

Surface Texturing

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Abstract:

The texturing of surfaces of machine elements has been the center of debate for more than ten years without conclusive results. The experimental results of either basic or system tests do not allow for a definite picture of the effects of surface texturing on the behavior of rolling and sliding contacts. In this talk, both theoretical as well as experimental results will be presented to quantify the effect of surface texturing on rolling contacts. The influence of many aspects of surface texturing such as the shape of the texture, its density, its lay etc. were investigated. The results allow for a quantification of the effects that surface texturing has on the basic parameters of a rolling contact, such as the pressure and the film thickness and subsequently the lifetime of such a contact.

Bio:

Dr. Vasilios Bakolas was born in Thessaloniki, Greece. He studied Mechanical Engineering at the Aristotle University of Thessaloniki, where he also wrote his Ph.D. thesis. In 2000 he started working as an analytical engineer for the Schaeffler Group. For more than 10 years he was responsible for contact modelling and lubrication analysis of contacts. From 2011-2017 he was responsible for the Advanced Bearing Analysis Department where he continued to deal with tribology questions but he was also heavily involved in innovation projects in the field of bearings. In 2017 he was appointed to Principal Expert for Bearings R&D. He has been a member of the STLE Board of Directors from 2011-2017. He is also an Associate Editor for Tribology Transactions since 2009. Dr. Bakolas has written more than 30 articles and conference papers. He also holds 5 patents related to various aspects of rolling element bearings.