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Research Papers: Applications

Study of a Brittle Transparent Disk Under Dry RCF Conditions

Arthur Francisco, Houssein Abbouchi and Bernard Villechaise

J.

Tribol. 2010;132(3):031101-031101-8.

doi:10.1115/1.4001785.

Research Papers: Biotribology

Effects of Nanostructured Additives on Boundary Lubrication for Potential Artificial Joint Applications

Alice Pendleton, Prasenjit Kar, Subrata Kundu, Sahar Houssamy and Hong Liang

J.

Tribol. 2010;132(3):031201-031201-5.

doi:10.1115/1.4001457.

Research Papers: Coatings & Solid Lubricants

Tribological Behaviors of PTFE-Based Composites Filled With Nanoscale Lamellar Structure Expanded Graphite

Yu-lin Yang, Zhi-ning Jia, Jin-jiang Chen and Bing-li Fan

J.

Tribol. 2010;132(3):031301-031301-7.

doi:10.1115/1.4001546.

Research Papers: Self Lubricating Composite Coatings Containing TiC–MnS or

WC–MnS Compounds Prepared by the Plasma Transferred Arc (PTA) Technique

P. Skarvelis, G. D. Papadimitriou and M. Perraki

J.

Tribol. 2010;132(3):031302-031302-8.

doi:10.1115/1.4001649.

Research Papers: Contact Mechanics

Contact Area and Static Friction of Rough Surfaces With High Plasticity Index

L. Li, I. Etsion and F. E. Talke

J.

Tribol. 2010;132(3):031401-031401-10.

doi:10.1115/1.4001555.

Research Papers: Elastohydrodynamic Lubrication

Plasto-Elastohydrodynamic Lubrication (PEHL) in Point Contacts

Ning Ren, Dong Zhu, W. W. Chen and Q. Jane Wang

J.

Tribol. 2010;132(3):031501-

031501-11.
doi:10.1115/1.4001813.

Research Papers: Friction & Wear

Effect of Thread and Bearing Friction Coefficients on the Self-Loosening of Preloaded Countersunk-Head Bolts Under Periodic Transverse Excitation

Amro M. Zaki, Sayed A. Nassar and Xianjie Yang

J. Tribol. 2010;132(3):031601-031601-11.
doi:10.1115/1.4001621.

Application of Elastic-Plastic Static Friction Models to Rough

Surfaces With Asymmetric Asperity Distribution

Chul-Hee Lee, Melih Eriten and Andreas A. Polycarpou

J. Tribol. 2010;132(3):031602-031602-11.
doi:10.1115/1.4001547.

Thermodynamic Model of the Metallic Friction Process

Maria Maciąg

J. Tribol. 2010;132(3):031603-031603-7.
doi:10.1115/1.4001895.

Comparison Between Elastic Foundation and Contact Force

Models in Wear Analysis of Planar Multibody System

Saad Mukras, Nam H. Kim, Nathan A. Mauntler, Tony Schmitz and W. Gregory Sawyer

J. Tribol. 2010;132(3):031604-031604-11.
doi:10.1115/1.4001786.

Research Papers: Hydrodynamic Lubrication

On Squeeze Film Damping in

Microsystems

Victor Marrero, Diana-Andra Borca-Tasciuc and John Tichy

J. Tribol. 2010;132(3):031701-031701-6.
doi:10.1115/1.4001620.

Design and Evaluation of Damped Air Bearings at Head-Disk Interface

Jianhua Li, Junguo Xu, Yuki Shimizu, Masayuki Honchi, Kyosuke Ono and Yukio Kato

J. Tribol. 2010;132(3):031702-031702-13.
doi:10.1115/1.4001812.

Surface Roughness Effects on Air Bearing Performance Over a Wide

Range of Knudsen and Wave Numbers

James White

J. Tribol. 2010;132(3):031703-031703-10.
doi:10.1115/1.4001848.

Research Papers: Lubricants

The Effect of Deformation Speed

on Frictional Behavior by Tip Test

Ki-Ho Jung and Yong-Taek Im

J.

Tribol. 2010;132(3):031801-031801-6.
doi:10.1115/1.4001556.

Feasibility of Gas-Expanded Lubricants for Increased Energy

Efficiency in Tilting-Pad Journal Bearings

Andres Clarens, Amir Younan, Shibo Wang and Paul Allaire

J.

Tribol. 2010;132(3):031802-031802-8.
doi:10.1115/1.4001648.

Research Papers: Mixed and Boundary Lubrication

Effect of Friction Modifiers and Antiwear Additives on the Tribological Performance of a Hydrogenated DLC Coating

T. Haque, A. Morina and A. Neville

J.

Tribol. 2010;132(3):032101-032101-13.
doi:10.1115/1.4001650.

On the Prediction of Running-In Behavior in Mixed-Lubrication Line

Contact

Saleh Akbarzadeh and M. M. Khonsari

J.

Tribol. 2010;132(3):032102-032102-11.
doi:10.1115/1.4001622.

Research Papers: Other (Seals, Manufacturing)

Identification of Force Coefficients in a Squeeze Film Damper With a Mechanical Seal: Large Contact Force

Adolfo Delgado and Luis San Andrés

J.

Tribol. 2010;132(3):032201-032201-7.
doi:10.1115/1.4001458.

A Model for Improved Prediction of Force Coefficients in Grooved

Squeeze Film Dampers and Oil Seal Rings

Adolfo Delgado and Luis San Andrés

J.

Tribol. 2010;132(3):032202-032202-12.
doi:10.1115/1.4001459.

Technical Briefs

Elastohydrodynamic Line-Contact of Compressible Shear Thinning Fluids With Consideration of the Surface Roughness

J. Y. Jang and M. M. Khonsari

J.

Tribol. 2010;132(3):034501-

034501-6.
doi:10.1115/1.4001787.

An Overview of the Hardness

Differential Required for Abrasion

Giuseppe Pintaude

J.

Tribol. 2010;132(3):034502-
034502-4.
doi:10.1115/1.4001896.

Slurry Pump Impeller Wear: Testing

Veselin Batalović

J.

Tribol. 2010;132(3):034503-
034503-5.
doi:10.1115/1.4001784.

Study of Wear Self-Repair of Steel 100Cr6 Rubbed With Lubricants

Modified With Schiff Base Copper Complex

Xinlei Gao, Li Wu, Jian Li and Wanzhen Gao

J.

Tribol. 2010;132(3):034504-
034504-5.
doi:10.1115/1.4001963.