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Press-Release

Three-Day International Conference on Thermofluids Engineering (INCOTHERM 2025) Kicks Off at IIT (ISM) Dhanbad

The **three-day 1st International Conference on Thermofluids Engineering (INCOTHERM 2025)**, organized by the **Department of Mechanical Engineering, IIT (ISM) Dhanbad**, commenced today at the **Golden Jubilee Lecture Theatre** as part of the institute's **centenary celebrations**, marking 100 years of academic and research excellence.

Delivering the **inaugural address as Chief Guest**, **Prof. Poh Seng (P.S.) Lee**, Professor and Head of the Department of Mechanical Engineering at the **National University of Singapore (NUS)**, emphasized the growing importance of *sustainable cooling*, *energy efficiency*, and *waste heat recovery* in the modern industrial ecosystem. He highlighted the challenges of thermal management in high-performance systems such as data centers in tropical climates, where free cooling is restricted by hot and humid conditions. Prof. Lee explained how his research group employs **ohmic heaters**—instead of GPUs or CPUs—to simulate heat generation, enabling **precise environmental control** and **accurate thermal measurement**. He called for a **climate-aware design philosophy**, underscoring the need for **interdisciplinary collaboration** and **industry partnerships** to drive innovation and develop climate-resilient technologies.

Prof. Sarit Kumar Das, Institute Professor, Department of Mechanical Engineering, **IIT Madras**, who graced the occasion as **Guest of Honour**, stressed the importance of creating an enabling **academic ambience** in Indian institutions. He noted that while India is rich in talent, it is essential to channel this potential effectively for impactful outcomes. He lauded **INCOTHERM 2025** for providing the ideal environment for collaboration and intellectual exchange.

Prof. Sukumar Mishra, Director, IIT (ISM) Dhanbad, in his inaugural address, spoke about India's **rich legacy of science and technology**, deeply rooted in ancient scriptures. Differentiating between *Gyan* (knowledge), *Vigyan* (scientific analysis of knowledge), and *Pradyogiki Vigyan* (technology), he emphasized that the **application of scientific knowledge for economic progress** is vital for national development.

Prof. Somnath Chattopadhyay, Head of the Department of Mechanical Engineering and **Chairman, INCOTHERM 2025**, extended a warm welcome to all distinguished guests, delegates, and participants. He drew inspiration from India's ancient learning centers such as **Nalanda** and **Vikramshila**, likening them to IIT (ISM) Dhanbad's modern-day spirit of inquiry and innovation. Prof. Chattopadhyay remarked that “no mountain is taller than the human pursuit of knowledge,” commending the organizing team for upholding IIT (ISM)'s century-old legacy through this global academic congregation.

Earlier, **Prof. Pawan Kumar Singh**, Convener, delivered the **welcome address**, outlining the objectives and themes of the conference, while **Prof. Deepak Kumar**, Joint Convener, proposed the **vote of thanks**.

Featuring plenary and keynote sessions by renowned experts including **Prof. P.S. Lee (NUS, Singapore)**, **Prof. B.B. Saha (Kyushu University, Japan)**, **Prof. S.K. Das (IIT Madras)**, **Prof. M. Ramgopal (IIT Kharagpur)**, **Prof. A. Agrawal (IIT Bombay)**, and **Prof. S. Ansumali (JNCASR, Bengaluru)**, **INCOTHERM 2025** will cover a broad range of topics such as **multiphase flow**, **computational and experimental fluid dynamics**, **microfluidics**, **clean energy**, **refrigeration and HVAC**, **aerodynamics**, **thermal management**, and **AI/ML applications** in heat transfer and fluid flow.

With participants from India and abroad, **INCOTHERM 2025** is set to serve as a **global hub for knowledge exchange**, reinforcing **IIT (ISM) Dhanbad's** commitment to **research excellence, sustainability, and innovation** as it celebrates its **centenary year**.

Rajni Singh
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