

Application Case: Infrared Radiator and Induction Generator

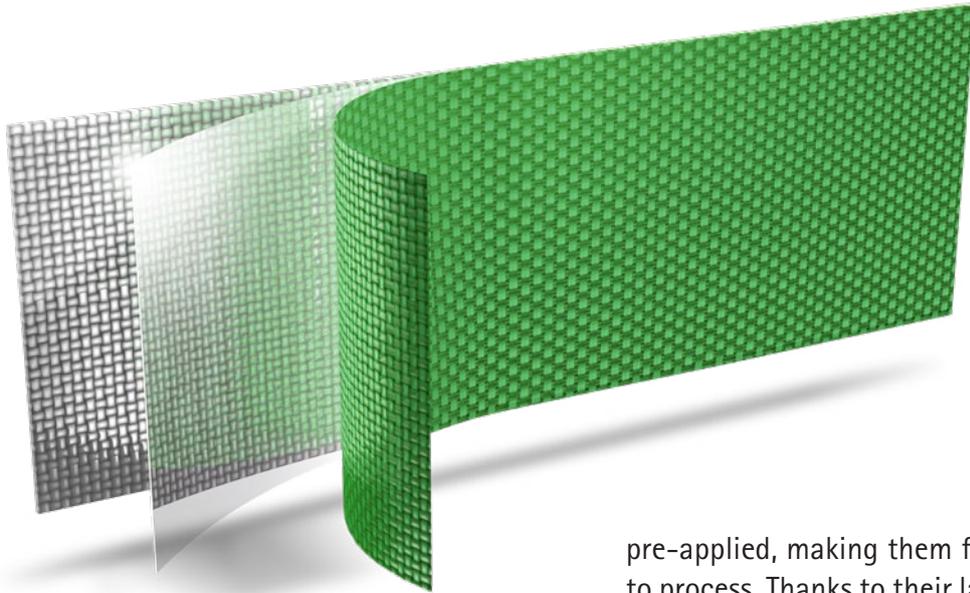
Smart Processes for Robust and Flexible Connections.

The bonding solutions of the Bonding Engineers often offer more than just the connection of two joining partners: They can, for example, additionally seal, dampen or conduct electricity. All according to customer requirements and needs within the respective application. But the Bonding Engineers do not respond to the increasing demands of their customers with high-tech adhesive tapes alone – true to their "Smart Bonding Approach", they keep the entire process in mind. Is a roll needed, a spool or a high-precision die-cut? On which substrates should the tape be bonded? How can a particularly efficient automation solution be found? Is surface conditioning necessary?

For the thermal input into the bonding process the Bonding Arena® offers several stations, two of which we would like to introduce to you below: The infrared radiator and

the induction generator. With the help of these devices, a controlled heating of substrates or adhesives as well as a problem-free integration into the existing customer process can be achieved in the shortest possible time.

In continuous processes, the power of the IR radiator can easily be controlled by the speed of the processing machine or the temperature of the substrate surface. For the bonding of metallic components, for example, the heat activation of corresponding adhesives using an **induction generator** is suitable. Similar to an induction cooker in the kitchen, the heat is applied indirectly to the adhesive die-cuts, particularly well via ferromagnetic metals – in a matter of seconds. In addition to the speed of the process, the advantage here is a particularly accurate, precise and clean connection. Heating by induction is particularly suitable for more complex and small geometries, as it can be controlled and monitored with pinpoint accuracy.



The example of bolt bonding with the induction generator illustrates how easily the DuploTEC® SBF (Structural Bonding Films) products based on polyurethane can be integrated into the process and how they can contribute to short cycle times and fast further processing. The polyurethane films combine the performance of structural bonding with the easy handling of a pressure-sensitive adhesive tape. DuploTEC® SBF adhesive tapes are dimensionally accurate and can be

pre-applied, making them fast, clean and reliable to process. Thanks to their latently reactive curing mechanism, these adhesive films achieve a very high strength and long-term resistance, while remaining flexible. This mixture of product and process properties opens up new possibilities for automation solutions.

Would you like to learn more about how you can optimally integrate automated heat input into your production process? We would be pleased to introduce our two stations to you. Simply contact our application engineering department via ae@lohmann-tapes.com