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ICIT - 08

6th International Conference on Industrial Tribology- 2008



SCOPE Convention Centre, New Delhi

Tribology for Energy Efficiency and Environment
Protection

Final Announcement



IndianOil

R&D

The Power of Possibilities

Organised by
IndianOil R&D Centre

November 6 - 8, 2008

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



front cover

**6th International Conference on
Industrial Tribology
(ICIT) 2008
(November 6-8, 2008)**

NATIONAL STEERING COMMITTEE

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*Director (R&D), IOCL, Faridabad
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Dr. K.P. Naithani, GM (LT), IOCL R&D, Faridabad	Secretary Technical
Mr. V. Martin, DGM (Trib), IOCL R&D, Faridabad	Secretary Organisational

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INTRODUCTION

6th International Conference on Industrial Tribology (ICIT-08) is being organized under the aegis of Tribology Society of India, by IndianOil R&D Centre during November 06-08, 2008 at SCOPE Convention Centre, Lodhi Road, New Delhi. Theme of this conference is **"Tribology for Energy Efficiency and Environmental Protection"**

After the First World, Tribology Conference on 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 organized to provide a forum for sharing of experiences of Tribologists from Industry, Academic and Research Institutions. In December 1997, an International Conference was organized at Calcutta with a theme "War against Wear" to commemorate 25 years of the Indian contributions in advancement of the science of Tribology after the 1972 event which sensitized the scientists and engineers in India to the importance and interdisciplinary nature of Tribology. Since then, ICIT series of conferences becomes a prestigious biennial platform for researchers, machine manufacturers, automobile design developers, lubricant formulators, etc. for exchanging ideas and information on latest developments in the area of Friction Lubrication and Wear.

The 5th International Conference on Industrial Tribology was organized by Indian Institute of Science, Bangalore, India, which focused the achievements of Tribology and the future advancement of this discipline in the 21st Century. This conference was attended by 300 delegates from India and abroad.

ABOUT DELHI

Delhi is just not a city but it is a book which narrates the history of India. The city was built and destroyed seven times and has been witness to the various events, which has brought India through the history books.

Today as the Capital of India, Delhi is the seat of administration and the monuments which tell the saga of a bygone era stand there. These icons are testimony to the grandeur of past and also an attraction for the tourists. With an area of 1483 Sq. Kms, Delhi is all set to acquire full statehood. The charm of Delhi has attracted Emperors, Conquerors and poor in equally. It is correctly said that Delhi is a land of 'Dilwalas' or for people with heart. This phrase acquires a true colour when one goes around the lanes of Delhi. Delhi is a window to the kaleidoscope that is India.

Delhi is India's main point of arrival for overseas visitors, and the major transport hub for destinations in the states of Rajasthan, Punjab, Himachal Pradesh and Laddakh as well as Central North India. Delhi City, the showcase of India, has

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been the centre of political activity from time immemorial. The ancient fortress, majestic buildings and historic ruins find their modern counterparts in the tall skyscrapers, diplomatic enclaves and well-planned townships of New Delhi. The people here, their lifestyles, traditions and even the climate are a rich and varied mixture of all that is India.

Delhi has very pleasant climatic condition during the month of November. Temperature ranges from 25°C during the day to 15°C during the night with a relative humidity of about 40%.

ABOUT THE VENUE: SCOPE Convention Centre

SCOPE Complex is a permanent home and above all a physical identity for public enterprises under banner of SCOPE. Located in Lodhi Road, SCOPE Complex is flanked by Jawaharlal Nehru Stadium on the one side and the Central Government Offices on the other. The locality abound in greenery with plenty of trees interspersed along the avenues. The open spaces lend environmental serenity to the busy complex. It provides the constituents with maximum commercial comforts and state-of-the-art facilities. It has a fully furnished auditorium with a capacity of 300 persons with translation facilities available for the Public Sector Undertakings (PSUs). It also has two seminar rooms, two conference rooms and a board room.

