



lubricants



Special Issue Reprint

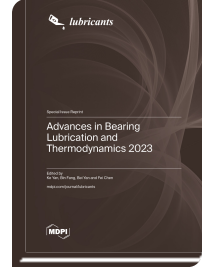
Advances in Bearing Lubrication and Thermodynamics 2023

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Bearings are currently the most widely used mechanical component. In the process of high-speed and heavy-load operation, friction and heat generate between the rolling elements, cages, and rings. At this time, lubrication technology is integral to reducing friction and wear, facilitating heat dissipation, and extending the bearings' life. In the last century, important research on bearing thermal analysis and corresponding lubrication technologies has been conducted. However, as the bearing speeds continue to increase, complex operation conditions pose more challenges to bearing thermal analysis. At the same time, the continuous cross-fusion of materials, sensors, big data, and emerging technologies has enabled the continuous improvement of bearing lubrication technology. This Reprint is aimed at the latest developments centered around the thermal mechanisms and lubrication technology, as well as the effect of the bearings' working parameters on their lubrication performance and thermal behavior.



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