

Steinhagen, May 20, 2021

New research and testing equipment for highly technical surface treatment

Plasmamatreat makes further investments to drive forward challenging customer projects and new developments

Plasmamatreat GmbH constantly faces shifting demands as a result of new ideas, regulations, and standards: Customers from industries such as electronics and medical technology are increasingly approaching the company with unique and innovative project requests in the field of surface treatment with plasma technology. Consequently, the capacities of the technology and research center that opened in 2019, which comprises 14 laboratories and various testing facilities, will now be expanded to include a class-6 cleanroom. Additionally, many Plasmamatreat products are now also certified by UL, a global independent safety science company. The new certification and the expanded capacities will allow internal development, testing, and even customer acceptance of completed projects to take place in accordance with the desired standards and under the actual cleanroom conditions that will be required for production later on.



For special customer requirements, Plasmamatreat has expanded its research and testing equipment to include a clean room with a class 6 level of purity.

“Expanded requirements as a result of new industrial standards, stricter standards for safe and environmentally friendly processes, and the implementation of solutions for highly customized, customer-specific manufacturing processes – these are the challenges our customers present to us time and time again,” explains Christian Buske, CEO of Plasmamatreat. The company made its most recent investment partly as the result of a major project for a customer from the electronics industry. The customer had asked Plasmamatreat if the company could deliver full systems for manufacturing processes in the semiconductor industry; Plasmamatreat agreed to do so and subsequently expanded its capacities in line with the customer’s needs. “For new projects, in particular, the innovative spirit at Plasmamatreat, the development and derivation of new or alternative process steps, and the partnership with our customers all lay the foundation for the successful integration of Openair-Plasma into a wide range of production lines,” Buske adds.

“The goal of this project was to develop a system for surface treatment in the semiconductor industry. It should launch operations this year. All internal system tests have to be conducted under the same cleanroom conditions as the system will face during actual production,” explains Nico Coenen, Global Market Segment Manager Electronics at Plasmamatreat. The installation of a class-7 cleanroom was required as part of the customer project. Conclusive tests determined that in its final state, the new Plasmamatreat cleanroom is actually class 6. Cleanroom classes are defined by ISO 14644-1 standards. The level of purity is determined by the maximum limits of particle concentrations permitted per cubic meter of air, and cleanrooms are subdivided into classes 1 to 9. Purity class 1 is the purest, with the lowest permitted concentration of particles. Class 9 is the lowest purity level. For most ISO applications, cleanroom classes 7 and 8 are sufficient.

For its international customers, Plasmamatreat has now also acquired UL certification for many of its products. This will make it even simpler for customers to quickly and easily implement new systems anywhere in the world. A qualified, accredited testing laboratory has certified that these Plasmamatreat products conform to US safety standards. This certification lets customers know that the systems have met all criteria for safe operation and that they will be easy to integrate into manufacturing processes.

Plasmamatreat views both the cleanroom certification and UL certification as vital components of future projects. The company believes that the resulting capabilities will allow customers to better evaluate the potential for using Openair-Plasma for their own products and processes. This is an attractive prospect for companies in industries such as electronics manufacturing or medical technology, for instance, as potential research and testing scenarios can be run at Plasmamatreat at an early stage, making the evaluation of new products much more efficient. “We will make use of these new opportunities for complex projects,” Coenen adds, as prototype production for these projects often needs to occur under the same conditions as will be in place for mass production later on. Consequently, the cleanroom is designed in such a way that even large applications – involving the use of robots, for example – can be tested and implemented.

About Plasmamatreat

Plasmamatreat is an international leader in the development and manufacture of atmospheric plasma systems for the pretreatment of substrate surfaces. Whether plastic, metal, glass or paper – the industrial use of plasma technology modifies the properties of the surface in favor of the process requirements.

Openair-Plasma® technology is used in automated and continuous manufacturing processes in almost every industrial sector. Examples include the automotive, electronics, transportation, packaging, consumer goods and textile industry, but the technology, cost and environmental advantages of the plasma technology are used in medical technology and in the renewable energy sector as well.

Press Release



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

For more information, please visit: www.plasmatreat.com

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