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Aachener Kolloquium 2021 – Pressemitteilung

Sustainable mobility with innovative coating solutions from Ionbond

Sustainability has become an important topic in all industries, but especially in the automotive industry. Automotive suppliers and OEMs are already well-acquainted with the advantages of hard coatings to make tools and components last longer and perform better, which contributes to productivity and sustainability both. For instance, the right coating can extend the service life of coated tools and components, reduce the adhesion tendency of components and reduce friction under low-lubrication conditions.

The vision of sustainable and CO_2-neutral mobility increases the additional demands on technology. New engine designs include higher specific, mechanical and thermal loads on components. The drive for even more fuel efficiency increases the need to minimize friction losses in tribological assemblies. This leads to a demand for new materials and innovative surface treatment processes. The low-friction and wear-resistant coating solutions from Ionbonds meet these requirements and more. Ionbond's plasma-assisted PVD and PACVD vacuum coating technologies are environmentally friendly and can make a significant contribution to the sustainability goals of automotive suppliers.

Improving the effective range of battery and fuel cell electric vehicles

The hard, low-friction Tribobond™ 40 series coatings are ideally suited for many e-mobility applications. The main benefit of these diamond-like carbon (DLC) coatings is reducing friction power losses at high speed and increasing the wear resistance and efficiency of powertrains. Tribobond™ 40 can also be used on components for e-compressors, water pumps, sealing, steering and braking units to increase their robustness and reduce the energy consumption of non-drive train systems. This extends the range of battery electric vehicles (BEVs).

DLC coatings are also used to increase the performance and longevity of the fuel cells in fuel cell electric vehicles (FCEVs) and in electrolyzers for the production of "green" hydrogen. In these applications, Tribobond™ coatings significantly improve the electrical conductivity and service life of bipolar plates.

Coated components reduce the emission levels for internal combustion engines

In internal combustion engines, DLC coatings are still the state of the art, even after more than 20 years. They have helped to continuously increase the performance and reduce the emission levels of gasoline and diesel engines. In Euro 7 combustion engines and injection systems, they protect highly stressed components in thin-bodied oils and support the use of future climate-neutral eFuels. The outstanding properties of Tribobond™ coatings significantly extend the service life of internal combustion engines.

Interested? For more information, please visit our website: www.ionbond.com