PA/BA/MA

Topic: Effect of Diamond-like Carbon (DLC) coatings and green lubrication on tribological contacts

PVD technology

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 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 have friction and wear reducing effects in tribological systems, e.g. engine components such as tappets, piston rings and gear wheels.

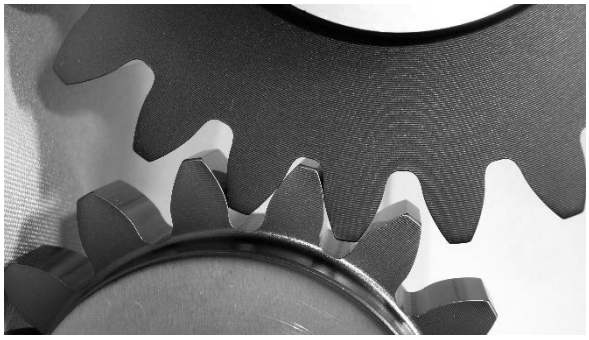
Aim of the study:

The aim of this work is to analyze the the interactions between biodegradable lubricants and DLC coatings are to be determined using various analytical methods. Tribological examinations are performed on the pin-on-disc (PoD) tribometer. The aim is to investigate an ecological alternative to conventional tribological systems. The findings serve as the basis for the research area "DLC/Green Lubrication", which has so far received little attention.

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.

biodegradable lubricant [Source: www.dymarlube.com]



DLC coated wheels [IOT]

Mercedes AMG GT R [Source: www.mercedes.de]

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

Contact:
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