



3rd

INTERNATIONAL CONFERENCE ON INDUSTRIAL TRIBOLOGY

8th to 11th April, 2002 at TATA Steel, Jamshedpur



Theme
**"Emerging Trends
in Tribology"**



V6

Organised by :

TATA Steel, Jamshedpur

Under the Aegis of Tribology Society of India
(www.tribologyindia.org)

Introduction

TATA Steel, Jamshedpur, under the aegis of Tribology Society of India (TSI) is proud to announce the **Third International Conference on Industrial Tribology (ICIT)** to be held at Jamshedpur, India during 8th to 11th April 2002. After the first World Tribology Conference of Industrial Tribology of 1972 held at New Delhi with a focus on the development of the discipline of Tribology in India, biennial National Conferences were regularly organised to provide a forum for sharing of experience of Tribologists from industry and academic research institutions. In December 1997, an International Conference was organised at Kolkatta with a theme '**War against Wear**' to commemorate 25 years of the Indian contribution in the advancement of the science of Tribology which sensitized the scientists and engineers in India to the importance and interdisciplinary sweep of Tribology.

The Third ICIT is being organized by TATA STEEL at Jamshedpur with the theme **Emerging Trends in Tribology** to bring to focus the achievements of Tribology by 2000 and the future advancement of this discipline in the 21st Century.

Contents

The theme **Emerging Trends in Tribology** is proposed to cover the broad areas of Tribology through following technical sessions which include different aspects of Tribology. The proposed technical sessions are :

- **Lubrication**
- **Lubricants**
- **Maintenance Tribology & Condition Monitoring**
- **Wear**
- **Tribology in Specific Industrial Sectors**
- **Current issues in Tribology**
- **Advanced Material and Coatings**

Education Courses

There will be two education courses on 8th and 9th April 2002 on the eve of ICIT on the following topics:

- | | |
|---|---|
| • Cement/Steel Plant Lubrication | Dr. B. Chakrabarti (L&T) and
Shri C.M. Sharma (TATA Steel) |
| • Basics of Tribology | Dr. M.R. Tyagi (IIP Dehradun) |

The courses will consist of a one day theory course followed by one day visit to industries in Jamshedpur. The course fee is Rs.3000/- per head if paid before 28th Feb' 02 and Rs.4000/- if paid later.

TSI members will have to pay Rs.2000/- and Rs.3000/- respectively for education course. Members from academic institutions and bonafide students will pay a concessional fee of Rs.1000/- only. Requests for participation may be sent to the course coordinators at the addresses given below:

Dr B Chakrabarti, Larsen and Toubro, Engg & Const. Deptt, Saki Vihar Road, Powai Works, Mumbai-72 Email: bc@epc.ltindia.com

Dr MR Tyagi, Indian Institute of Petroleum, P.O. Mohkampur, Dehradun-248005,
Email : mrttyagi@iip.res.in



Best Paper Award

From among the papers presented during the conference, two papers will be selected by a panel of eminent judges for best paper award in the following two categories:

- **Paper on Basic research**
- **Paper on Applied research**

Business Meet

ICIT shall offer an unique opportunity for the organizations to hold an exhibition of equipment, instruments, products and services related to Tribology at the Conference Venue.

Souvenir to be published on the occasion would also offer opportunity for advertisement. Interested Organizations may contact the Organizing Secretary for further details.

Sponsorship and co-sponsorship are invited from companies, organizations, and trade associations.

Exhibition

An unit exhibition space of about (3m x3m) along with basic infrastructural facilities is being offered to the exhibitors. Also, one representative of the participating organization in the exhibition is entitled to be registered as conference delegate without delegation fee. A list of exhibitors will be published in the souvenir. The registration fee for the exhibition is as follows:

Indian Companies	Rs.25,000/-	per unit space
Foreign Companies	US \$1000	per unit space

Souvenir Advertisement

Souvenir to be published on the occasion would also offer opportunity for advertisement

- Back cover (multi color) Rs.5000/-
- Inside back cover (multi color) Rs.3500/-
- Inside front cover (multi color) Rs.3500/-
- Inside full page (multi color) Rs.2500/-
- Half page (multi color) Rs.2000/-

Advertisement requests must reach the Organizing Secretary by 1st February, 2002 at the latest, accompanied by demand drafts/ pay orders/cheques drawn in favour of **TSI-ICIT'01**, payable at **Jamshedpur, India**.

