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Sonderhoff presents System 3 concept at Midest 2019

The system supplier Sonderhoff, part of Henkel AG & Co. KGaA, offers the plastic and metal processing industry in France sealing, adhesive and sealing solutions based on polyurethane, silicone or PVC for a wide variety of applications. At Midest Lyon (5 – 8 March 2019), Sonderhoff will be presenting itself as a specialist for innovative sealing technology from a single source (System-3): material and machine as well as the sealing, gluing and potting of components in contract manufacturing. The System 3 concept from Sonderhoff can be individually tailored to the customer's production processes to provide maximum flexibility in the design of the material recipe and machine configuration.

The Fermapor CC seal made of polyurethane is very robust and ice water resistant (Source: Sonderhoff)

At the exhibition stand, it will be demonstrated how the **Smart-M dosing cell** is used to apply liquid sealing material to a LED signal lamp fully automatically and with contour accuracy. Philippe Ott, overall responsible for the sales of Sonderhoff in Western Europe and Maghreb, will explain the advantages of this **Formed-In-Place (FIP) a**pplication to visitors: “The liquid applied **Fermapor K31** foam system reacts to a soft foam seal under room temperature “in situ” direct on the component. And because it is applied liquid, the beginning and end of the

seal can flow into each other, creating a “seamless” seal.” The components are thus protected from rain, ice and snow, cold, heat, dust and wind, but also mechanical influences. According to the company, the FIP process has proven itself in the serial production of various industries as state-of-the-art technology for the sealing, gluing and potting of components. Gildas Manceau, Area Sales Manager at Sonderhoff for Northern France, added: “The seal can be fully automatically applied to the component with great precision and accurate to the contour. This makes the FIP process more economical than a manual seal. It can save time and money.” **The gasket material is 100 % used** and there is no rejects. Due to the compressibility of the foam gasket, it also compensates for manufacturing tolerances of a component. And thanks to the curing of the material systems at room temperature, there are no investment and energy costs for tempering ovens, said the company.
The dosing systems and material systems from Sonderhoff are optimally matched to each other. Depending on customer requirements, different curing and tack-free times of the material systems from Sonderhoff are individually adjustable. This makes the manufacturing processes even more efficient, and downstream processes, right through to final assembly, can start earlier. The company uses **CNC-controlled linear robots** for the dosing systems, which move the mixing head over the component contour at different speeds for material dosing. As a result, different output rates can be realized. This is an advantage when it comes to the automatic material application of large quantities and complex component geometries in series production.

The **FIP CC (Formed-In-Place Closed Cell) sealing technology** will be presented for the first time in France at the Midest 2019. FIP CC combines the high waterproofness of a silicone gasket with the attractive material cost of a polyurethane foam gasket, said Sonderhoff. By means of physical foaming, the very fine-cell, predominantly closed-cell polyurethane soft foam seal Fermapor CC is produced with the dosing system DM 402 CC developed for this purpose. Even in the case of a damaged sealing surface, such as tears, the water absorption of the Fermapor CC foam gaskets changes only slightly. It is also very weatherproof and at water temperatures of 1 °C also ice water resistant. What is new about the FIP CC technology is that the dispensing of the CC foam is already applied to the component in its almost complete sealing dimension. This enables process-oriented quality control, which confirms that the seal was applied at the same height over the entire component contour.

With the **System 3 concept** consisting of material, machine and contract manufacturing, Sonderhoff can not only flexibly adapt the material recipe and machine configuration to the customer's production processes. Instead, the company goes one step further with the **Mold'n Seal process**: the previously separate processes of injection molding and foam sealing are now combined in one production step. The injection molded parts no longer need to be prefabricated and stored as before. The Mold`n Seal process can be adapted to different cycle times of injection molding as well as to components with different geometries for the direct application of the foam seal to the part contour. Additional processes such as pretreatment of the surface of the plastic part by ionization or plasma treatment may also be integrated. Instead of the previous two, only one handling robot is required for the part handling of both processes (injection molding and foam sealing application) in the production cell. Depending on the different configurations, a very small footprint of only 24 – 40 m² is needed.

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