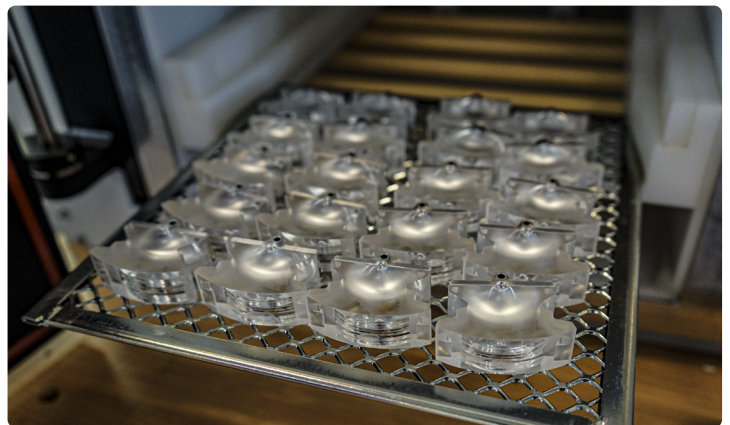


Tantec Plasma Treatment Crucial for Production of LED Navigation Lights

Lopolight is a leading manufacturer of navigation lights for boats, ships, ferries, and other vessels. The Danish company is located in Humlebæk, north of Copenhagen, and develops and produces complete LED navigation lighting systems which meet the extremely demanding standards of the US Coast Guard and the army. A new innovative design made it necessary to improve the adhesive properties of the used plastic parts. After thorough testing and analysis, Lopolight opted for a VacuTEC 2020-solution.

It all started in a basement in 2002, when LED lights were on the advance and increasingly being used. The previous generation of navigation lights had many disadvantages such as a high energy consumption, a short lifespan and conventional light bulbs which required regular replacements. But thanks to the innovative thinking of the Lopolight founders, a solid LED navigation light was soon developed. 170.000 LED navigation lights have been sold and used on all kinds of vessels - covering a wide range from smaller boats to military submarines.



Development is one of Lopolight's core competences. One of the most innovative products on the market was launched in 2019. During the development of this new and unique product Lopolight faced severe adhesion problems.

Adhesion problems

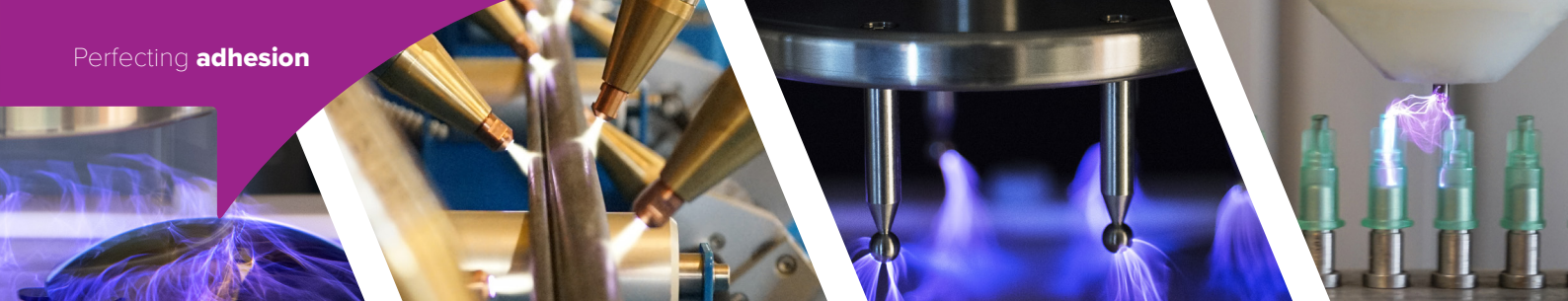
Lopolight's products include a unique combination of LED-elements and effective high-quality electronics. This technology guarantees an extremely long lifespan at low power consumption even under the harshest conditions. All lamps are completely sealed, which is part of why these lamps are a high quality product. Adhesion plays a big part when it comes to the sealing of the lamps because they need to be a 100% weatherproof and waterproof even when immersed in water. In fact, Lopolight has developed solutions for several submarines which still worked flawlessly after tests in 350 meters depth.

After a google-search for "plasma treatment" and "adhesion problems", Lopolight contacted Tantec to discuss the adhesion problems they were facing. Lopolight then visited Tantec for a sample test with their own parts. The suggested treatment showed a significant positive effect, which also proved to be durable. The analysis showed that a Tantec VacuTEC 2020 plasma treater was most suitable for the Lopolight parts and after taking a short time for consideration, Lopolight placed the order. Although the investment was made to improve the surface treatment of the plastic parts in the first place, it was soon discovered that other elements, such as cables, would benefit from the treatment as well.

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Satisfied Customer

One of the founders of Lopolight - which, by the way, is an acronym for "Low Powered Light" - Partner and Head of Development Peter Hancke, was actively involved in the whole process from the initial contact to the in-house test and the final implementation of the Tantec plasma treater. ***"We are extremely satisfied with the Tantec-solution for atmospheric plasma treatment. We are very impressed by the usability of the system. We are also very pleased with the good service and the practical support we received during installation"***, says Peter Hancke.

VacuTEC Vacuum Plasma Treater

Tantec develops both standard and customized solutions. One of our standard products is the VacuTEC 2020, our smallest vacuum plasma treater.

VacuTEC provides fast treatment and improves the adhesive properties of the treated material before coating, bonding, painting, or printing.

Organic substances which might contaminate the surface are invisible to the naked eye. However, they can affect an object's ability to interact with other materials significantly.

During vacuum plasma treatment, a gas is ionized in a vacuum chamber to form plasma. Oxygen and argon plasmas are often used for plasma etching and the activation of surfaces.

Our plasma treatment systems can remove 100% of the mentioned organic contaminants. This increases the adhesive properties of the material before bonding and reduces the surface's wettability, so that print, paint, and coatings remain on the surface.

