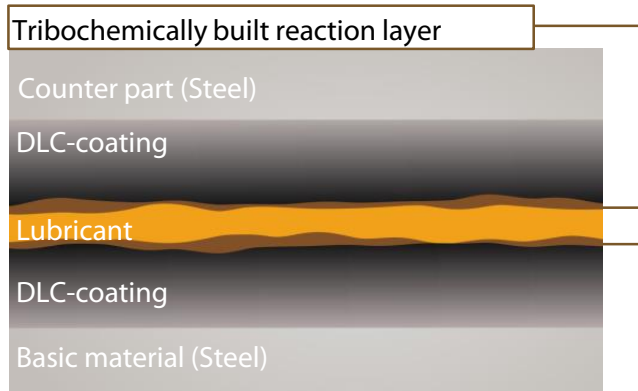


Topic: High-Load Tribometer Tests for the Analysis of the Changed Wetting Behaviour of Lubricants and Additives

PVD-Technology

Aim of the study:

In the context of this work, application-oriented tribological investigations are to be carried out in a high-load tribometer on self-produced DLC-coated discs with various lubricants and additives. Subsequently, the analysis of the tribocontact track is carried out by contact angle measurement, Raman spectroscopy, scanning electron microscopy, laser scanning microscopy, etc. The aim of this work is to increase the understanding of the chemical-physical mechanisms of action between DLC coatings and lubricants/additives.



Schematic representation of tribochemically built reaction layers in DLC/DLC contact

Conditions:

You study mechanical engineering, materials engineering, materials science or a comparable course of study. Are you interested in working independently and practically and in developing innovative coating systems? Then contact us by email or phone.



Mercedes C63 AMG [Source: motorsport-magazin.com]

Topic:

Increasing demands on the energy efficiency of tribological systems and machines require continuous improvement of various components and tools. A technology for successfully increasing of efficiency, e.g. in the automotive industry, is applying coatings on power train components by using Physical Vapour Deposition (PVD). This coating technology enables the production of amorphous carbon coatings $a-C(:H)(:Me/:X)$. These so-called Diamond-like carbon (DLC) coatings show friction and wear reducing effects in tribological systems, e.g. engine components such as tappets, piston rings and gear wheels.

If you are interested we can make an appointment to discuss further details.
Just contact me by email or phone.

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