ABOUT THE ORGANIZER

Indian Oil Corporation R&D Centre

Indian Oil Corporation Limited (IndianOil) is the country's largest commercial enterprise with a sales turnover of Rs. 2,20,779 Crores (US \$ 54 billion) and net profit of Rs. 7499 Crores (US \$ 1.8 billion) for the fiscal year ended March 2007. Indian Oil is India's No.1 company and in Fortune magazine's listing of the world's 500 largest Corporations, ranked 135 for the year 2007 based on previous fiscal performance. It is also the 21st largest petroleum company in the world. Indian Oil has also been adjudged No.1 in petroleum trading among the national oil companies in the Asia-Pacific region. Indian Oil's R&D Centre at Faridabad has won recognition for its pioneering work in lubricant formulations, refinery processes, pipeline transportation, bio-fuels and alternate fuels. It has developed formulations for over 825 marketed SERVO[®] brand lubricants and greases for every conceivable application in automotive, railroad, industrial and marine sectors, meeting stringent international standards and bearing the stamp of approval of all major original equipment manufacturers. SERVO is the only lubricant brand which was conferred with Super-brand (UK) status in India.

SCOPE OF ICIT-2008

ICIT-2008 will be dealing with various innovations in Tribology for enhancing the energy efficiency and environment protection under the following broad areas of science and engineering:

- Energy efficient lubricants and component designs
- Environment protection through Tribology
- Bearings and Lubrication
- Tribology related to Engine and Automotive Ancillaries
- Contact Mechanics and Friction
- Wear Mechanisms
- Oil Lubricants, Greases and Additives
- Solid Lubrications and Lubricants
- Metal Working Fluids and Tribology
- Micro / Nano-Tribology
- Polymer Tribology
- Bio-Tribology
- Surface Treatments and Coatings
- Tribo-Testing
- Tribology of Magnetic Storage Systems
- Condition Monitoring and Maintenance
- Material Science

CONFERENCE / SPECIAL SESSIONS

Technical Papers

More than two hundred papers will be presented during the three day proceedings of the conference both in Oral and Poster sessions. A series of Plenary Lectures by leading Tribologists of the world has also been arranged in the frontier areas of tribology. Following are some of the world known tribologists, who will speak in the plenary sessions.

Prof. Jean Michel Martin	Laboratory of Tribology and System Dynamics, Ecully Cedex, France
Mr. Luis Bastardo	Nynas, Sweden
Prof. S.K.Biswas	Indian Institute of Science, Bangalore, India
Prof. Ernst Meyer	University of Basel, Switzerland
Prof. Hugh Spikes	Imperial College London, U.K.
Dr. B. Subramonian	ISRO Trivandrum, India
Prof. Michael Grunze	University of Heidelberg, Germany
Prof. Roger Horn	Ian Wark Research Institute, Adelaide, Australia
Dr. G K Sharma	NATRIIP, New Delhi, India
Dr. R Mukhopadhyay	HASETRI, INDIA

Conference Proceedings: It is proposed to publish a Conference CD ROM which will contain all the papers being presented in the conference. All the registered delegates will be given a set of Conference CD ROM

6th INTERNATIONAL CONFERENCE ON INDUSTRIAL TRIBOLOGY 2008
PROGRAMME AT A GLANCE

Registration : 6th November 2008 (0830 - 0930 hrs.)

