



PROCEEDINGS

2nd National Industrial Tribology Conference 1976

Editors : R. C. CHATURVEDI & R. A. RAO

621.89(063)
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PROCEEDINGS
OF THE
Second National
Industrial Tribology Conference
Bombay—1976



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PREFACE

The word Tribology, though having ancient greek origin, was introduced in our vocabulary not very long ago. It made its forceful appearance on the Indian Scene when the World Conference in Industrial Tribology was organised at IIT Delhi in 1972. The impact gave birth to the Indian Society for Industrial Tribology and under its influence Industrial Tribology has become an accepted discipline at many institutions. A number of short term programmes have been organised by the society for the people in the industry and a few postgraduate programmes have also been initiated. With widespread acceptance of this multidisciplinary area the need for a forum for interaction among research workers and practising engineers in this area was strongly felt, and the first national conference was organised in 1974 at IIT Madras.

This volume incorporates the papers presented at the Second National Industrial Tribology Conference held at the Indian Institute of Technology Bombay from December 6th – 8th, 1976. These papers have been grouped under 5 main sections viz.

1. Gears and I.C. Engines.
2. Friction and wear of surfaces.
3. Metal Working.
4. Bearings (Design, Stability and Performance).
5. Lubrication Practice and Maintenance Management.

The address of the Chairman and the Keynote address delivered by Dr. J. S. Ahluwalia has been included in the prelims. The Invited talk by Dr. H. Dalal was without a prepared text and we have been able to incorporate only a summary. We have however been able to record a large part of the discussions after the talk and that is also incorporated.

Dr. M. G. Krishna delivered an invited talk on Quest for conservation – the role of R and D Institutions. We are sorry that it could not be incorporated in the proceedings as the written text is not available.

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The proportion of practising engineers from the Industry was almost 75 percent of the total participation and they contributed vigourously in the session on Case Studies and Panel Discussion. Unfortunately it has not been possible for us to record the deliberations of that session, and the proceeding have certainly missed quite some valuable experience.

Discussions on the papers presented were also generally vigorous, and we have incorporated whatever we could record at the end of the proceedings. We sincerely regret the omissions on our part and request the contributors to forgive us.

Organising a conference of this magnitude is an experience by itself. There were many shortcomings which were gracefully overlooked by the participants. However even this could have hardly been possible but for the support we got from the members of the reception and organising committees, student volunteers and a large number of technical and other staff particularly Mr. Patil, and Miss Ravikala, and we are indeed grateful to all of them. We wish to record our gratitude to all the Cosponsors, and Advertisers, who contributed the finance for the conference. We are also grateful to, the members of the National Organising Committee, Reviewing Committee, and the Chairmen of the various technical sessions.

Finally we must thank the sponsors of the delegates, the delegates themselves and the authors of the papers, who only constitute the conference.

March 1978
Bombay.

R. C. Chaturvedi
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CONTENTS

Preface	3
Cosponsors	5
Advertisers	6
The National Organising Committee	7
The Paper Reviewing Committee	9
The Local Organising Committee	10
The Role of Industrial Tribology <i>A. K. De</i>	i
Policies and Practics Connected with Lubricants <i>J. S. Ahluwalia</i>	iii
Role of Tribology in the Reliability and Maintainability of Equipment <i>H. Dalal</i>	ix
GEARS AND INTERNAL COMBUSTION ENGINES	
1. Instantaneous Friction Coefficient for Gears <i>A. C. Rao and M. R. Madan.</i>	I-1.1 to I-1.5
2. Surface Durability of Gears <i>R. Krishnamurthy</i>	I-2.1 to I-2.8
3. Moisture Corrosion Tendencies of Automotive Hypoid Gear Oil : Development of Test Technique. <i>R. L. Mendiratta, R. K. Sharma, S. Singhal.</i>	I-3.1 to I-3.6
4. Low Temperature Deposits : A Brief Study on Indian Passenger Cars. <i>S. K. Jain and S. Singhal.</i>	II-1.1 to II-1.6
5. Analytical Methods of Determining Wear Life of a Piston – Cylinder Assembly for an I.C. Engine. <i>B. D. Shivalkar and S. L. Kulkarni</i>	II-2.1 to II-2.5
6. Surface Durability of Nylon Gears <i>R. Padmanabhan and R. Krishnamurthy.</i>	II-3.1 to II-3.6
7. Lubricant under service in Marine Diesel Engine. <i>M. V. R. Koteswara Rao, A. K. Audi and T. S. Muralidharan.</i>	II-4.1 to II-4.4
FRICITION AND WEAR OF SURFACES	
8. Dynamic Loading and Wear Analysis of the Bearing of 4 Bar Pin Jointed Mechanisms. <i>R. Samuel, K. N. Rustagi and K. Sukumar.</i>	III-1.1 to III-1.8
9. Studies on the Friction and Wear Behaviour of Sintered Iron based Friction Materials. <i>K. Gopinath, G. V. N. Rayudu and R. G. Narayanamurthi.</i>	III-2.1 to III-2.5