Sponsorship / Co-sponsorship / Support

Industries, reputed companies, institutions are invited to sponsor/ co-sponsor/financial support the **ICIT**. Due recognition will be given to all such support besides the following concessions:

National

Sponsorship : Rs.1,00,000/- 4 Delegates without delegation fee
Co-sponsorship : Rs.50,000/- 2 Delegates without delegation fee
Financial support : Rs.25,000/- 1 Delegate without delegation fee

Overseas

Sponsorship : US \$ 5000 : 2 Delegates without delegation fee and one unit space will be provided for exhibition gratis along with souvenir advertisement.

Registration Fee

The registration fee for the Conference will cover:

- Participation in Technical Sessions.
- Copy of the Conference Proceedings.
- Conference Kit.
- Lunch, Dinner and Tea during the Conference.
- Conference Banquet.
- Local transport arrangements for arranged visits.

Registration fee Structure

	TSI (Life-members)	Others
• Industry delegates	Rs.3000/-	Rs.4000/-
• Delegates from R&D and academic Institutions	Rs.1500/-	Rs.2500/-
• Bonafide Students	Rs.500/-	
• Overseas delegates	US \$400	

All participants, subject to eligibility, will be entitled to free life-membership of Tribology Society of India

Accommodation and Social Programmes

Jamshedpur offers a range of accommodation to suit your budget. If desired by the participant, hotel accommodation and travel arrangements will be made by the organizers.

Jamshedpur, the steel city of Jharkhand, has a rich heritage and blend of different cultures. Major attractions include Jubilee Park, Dimna etc. and other attractions with a relish of modern India.

Jamshedpur has a warm weather during the month of April. Temperatures range from 30-35° C during the day to 20-25° C during night with a relative humidity of about 40%.

Hotel Reservation

Hotel Reservation and Tariff* (per diem rates)

Hotel	Single		Double	
	Rupees	US \$	Rupees	US \$
Centre Point	1600	40	2000	50
Natraj	1150	30	1350	40
Siddhartha	1050	25	1245	30
Darshan	800	20	1000	25
Nalanda	1150	30	1350	40
Shaurya Inn	700		850	
The Kanchan	700		900	
Mansarovar	575		675	

*Tariff subject to confirmation. Taxes extra as applicable (approximately 20%). US \$ rates are applicable for foreign nationals and NRIs only.

For further information, please contact

Shri C. Mishra

Organizing Secretary,
ICIT
C/o Mechanical Technology Group,
Tata Steel, Jamshedpur-831001
Jharkhand, India
Phone (O) : (+91 0657) 424266, 843666
Phone (R) : (+91 0657) 305329
Fax : (+91 0657) 427819, 424266
e-mail : cmishra@jsr.tatasteel.com

or

Dr. A.K. Bhatnagar

President,
TSI
C/o IOC Ltd.
R & D Centre
Sector 13, Faridabad-121007
Haryana, India
Phone : (+91 0129) 5284420
Fax : (+91 0129) 5292009, 5286221
bhatnagarak@iocrnd.stpn.soft.net

N.B. : Registration fee and other payments should be made by Demand Draft/Pay Order/Cheque drawn in favour of **TSI-ICIT'01**, payable at **Jamshedpur**, India. In case of outstation cheques, please add Rs.35/- towards bank charges.

