Special Issue

Friction and Lubrication of Mechanical Drive Train Components

Message from the Guest Editors

Approximately 20% of the world's total energy consumption originates from friction in tribological contacts. Frictional power loss in the contacts of mechanical drive train components significantly contributes to this number. This fact underlines the outstanding importance of the engineering task to understand the essential processes in this field, using this knowledge to minimize undesired frictional losses. Modern lubrication methods, novel materials, and specific contact design approaches represent important aspects that improve the efficiency of tribological contacts, which have resulted due to the transfer of the newest scientific results to industrial applications. This Special Issue focuses on the friction and lubrication of mechanical drive train components, such as bearings, gears, and seals. It includes all types of contact load and speed combinations, and therefore, ranges from slow-running systems, such as wind turbines, to high-speed turbomachinery systems. It will address both the contact problem itself, including issues related to materials, lubrication, or fluid flow, and the interaction of the frictional contact with other components of the machine.

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Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.
Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.
There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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