Nov. 6, 2008 (Thursday)		Nov. 7, 2008 (Friday)		Nov. 8, 2008 (Saturday)	
Inauguration of Conference (Main Auditorium) (0930 – 1015 hours) Inauguration of Exhibition (1015 – 1025 hours) Inauguration of Posters (1025 – 1030 hours) COFFEE (1030 – 1045 hours) Theme Lecture (Main Auditorium) (1045 – 1130 hours)		Plenary Session – II (Main Auditorium) (0930 – 1100 hours) COFFEE (1100 – 1130 hours) Technical session – III (1130 – 1300 hours)		Plenary Session – III (Main Auditorium) (0930 – 1100 hours) COFFEE (1100 – 1130 hours) Technical Session – V (1130 – 1300 hours)	
		Main Auditorium Session IIIA		Main Auditorium Session VA	
		Tagore Hall Session IIIB		Tagore Hall Session VB	
		Ghalib Hall Session III			

Plenary Session – I (Main Auditorium) (1130 – 1315 hours) Lunch (1315– 1415 hours) Technical Session I (1415 – 1545 hours)		Lunch (1300 – 1400 hours) Business Meet – I (1400– 1530 hours) TEA (1530– 1600 hours)		Lunch (1300 – 1400 hours) Technical Session – VI (1400 – 1530 hours)	
Main Auditorium Session IA		Main Auditorium Session VIA		Main Auditorium Session VIB	
Tagore Hall Session IB		Tagore Hall Session IVB		Tagore Hall Session VIB	
Ghalib Hall Session IC		Ghalib Hall Session IVC			
TEA (1545 – 1600 hours) Technical session -II (1600 – 1730 hours)		TEA (1530– 1600 hours) Technical Session – IV (1600 – 1730 hours)		HIGH TEA (1700-1730)	
Main Auditorium Session IIA		Main Auditorium Session IVA			
Tagore Hall Session IIB		Tagore Hall Session IVB			
Ghalib Hall Session IIC		Ghalib Hall Session IVC			
Interactive Session - I (1030 – 1600 hours) Cultural Program & Dinner (1900 – 2200 hours)		Interactive Session - II (1030 – 1600 hours) Cultural Program & Dinner (1900 – 2200 hours)			

Best Paper Award

Best paper award will be given in the following three categories among the papers presented during the conference:

- TSI Best Oral Paper (Academic Research)
- TSI Best Oral paper (Applied Research)
- TSI Best Interactive Paper

Each award will carry a cash prize of Rs. 5000/- besides a certificate of commendation.

Education Courses

There will be two one day education courses on November 5, 2008 on the eve of ICIT-2008 on the following topics to be coordinated by well known Industry Leaders:

Gear Tribology : Dr. B. Chakrabarti (L&T) and Prof. Parish Hirani (IIT BOMBAY)

Advances in Lubricating Greases : Dr. K.P.Naithani (Indian Oil R&D) (In association with NLGI India Chapter)

The course will consist of one day theory course. The course fee is Rs. 3000/- for TSI/NLGI members and Rs. 4000/- for Non-members.

TSI BOOK ON TRIBOLOGY

On the eve of ICIT-08, a book entitled "**Lubricant Additives and Tribology**" written by Dr SP Srivastava, D.Sc. former Executive Director, IOCL R&D Faridabad and one of the most experienced Tribologists in India, will be released. One copy of the book will be offered to all registered delegates at a price of Rs. 300/-. Limited number of copies will also be available to other TSI members, on first cum first serve basis, at a price of Rs. 900/- per copy. Registered delegates as well as TSI members can book their copies in advance by sending a Demand Draft of requisite amount in favour of Tribology Society of India payable at Faridabad to Treasurer, Tribology Society of India at its Faridabad address.

Non TSI members can book their copies with the publisher of the book at the following address.

Tech Book International
1/12, Kalkaji extension, Kalkaji
New Delhi 110019 INDIA
Phone : +91 11 26284790
Email : tecnizbooks@gmail.com
Attn: Mr. Ashok Parwanda, Director

EXHIBITION AND BUSINESS MEET

Exhibition

ICIT-2008 shall offer a unique opportunity for the organizations to exhibit their Equipment, Instruments,

Products and Services related to Tribology at the Conference Venue.