Programme Details

April 8th, 2002

- 0900 - 1700 Registration
- 1600-2200 Conference Inauguration
 - Inauguration
 - Theme lecture by Prof. John B. Pethica, FRS, University of Oxford, UK
 - Welcome Dinner

April 9th, 2002

- 0900-1100 Plenary Session I
- 1100-1130 Tea Break
- 1130-1300 Parallel Sessions I and II
- 1300-1400 Lunch Break
- 1400-1530 Parallel Sessions III and IV
- 1530-1600 Tea Break
- 1600-1730 Parallel Sessions V and VI
- 1730-1830 General Body Meeting of TSI
- 1900-2200 Dinner

April 10th, 2002

- 0900-1100 Plenary Session II
- 1100-1130 Tea Break
- 1130-1300 Parallel Sessions VII and VIII
- 1300-1400 Lunch Break
- 1400-1530 Parallel Sessions IX and X
- 1530-1600 Tea Break
- 1600-1800 Parallel Sessions XI and XII
- 1900-2200 Dinner

April 11th, 2002

- 0900-1100 Plenary Session III
- 1100-1130 Tea Break
- 1130-1300 Parallel Sessions XIII and XIV
- 1300-1400 Lunch Break
- 1400-1600 Valedictory Session
- 1400-1600 to be chaired by Shri B. Muthuraman,
- 1400-1600 CMD, Tata Steel, Jamshedpur
- 1600-1700 High Tea



Patrons

Dr. J. J. Irani
Tata Steel

Shri B. Muthuraman
CMD, Tata Steel

Shri M. A. Pathan
Chairman, Indian Oil Corporation Ltd.

National Steering Committee

Dr. A. K. Bhatnagar
Director (R&D)
Indian Oil Corporation Ltd.,
Faridabad

Dr. Anil Kakodkar
Chairman, AEC & Secretary, DAE,
Mumbai

Dr. Bikash Sinha
Director,
Variable Energy Cyclotron Centre,
Kolkatta

Dr. V. Siddhartha
Officer on Special Duty
Ministry of Defence,
New Delhi

Lt. Gen Amarjit Singh
Ministry of Defence,
New Delhi

Shri Sudhir Singhal
Director
Indian Institute of Petroleum,
Dehradun

Dr. N. Ramakrishnan
Director
Regional Research Laboratory,
Bhopal

Prof. D. V. Singh
Ex Vice Chancellor, University of
Roorkee

Prof. Govardhan Mehta
Director
Indian Institute of Science,
Bangalore

Shri S. K. Kapoor
Director (M)
Hindustan Petroleum Corporation Ltd.,
Mumbai

Dr. S. K. Bhattacharya
Managing Director,
Durgapur Steel Plant

Shri S. Rammohan
CMD, CPCL, Chennai

Dr. John Battersby
Managing Director
Lubrizol India Ltd.,
Mumbai

Prof. A. Sethuramiah
ITMMEC
Indian Institute of Technology,
New Delhi

Shri Dipankar Sen Gupta
General Manager (A&M)
Tata Steel, Jamshedpur

Prof. M. C. Dwivedi
Department of Chemical
Engineering
Indian Institute of Technology,
Mumbai

Prof. B. C. Majumdar
Department of Mechanical
Engineering
Indian Institute of Technology,
Kharagpur

Prof. S. K. Biswas
Department of Mechanical
Engineering
Indian Institute of Science,
Bangalore

Shri Sanjay Krishanmurthi
Executive Director (Lubricants)
Bharat Petroleum Corporation
Ltd., N. Delhi

Shri M. C. Sachdeva
Executive Director
(Eastern Region)
Indian Oil Corporation Ltd.,
Kolkatta

Shri Arun Jyoti
Executive Director
(Western Region)
Indian Oil Corporation Ltd.,
Mumbai

Dr. J. Bhatia
Chairman
Envirotech India, Mumbai

Dr. U. Muralidharan
General Manager (R&D)
Timken Engineering and
Research India (P) Ltd., Bangalore

Shri N. R. Raje
General Manager (LT),
Indian Oil Corporation Ltd.,
Faridabad

Shri V. N. Sharma
General Manager
Balmer Lawrie & Co. Ltd., Kolkatta

Shri P. Jagannathan
General Manager (Mechanical)
Bharat Heavy Electricals Ltd.,
R&D, Hyderabad