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Titolo	Automotive Tribology // edited by Jitendra Kumar Katiyar, Shantanu Bhattacharya, Vinay Kumar Patel, Vikram Kumar
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Descrizione fisica	1 online resource (342 pages)
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Disciplina	621.89
Soggetti	Tribology Corrosion and anti-corrosives Coatings Automotive engineering Engines Machinery Tribology, Corrosion and Coatings Automotive Engineering Engine Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di contenuto	Introduction -- Tribology of Automotive Engine -- Materials Aspects in Engine -- Tribo-Performance of Polymer Composite in Automotive Application: a Review -- Surface Coatings for Automobile Applications -- Prospects of Cavitation in the Field of Internal Combustion Engines -- Tribological performance of surface textured automotive components: A review -- Influence of Surface Texturing in Controlling Friction and Wear -- Influence of fillers on thermo-mechanical and tribological behavior of GFRP composites -- Mechanical and Erosion characteristics of natural fiber reinforced polymer composite: Effect of Filler size -- Erosion Wear Behaviour and Dynamic Mechanical Analysis of Hybrid Reinforced Polymer Composite for Automotive Application -- Effect of Reinforcements on the Tribological behavior of Aluminum Matrix Surface composites -- The Future of Metal Foam Materials in the Automotive Industry -- The Potential of Natural fibers/ fillers for Automotive Sector -- Lubrication Aspects in Automobile -- Sustainable

Lubrication in Automobiles -- Grease Lubrication -- Lubrication Effectiveness and Sustainability of solid/liquid Additives in Automotive Tribology -- The Potential of Bio-lubricants in Automotive Tribology -- Asbestos free braking pads by using organic fiber based reinforced composites for automotive industries -- Analysis of Partial Texture Journal Bearing Lubricated with Couple Stress Fluids -- Shot peening effects on abrasive wear behavior of medium carbon steel.

Sommario/riassunto

This book presents a comprehensive study of all important aspects of tribology. It covers issues and their remedies adopted by researchers working on automobile systems. The book is broadly divided into three sections, viz. (i) new materials for automotive applications, (ii) new lubricants for automotive applications, and (iii) impact of surface morphologies for automotive applications. The rationale for this division is to provide a comprehensive and categorical review of the developments in automotive tribology. The book covers tribological aspects of engines, and also discusses influence of new materials, such as natural fibers, metal foam materials, natural fiber reinforced polymer composites, carbon fiber/silicon nitride polymer composites and aluminium matrix composites. The book also looks at grease lubrication, effectiveness and sustainability of solid/liquid additives in lubrication, and usage of biolubricants. In the last section the book focuses on brake pad materials, shot peening method, surface texturing, magnetic rheological fluid for smart automobile brake and clutch systems, and application of tribology in automobile systems. This book will be of interest to students, researchers, and professionals from the automotive industry.
