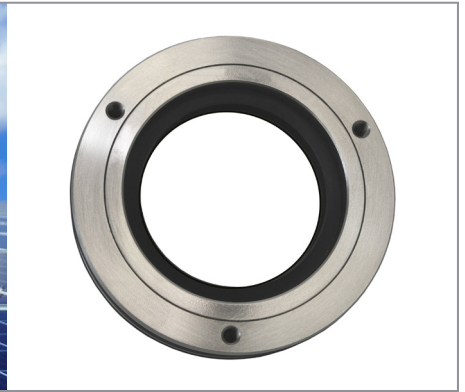


PS-SEAL® Special

Case Study: Photovoltaic



Industry

Machine Building - Photovoltaic

Customer

Our customer is a German mechanical engineering company. The family owned company develops and manufactures equipment for industrial vacuum coating of glass, wafers and plastic film, among other things. It is considered the world market leader, especially in plant engineering for large area architectural glass coating and thin film photovoltaics.

Background

Avoidance of high temperatures by cooling water and protection of the internal process against penetration of particles from the atmosphere. In this process, the coating material is removed from a solid target and transferred to the substrate. This is done in a magnetic field enhanced gas discharge in a vacuum. This discharge creates a plasma, a mix of electrons and positive gas ions. The positively charged ions are accelerated by an electric field onto the surface of the target, which is connected as a cathode. This knocks individual atoms out of the target surface. These atoms condense on a substrate, for example glass, and form the functional layer.

Challenges faced

In dynamic coating, the coating thickness is determined by the speed of material removal from the target and the speed at which the substrate is moved past. Other and previously used sealing systems could not meet customer expectations for service life and durability.

Operating Conditions

1. Media: Water (cooling process)
2. Speed: 10-30 rpm
3. Temperature: 30°C
4. Pressure: 4-6 bar

Solution and Benefits

The developed lip material provides high wear resistance and a high service life. Efficient production and maximum output of the photovoltaic modules are basic requirements of the end customers in the solar and photovoltaic segment

Garlock convinces with high-quality lip material and was able to meet the customer's requirements for service life and durability, thus contributing positively to the efficiency and productivity of the customer's equipment.

For more information, please visit:

www.garlock.com

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