Xtend3 generation, following in the footsteps of the Coveris facility in St. Neots. With Xtend3, operators can make selections the conventional way using the keys or with innovative swipe technology. They can access context-sensitive information or an online instruction manual, as well as short videos with simple explanations of various operating steps.

True Partnership

"Baumer hhs's service team is available when an emergency arises. Coveris likewise can rely on rapid delivery of spare parts from the Baumer hhs warehouse at its UK. The systems from Baumer hhs run extremely stably and reliably. But still, it's good to know that we can get prompt support when we need it. Our two companies share a true partnership. And that's another reason why we're a 'Baumer hhs-only' business." ■



The Coveris facility in Wisbech switched four folder-glueers and a tray former to glue application and quality assurance systems from Baumer hhs.