

Ref: C 2 PF 251199/03
JOURNAL OF TRIBOLOGY (ASME)
01.04.01 Vol: 123 No. 2
0742-4787 22101144
LIBRIS - C2
144 BOULEVARD KRIM BELKACEM
ALGER
ALGERIE

DE: 27745325

16.05.01

JOURNAL OF TRIBOLOGY

Transactions of the ASME®

Editor:
JOHN TICHY

Associate Editors:

G. A. ADAMS (2003)
M. BRYANT (2001)
YIP-WAH CHUNG (2003)
M. T. DUGGER (2003)
B. JACOBSON (2001)
M. M. KHONSARI (2003)
R. KU (2002)
A. LUBRECHT (2003)
T. C. OVAERT (2003)
L. SAN ANDRES (2002)
J. STREATOR (2002)
C. VENNER (2004)
J. WILLIAMS (2002)
S. WU (2004)

Past Editors:

D. F. WILCOCK (1967-1974)
D. F. HAYS (1975-1980)
W. O. WINER (1981-1987)
A. Z. SZERI (1988-1993)
F. E. KENNEDY, JR. (1993-1998)

TRIBOLOGY DIVISION

Chairman, R. BARNSBY
Secretary, I. ETSION

BOARD ON COMMUNICATIONS

Chairman and Vice-President
R. K. SHAH

OFFICERS OF THE ASME

President, JOHN R. PARKER

Exec. Director:

D. L. BELDEN

Treasurer:

J. A. MASON

PUBLISHING STAFF

Managing Director, Engineering

CHARLES W. BEARDSLEY

Director, Technical Publishing

PHILIP DI VIETRO

Managing Editor, Technical Publishing

CYNTHIA B. CLARK

Managing Editor, Transactions

CORNELIA MONAHAN

Production Coordinator

COLIN MCATEER

Production Assistant

MARISOL ANDINO

Transactions of the ASME, Journal of Tribology (ISSN

0742-4787) is published quarterly (Jan., April, July,

Oct.) by The American Society of Mechanical Engineers,

Three Park Avenue, New York, NY 10016.

Periodicals postage paid at New York, NY

and additional mailing offices.

POSTMASTER: Send address changes to Transactions of

the ASME, Journal of Tribology, c/o THE AMERICAN

SOCIETY OF MECHANICAL ENGINEERS, 22 Law Drive,

Box 2300, Fairfield, NJ 07007-2300.

CHANGES OF ADDRESS must be received at Society

headquarters seven weeks before they are to be effective.

Please send old, old and new addresses.

STATEMENT from By-Laws: The Society shall not be

responsible for statements or opinions advanced in papers

or ... printed in its publications (37-1, Par. 3).

COPYRIGHT © 2001 by The American Society of

Mechanical Engineers. For authorization to photocopy

material for internal or personal use under these

circumstances not falling within the fair use provisions of the

Copyright Act, contact the Copyright Clearance Center

(CCC), 222 Rosewood Drive, Danvers, MA 01923, tel: 978-

750-8400, www.copyright.com. Request for special

permission or bulk copying should be addressed to

Reprints/Permission Department.

INDEXED by Applied Mechanics Reviews and Engineering

Information, Inc. Canadian Goods & Services

Tax Registration #126148948

Journal of Tribology

Published Quarterly by The American Society of Mechanical Engineers

VOLUME 123 • NUMBER 2 • APRIL 2001

237 Editorial

TECHNICAL PAPERS

- 238 Fatigue Failure Progression in Ball Bearings
Michael N. Kotzalas and Tedric A. Harris
- 243 Analysis of a Self-Tracking Rolling Element Bearing
Christopher E. Truman, Jonathan J. Blake, and Anthony Sackfield
- 248 A Generalized Traction Curve for EHL Contacts
B. Jacod, C. H. Venner, and P. M. Lugt
- 254 Elastohydrodynamic Film Collapse During Rapid Deceleration:
Part I—Experimental Results
R. P. Glovnea and H. A. Spikes
- 262 Elastohydrodynamic Film Collapse During Rapid Deceleration:
Part II—Theoretical Analysis and Comparison of Theory
and Experiment
R. P. Glovnea and H. A. Spikes
- 268 Elastohydrodynamics of a Worm Gear Contact
S. Kong, K. Sharif, H. P. Evans, and R. W. Snidle
- 276 Direct and Inverse Solutions for Elastohydrodynamic Lubrication of Finite
Porous Journal Bearings
Abdallah A. Elsharkawy and Lotfi H. Guedouar
- 283 Flow Factors for Lubrication With Emulsions in Ironing
Steven R. Schmid and Jin Zhou
- 290 Influence of Workpiece Surface Topography on the Mechanisms of Liquid
Lubrication in Strip Drawing
Ichiro Shimizu, Jan L. Andreasen, Jakob I. Bech, and Niels Bay
- 295 Groove Effects on Thrust Washer Lubrication
To HimYu and Farshid Sadeghi
- 305 Improvement of Operating Characteristics of High-Speed Hydrodynamic
Journal Bearings by Optimum Design: Part I—Formulation of
Methodology and Its Application to Elliptical Bearing Design
H. Hashimoto and K. Matsumoto
- 313 Thermal and Dynamic Characterization of Wet Clutch Engagement With
Provision for Drive Torque
M. Mansouri, M. Holgerson, M. M. Khonsari, and W. Aung
- 324 Tribo-Chemical Wear of Amorphous Carbon Overcoats and TiC in
Al₂O₃-TiC Sliders
Lihong Zhang
- 330 A Numerical Three-Dimensional Model for the Contact of Layered
Elastic/Plastic Solids with Rough Surfaces by a Variational
Principle
Wei Peng and Bharat Bhushan
- 343 Numerical and Experimental Investigations of the Head/Tape Interface in
a Digital Linear Tape Drive
Sanwu Tan and Frank E. Talke
- 350 Analysis of Contact Deformation and Stiction Between Textured Disk and
Textured Slider
Mingwu Bai and Koji Kato
- 358 Error Analysis of Head-Disk Spacing Measurements Made by Using
Optical Interferometry
Yasunaga Mitsuya and Yasuji Ohshima

(Contents continued on inside back cover)

This journal is printed on acid-free paper, which exceeds the ANSI Z39.48-1992 specification for permanence of paper and library materials. ♻️
♻️ 85% recycled content, including 10% post-consumer fibers.