

PROCEEDINGS  
OF THE  
FIRST WORLD CONFERENCE  
IN  
INDUSTRIAL TRIBOLOGY  
NEW DELHI : 1972

Dedicated to all those, both in India and abroad, who directly and indirectly rendered their support in the noble cause in successfully organising the First World Conference in Industrial Tribology, 1972 in New Delhi

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Edited by

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## ACKNOWLEDGEMENT

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## PREFACE

This volume records in part the technical material presented at the First World Conference in Industrial Tribology during December 11-18, 1972. In this publication, the papers are selected from a number of contributions received from all over the World. The reviewers carefully selected the papers for presentation in this conference. Care has been taken to incorporate in this volume papers ranging from the importance of Tribology and research oriented to various industrial problems. However, basic and latest research in Tribology is also incorporated in it to cover the broadness of Tribology as an interdisciplinary area.

The papers presented at various sessions are classified as :

Tribology & Design ; Additives, Grease and Petroleum Products ; Control Fluids, Experimental Methods and Tribology in Medical Engineering ; Materials, Metallurgy and Engine Lubrication ; Elasto-hydrodynamic lubrication ; Friction and Wear ; Tribology in Production Process ; Gears and Bearings ; Tribology and Planning in Industry.

A sample survey on Industrial Tribology undertaken by the Conference has revealed a good potential for expansion of this work in India. Three typical cases from industrial organisations on Industrial Tribology were also discussed.

A proposal has been prepared for inclusion of Tribology and Planning in the Fifth Five Year Plan of the country for the Ministry of Planning and the Department of Science and Technology with a view of expansion of the discipline at top priority. A 20% and more net saving is assured if scientific application of Tribology is undertaken by the Indian Industries during the next few years. With a view to promote such activities, the conference delegates have recommended that the organising committee of World Conference, its Chairman and its Convener should attempt to form an Indian Society for Industrial Tribology. Such a body will further promote the formation of an International Society for Industrial Tribology with its secretariat in Delhi. All enquiries concerning the proposed Indian Society for Industrial Tribology may be addressed to :

Dr. J. P. Sharma  
Convener  
Indian Society for Industrial Tribology  
c/o Department of Mechanical Engineering  
Indian Institute of Technology  
Hauz Khas, New Delhi-110029 (India)

The real and permanent contribution to the 1972 first World Conference in Industrial Tribology were those of the delegates and the numerous authors. We are very grateful to them for their active participation.

We gratefully acknowledge the tremendous work put in by Mr. L. J. Haravu, Deputy Librarian and Mr. Rishi Kant Jha, Pool Officer, both of Indian Institute of Technology, New Delhi, in the publication of this Proceedings. This get up in no way would have been possible without their effort. We also acknowledge the role of the Technical Review Committee and thank all the members for their assistance.

July 1973

R. C. MALHOTRA  
J. P. SHARMA

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# WORLD CONFERENCE IN INDUSTRIAL TRIBOLOGY

(December 11-18, 1972)

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