Steinhagen, November 14th, 2024

**Long-term stable tape application through Openair-Plasma surface treatment**

Plasmatreat and Glaub Automation & Engineering: Cooperation for an innovative solution for the automotive industry

**Groundbreaking cooperation between two specialists: Plasmatreat GmbH and Glaub Automation & Engineering GmbH presented an innovative solution for the automotive industry at Fakuma 2024. The focus was on the combination of surface treatment with Openair-Plasma and subsequent fully automated tape application, which offers manufacturers new possibilities for optimizing their production processes.**

Adhesive bonding is one of the key technologies in modern vehicle construction. It provides manufacturers with a high degree of flexibility and supports lightweight construction, e.g. by eliminating mechanical fasteners and increasing the variety of materials. Adhesive tapes have established themselves as an effective solution in this area, especially for attaching add-on parts. Plasmatreat GmbH, the global market leader in atmospheric plasma technology, and Glaub Automation & Engineering GmbH, one of the leading developers and integrators of automated systems, showed a combined process in Friedrichshafen that significantly improves the quality, efficiency, precision and environmental compatibility of this work step when used inline in the production process.

**Live demonstration of automated process**

When high-energy plasma comes into contact with materials, it changes their surface properties, improving the efficiency and precision of manufacturing processes. This technology offers particular advantages when joining non-polar plastics or when combining plastic and metal or plastic and glass. It makes production more cost-effective and environmentally friendly. It also ensures consistently high joint quality, which is particularly important in the automotive industry. Trade visitors to the Fakuma were able to experience the combination of the Plasmatreat surface treatment process and the application of Glaub tape at first hand: Plastic test specimens were first pretreated with Openair-Plasma and then automatically taped on Glaub's demo system. On-site tests illustrated the effectiveness of the plasma effect.

**Practical application examples**

The automotive industry in particular benefits from these advantages, as current application examples from the Plasmatreat portfolio show.

* **Automotive headlights made of material combinations:** Surface pretreatment with Openair-Plasma improves the adhesion of adhesives and tapes during the assembly of headlights made of different materials.
* **Recycled plastic dashboard:** Openair-Plasma surface pretreatment creates a stable bond between recycled plastics and other materials. In this way, the technology supports lightweighting and contributes to greater sustainability.
* **Batteries (cell-to-cell bonding):** One of the biggest challenges in battery manufacturing is thermal conductivity. Plasma activation of surfaces increases adhesion and ensures optimal bonding of cells with adhesive or double-sided tape. This improves the performance and lifetime of modern battery systems.

Plasma treatment and tape application will continue to drive the production of durable, high-quality joints in the automotive industry. "By combining plasma technology and automated production, we offer our customers solutions that increase both efficiency and quality while being more environmentally friendly than conventional processes," said Joachim Schüßler, Sales Manager Germany at Plasmatreat GmbH.

For more information, please visit [www.plasmatreat.com](http://www.plasmatreat.com)

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***Info Box Openair-Plasma®:***

**How Openair-Plasma® and PlasmaPlus® optimize industrial processes**

When plasma with its high energy level comes into contact with materials, it changes the surface properties, e.g. from hydrophobic to hydrophilic. Plasma technology requires only compressed air and electricity. Ultra-fine cleaning with Openair-Plasma® gently and reliably removes dust, release agents, additives, plasticizers and hydrocarbons from surfaces. Plasma treatment activates the surface of non-polar plastics in particular. It helps to increase the surface energy by introducing hydroxyl groups, thus improving adhesion in subsequent processes such as bonding, printing, painting and sealing. Even oxide layers on metal surfaces can be reliably removed inline during the production process using plasma technology. With Plasmatreat's PlasmaPlus® technology, the deposition of nanocoatings can also be used to create functionalized surfaces with defined properties, e.g. as an additional bonding layer.

For more information, please visit [www.plasmatreat.com](http://www.plasmatreat.com)

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**About Plasmatreat**

Plasmatreat is a world leader in the development and manufacture of atmospheric plasma systems for the pretreatment of surfaces.

Whether plastic, metal, glass or paper, plasma technology is used to modify the properties of the surface to suit the process requirements.

Openair-Plasma® technology is used in automated and continuous production processes in almost all industries. Examples include the automotive, electronics, transportation, packaging, consumer goods and textile industries, but the technological, cost and environmental benefits of plasma technology are also being exploited in the medical technology and renewable energy sectors.

The Plasmatreat Group has technology centers in Germany, the USA, Canada, China and Japan and is represented by subsidiaries and sales partners in more than 30 countries with a global sales and service network.

For more information, please visit [www.plasmatreat.com](http://www.plasmatreat.com)

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**About Glaub Automation & Engineering**

Glaub Automation & Engineering GmbH, based in Salzgitter, Germany, specializes in innovative solutions in the field of automation technology, industrial software services and the automatic application of adhesive tapes, pads and foams. With a broad portfolio of products and services, the company focuses on quality and efficiency.

For more information, please visit: [www.https://www.glaub.de/](http://www.https://www.glaub.de/)

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**Images:**



Plasma treatment enables structural bonding of adhesives as well as tapes for automotive applications. (Copyright: Plasmatreat GmbH)



The robot-guided application head applies adhesive tapes (single or double-sided, with or without liner), pads and foams to surfaces in a fully automated process.

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