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Enhancement of Radiator Efficiency by Using Magnesium Oxide (MgO) Nanoparticles

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Abstract: In modern automotive and industrial systems, efficient thermal management is critical for ensuring performance, reliability, and longevity. Traditional coolants like water or ethylene glycol have limited thermal conductivity, leading to inefficient heat dissipation under high-performance conditions. To address this challenge, the use of nanofluids—fluids enhanced with nanoparticles—has emerged as a promising solution. This article explores the application of Magnesium Oxide (MgO) nanoparticles in radiator systems, focusing on how they enhance heat transfer, improve cooling efficiency, and reduce the risk of overheating.

Keywords: Radiator, Nanofluid, Magnesium Oxide



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