Special Issue

Tribological Behavior of Wire Rope

Message from the Guest Editors

Steel wire ropes, as a type of transmission and load-bearing component with a long history of use, are widely applied in fields such as lifting, traction, aerial ropeways, coal mine transportation, port operations, deep-sea drilling, military equipment, and bridge cables, where they play a crucial role. Additionally, due to their excellent mechanical strength and flexibility, steel wire ropes are often combined with polyurethane materials, such as in elevator traction belts and conveyor belts. However, during long-term use, steel wire ropes undergo various forms of frictional wear, leading to a decline in their service performance and posing safety risks. Therefore, this Special Issue aims to delve into the tribological behavior of steel wire ropes, revealing their characteristic mechanisms and potential hazards. Relevant research mainly includes the material properties, structural design, service environment, load characteristics, mechanical properties of steel wire ropes, and the interaction mechanisms present among them. Contributions to the experimental and theoretical research results in these aspects are welcome.

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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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