

Press release: Plasma technology, surface treatment and mechanical engineering - all from a single source

Relyon plasma GmbH from Regensburg presents the interplay of plasma technology, surface treatment and robotics at the K trade fair in Düsseldorf together with the two partners STTS - Systèmes et Technologies de Traitement de Surface and ULBRICH - Maschinenbau- und Export-Import Betriebs GmbH. The aim of the partnership is to be a solution-oriented partner with holistic process know-how, offering a one-stop service.

Regensburg/Düsseldorf. From the 16th to 23rd of October 2019, the K trade fair, the world's leading trade fair for plastics and rubber, will open its doors to the professional audience in Düsseldorf. In Hall 11, booth E18, relyon plasma from Regensburg will be demonstrating how cold atmospheric pressure plasma can be used for a wide variety of applications in the processing of plastics. In addition, the French sales partner STTS - Systèmes et Technologies de Traitement de Surface will provide insights into Corona technology and the Austrian sales partner ULBRICH - Maschinenbau- und Export-Import Betriebs GmbH will demonstrate automation based on robotics.

The partnership of the three companies goes back a long way and is characterized by the common goal of offering the customer the best possible solution. Thus, the three companies combine the different core competencies in order to generate a holistic solution approach for the customer: Process consulting, surface treatment and automation - all from a single source.

Cold atmospheric pressure plasma in handheld device

At the joint booth, relyon plasma will focus on the Piezoelectric Direct Discharge technology, PDD technology for short. This is a particularly compact technology for plasma generation based on direct electrical discharge at an open piezoelectric transformer (PT). This allows plasma to be integrated into the piezobrush® PZ2 hand-held device. The plastics and rubber industry uses the piezobrush® mainly for surface activation, i.e. to increase the surface energy on various materials. This facilitates the bonding of plastics, but also when bonding materials such as glass, GRP, ABS and other plastics with epoxy resin adhesive, the bonding force is significantly increased by pretreatment with the piezobrush®. Another field of application is 3D printing, in which the plasma hand-held device is used for bonding 3D-printed individual parts, to name only one.

Why can Corona surface treatment not only be used for flat, thin parts?

How can we help to improve adhesion on a robust and regular base? STTS, only French Corona manufacturer, has developed a specific way to treat not only "classical" films and plates but also 3 dimensional parts. How? With a very specific technology and a very particular way to analyse and approach the customers' products adhesion concerns. In addition of 30 years extensive experience in surface treatment, STTS has now a little less than a decade of deep partnership with a very high qualified plasma equipment manufacturer, relyon plasma, which allows to present, during the K 2019 show, the capacity to cover almost all the range of adhesions problems the customers are facing, including analysis and comprehension of the phenomenons. The major key being the understanding and therefore the adaptation to the material, shape and characteristics of your production line.

Automation through robotics

ULBRICH Automation is an expert in the combination of technical knowledge as well as automation technology and has extensive experience in the chemical industry. At the center of the booth, ULBRICH will present a mobile 6-axis collaborative robot system for dosing and surface treatment with plasma. The flexible robotic system can be connected directly to a 230V domestic installation and thus delivers a complete system the size of a shopping cart. In addition, Ulbrich presents a Smart Application System - refill gun, which provides more flexibility for manual 2K dosing applications. This system, for which only one compressed air supply is required, is designed for the filling of 20-200l hobbocks.

This will enable live demonstrations to be given on site of how the three companies' areas of competence overlap and interact with one another. A visit to booth 11 E 18 will give you a direct insight into the various technologies and allow you to experience and evaluate them on site.

About relyon plasma GmbH

Relyon plasma GmbH, a subsidiary of TDK Electronics, based in Regensburg, Germany, develops innovative plasma systems. True to the motto "rely on plasma", relyon plasma GmbH is a professional supplier of plasma systems as well as a service provider for individual customer requirements. Parallel to its own products for plasma treatment for industrial and medical applications, it develops customer-specific, highly efficient process solutions for surface cleaning, surface activation and germ reduction.

About STTS – Systèmes et Technologies de Traitement de Surface

Considered as an industrial start-up specialised in surface treatment, STTS is designer, manufacturer and integrator of innovative Corona and Plasma solutions. Our differentiation? An agile approach in the analysis of adhesion concerns and a very important flexibility in order to conceive completely customs made installations. A very unique position, completely new in this domain, which guarantees to our customers the ad hoc equipment integration, perfectly fitted to robust processes.

About ULBRICH – Maschinenbau- und Export-Import Betriebs GmbH

Ulbrich Maschinenbau was founded in 1949 by Johann and Roswitha Ulbrich. At first steam turbines were repaired, finally the production of machines was started. After the takeover of the company by Johannes Ulbrich in 1974, the product range was expanded and the design of the machines was enlarged, such as the development, design and construction of testing machines according to customer-specific requirements.

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Picture credits:



Image 1: Logo K-Messe

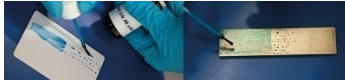


Image 2: Improved wettability of ABS and metal before and after plasma treatment with piezobrush PZ2

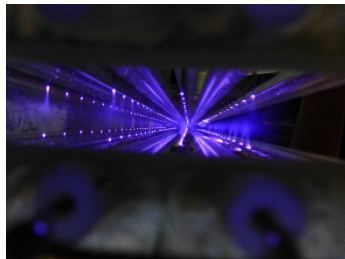


Image 3: Wide corona discharge in air gap



Image 4: Mobile 6-axis collaborative robot system for dosing and surface treatment with plasma