Special Issue

Gear Load-Independent Power Losses

Message from the Guest Editor

Gear systems are currently widely used in all fields of industry. Generally speaking, classic oil sump and splash lubrication are exploited at a low and moderate speed, while oil jet lubrication is for high-speed conditions. The former is related to churning phenomena, and the latter is with windage behavior. In the last few decades, important research on gear load-independent power losses for various types of gear has been extensive, especially for gear drag power losses (churning power losses, windage power losses, etc.). However, the transition between churning and windage phenomena for an isolated gear or a gear pair is relatively unexplored. Furthermore, no clear criterion is defined and published for suggesting which lubrication method for gears to select and which drag power losses model to use in different speed ranges. The current Special Issue is aimed at the latest developments concerning gear-load-independent power loss mechanisms (such as churning power losses, windage power losses, pocketing power losses, and impacting power losses) and lubrication technology and the effect of gear working parameters upon their lubrication behavior.

Guest Editor

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Message from the Editor-in-Chief

Friction, wear, and lubrication are tribological phenomena that govern the behavior of interacting surfaces in a wide range of machine components. Understanding the physical and chemical nature of these phenomena is critical to achieving long component lifetime and economical operation. Research in the field of tribology is highly interdisciplinary, and encompasses the fields of physics, chemistry, engineering, and mathematical modeling. *Lubricants* invites contributions on new advances in all areas of tribology for publication as peer-reviewed research articles, reviews of current research, letters, and communications. We are committed to providing timely reviews of all articles submitted. Please consider sharing your work with the scientific community through publication in *Lubricants.*

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