Protection of elastomers with DLC film

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Stellingen

Behorende bij het proefschrift

PROTECTION OF ELASTOMERS WITH DLC FILMS

Deposition, Characterization and Performance

By

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1. Flexible DLC films provide excellent protection to elastomers: reduced friction, negligible wear and superb adhesion.

2. Cleaning and pre-treatment are critical steps for a good adhesion of the film to the elastomer.

3. Tailored deposition of columnar cracked films may be the best choice for protection of flexible substrates

4. The overall friction coefficient of DLC-coated elastomers is the result of a complex combination of adhesive and rubber hysteresis contributions.

5. The reduction of friction of coatings on elastomers entails a deep knowledge of the substrate viscoelasticity.

6. To sleep well, it is better not to think in the mathematical complexity hidden in the mattress you lay upon.

7. Scientists care about atomic %; engineers for obvious reasons count in weight %.

8. What we know is one drop. What we don't understand is an ocean (Isaac Newton).

9. Scientific work must not be considered from the point of view of the direct usefulness of it. It must be done for itself, for the beauty of science, and then there is always the chance that a scientific discovery may become a benefit for mankind (Marie Curie). *Science counts for mankind but is not countable.*

10. Next to the most abundant element in the Universe (Hydrogen) is not the element Helium but the element coined Administratum. Already at minute concentrations the latter seems to be very toxic and very stable. Undisputedly it was proved to poison innovations. (*correspondence with Jeff Th. M. De Hosson*).