Each Stall will be 3 Mtrs x 2 Mtrs size and will cost as under:
Indian Companies : Rs. 50,000
Foreign Companies: US\$ 1250

Business Meet

A Business Meet for the equipment suppliers and services related to Tribology is being organized during the conference. In this, representative of a company will get 30 minutes to share details of equipment and / or services with the delegates. Charges for a business talk will be Rs 40,000/- for Indian Speakers and US\$ 1000 for Foreign Speakers.

CONFERENCE SPONSORSHIP

The Conference organized by TSI have in the past been supported by a good number of sponsors. They include practically every industry like Petroleum, Steel, Power Engineering and related allied industries. The sponsors will get wide publicity in the form of banners at the main conference venue and mention in the conference proceedings and souvenirs. The previous conferences were sponsored by Indian Oil Corporation, Hindustan Petroleum Corporation, Bharat Petroleum Corporation, Bharat Heavy Electricals Limited, Tata Steel, Balmer Lawrie, Standard Greases, Gulf Oil, Afton Chemicals, Lubrizol India and many other lubricant additive manufacturers.

Sponsorship for the Conference is invited from reputed Companies, Organizations, and Trade Associations.

Rates for the Sponsorship are as follows:

Platinum	:	Rs. 7,50,000 (6 free delegates)
Gold	:	Rs. 5,00,000 (4 free delegates)
Silver	:	Rs. 3,00,000 (2 free delegates)
Sponsorship of Conference Lunch		Rs 1,00,000
Sponsorship of Conference KIT		Rs. 1,50,000

CONFERENCE REGISTRATION FEES

	TSI Members	Non-TSI Members
Indian Delegates (Industry)	Rs. 6,500/-	Rs.8,000/-
Delegates from R&D and Academic Institutions	Rs.3,500/-	Rs.5,000/-
Students/Retired Officers	Rs.2,000/-	Rs.2,000/-
Foreign Delegates	US\$ 400	US\$ 500

For online registration, please visit www.tribologyindia.org

The Registration Fee for the Conference will cover:

Participation in Technical Sessions
Conference Proceedings in CD-ROM
Conference Kit
Lunch and Tea during the Conference
Conference Dinner
Local transport arrangements for arranged visits

ACCOMMODATION

Delhi offers range of accommodation to suit every budget.

Please write to Organizing Secretary (Organizational) for details of Hotel Accommodation Booking.

ICIT - 08 Sponsors

Indian Oil Corporation Limited
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PCS Instruments UK
Bharat Petroleum Corporation Limited
Hindustan Petroleum Corporation Limited
CIBA
L&T

ICIT - 08 Exhibitors

DUCOM
PARK Systems
IOCL
BPCL
HPCL
BLUE STAR
Predict Technologies
CSM Instruments
AVL INDIA

ICIT - 08 Business Meet Participants

CETR
PCS Instruments

6th International Conference on Industrial Tribology (ICIT) 2008 (November 06 08, 2008)

Organising Committee

Dr. R.K. Malhotra, ED(R&D), IOCL R&D	Chairman
Dr. K.P. Naithani, GM(LT), IOCL R&D	Secretary (Technical)
Mr. V. Martin, DGM(Trib.)	Secretary (Organisational)
M. K. Mehta, Ex GM, IOC R&D	Member
Dr. A. S. Sarpal, DGM(AD)	Member
Mr. R.B. Koganti, DGM(ET)	Member
Mr. R.T. Mookken, DGM(G,IL,SL,MWO)	Member
Dr. S.P. Dubey, DGM(CE&AM)	Member
Dr. Faiz Waris, CRM(CD)	Member
Dr. E. Sayanna, CRM (Grease)	Member
Dr. Deepak Saxena, CRM(MWO)	Member
Mr. R.D. Sharma, SHRM	Member
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Mr. Reji Mathai, RM	Member
Mr. W.D. Burde, ES	Member
Mr. Shanker Bhadhavath, SRO	Member

Technical Committee


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