10. Possibilities of Theoretical Separation of Waviness from Surface Profiles
M. S. Shunmugam and V. Radhakrishna. III-3.1 to III-3.4
11. An Experimental Study of the Wear of Cast Iron
K. L. Awasthy and J. P. Sharma. III-4.1 to III-4.9
12. An Experimental Study of Wear of Steel Surfaces.
K. L. Awasthy and J. P. Sharma. IV-1.1 to IV-1.5
13. Wear Under Magnetic Field.
M. K. Muju and A. Ghosh IV-2.1 to IV-2.4

METAL WORKING

14. Effect of Coolant Supply Conditions on Grinding Parameters
Ashok Kumar and P. C. Pandey. V-1.1 to V-1.5
15. Friction in High Speed Forging
Surender Kumar, C. B. Mishra V-2.1 to V-2.4
16. An Investigation of Electrolytic Grinding Process
G. Kuppuswamy and V. C. Venkatesh V-3.1 to V-3.4
17. Novel Radioisotope Applications in Metal Cutting Studies
R. Chawla, S. L. Bhattacharya and A. G. Gohad. V-4.1 to V-4.4
18. Lubricants in Metal Working
B. N. Das V-5.1 to V-5.6
19. Application of Tapping Test to Evaluate the Performance of Cutting Fluid Blends
S. K. Laad, N. Ramaswamy and A. K. De. VI-1.1 to VI-1.8
20. Effect of Lubrication on Combined Forward and Backward Extrusion of Copper and Aluminium
V. Gopinathan, Ali Shajee Teiyebi and P. Venugopal. VI-2.1 to VI-2.5
21. Mist Cooling in Machining Operations
K R. Bhat. VI-3.1 to VI-3.5
22. Evaluation of Steel Rolling Oil with Disk Machine
V. K. Jain VI-4.1 to VI-4.3
23. Abrasive Jet Machining of Glass
M. L. Neema, P. C. Pandey and I. L. Sapra VI-5.1 to VI-5.4

BEARINGS (DESIGN, STABILITY, PERFORMANCE)

24. The Influence of Polymer Modified Lubricants on the Threshold Speeds of Sleeve Bearings
S. T. N. Swamy, B. S. Prabhu and B. V. A. Rao. VII-1.1 to VII-1.6
25. Step Bearings with Micropolar Lubricant: Effect of Solid Particle Additives in Solution
M. Isa and K. Zaheeruddin VII-2.1 to VII-2.4

26. Performance Characteristics of Orifice and Capillary Compensated Six Pocket Hydrostatic Journal Bearings by Finite Element Method
R. C. Ghai, D. V. Singh and R. Sinhasan VII-3.1 to VII-3.6
27. Tests on Spherical Sintered Bearings
T. Sowmyan and R. Raman VII-4.1 to VII-4.4
28. Reliability in Titting Pad Journal Bearings
D. R. Kothari, P. R. Patel and D. K. Kulkarni VII-5.1 to VII-5.6
- BEARINGS (DESIGN, STABILITY, PERFORMANCE)
29. Effect of Correlation on the Steadystate Performance of a Hydrodynamic Journal Bearing with a Non-Newtonian Lubricant.
C. Rajalingam, B. S. Prabhu and B. V. A. Rao. VIII-1.1 to VIII-1.7
30. Stabilisation of Oil Film Thickness in Hydrostatic Bearings
Y. K. Dange VIII-2.1 to VIII-2.5
31. Analysis of Externally Pressurized Flexible Thrust Bearing by Finite Element Method
A. Rajagopal and B. G. Ghosh. VIII-3.1 to VIII-3.7
32. Finite Element Analysis of Bearing Lubrication Problem using isoparametric Element.
C. V. Ramakrishnan VIII-4.1 to VIII-4.5
- LUBRICATION PRACTICE AND MAINTENANCE MANAGEMENT
33. Planning for Preventive Maintenance in General Engineering Industries
L. N. Agarwal, S. N. Daga and K. C. Jain. IX-1.1 to IX-1.5
34. Predictive Maintenance by Ferography
D. Scott and V. C. Westcott. IX-2.1 to
35. Machinery and Plant Lubrication Practices
H. N. Ojha and R. P. Shrivastava. IX-3.1 to IX-3.8
36. Acoustics Aided Maintenance of Machine Tools
M. A. Manan, S. Vaidyanathan and B. V. A. Rao. IX-4.1 to IX-4.4
37. Importance and Application of Filtration in Industrial Tribology.
G. V. Ramanaiah and V. Nagaraj. X-1.1 to X-1.5
- ✓ 38. Re-refining of Engine Oils and Hydraulic Oils
M. K. Bhargava X-3.1 to X-3.6

Discussions on papers

D-1