

# INDIA FOCUSES ON ENVI

**Building on the success of the inaugural event that took place in in 2017, Delhi again hosted an international conference and exhibition focusing on environmental monitoring.**

**CEM India 2019 ran over three days in September, and attracted visitors and participants from all over the world. The impact of environmental regulations in India is driving an enormous requirement for accurate, reliable monitoring data, so the conference sessions were fully booked and the organisers had to extend the exhibition opening hours to accommodate the demand.**

**In addition to emission monitoring issues relating to combustion gases, particulates, mercury and dioxins, the conference included new themes covering the monitoring of wastewater effluents.**



With a focus on real-time continuous emissions monitoring, CEM India 2019 addressed the regulations, standards, methods and technologies that apply to environmental monitoring. The event attracted around 800 participants both domestically and internationally, and included experts and technology providers as well as representatives from Indian industries, pollution control board officials and researchers.

In common with other countries, pollution control in India relies on accurate reliable environmental monitoring; helping to establish baseline data, measuring the effectiveness of abatement and checking compliance with regulations. The CEM India events were therefore created to help a broad spectrum of Indian industries to comply with new regulations governing emissions to air and water.

Initiatives to encourage the installation of Continuous Emission Monitoring Systems (CEMS) in India began in 2014. Selected

- industrial sectors are establishing monitoring programmes with data connectivity to the regulator's server. However, this process requires attention to a number of key issues including CEMS selection, installation at the correct locations, calibration procedures, maintenance programmes, and performance evaluation and audit.

The main Indian industries that need to install CEMS include aluminium, zinc, copper, iron & steel, cement, distilleries, dying, chlor alkali, fertilizers, oil refineries, petrochemical plants, pesticides, pharmaceuticals, power plants, pulp and paper mills, sugar and tanneries.

- Besides being a capacity building and knowledge sharing platform, CEM India 2019 also unveiled huge business opportunities for national and international players in India. Eminent guests such as Dr. D. K. Aswal, Director, National Physical Laboratory (India), Dr. Prashant Gargava, Member Secretary, Central Pollution Control

- Board, Chandra Bhushan, eminent environmentalist and researcher, inaugurated the event and delivered presentations in the main conference.

Dr. Aswal explained that the Indian government has given NPL India the responsibility for developing a certification system for CEMS in India; a key initiative in the successful implementation of environmental regulation. He emphasised the importance of data quality and traceability in real-time monitoring, and explained the development of infrastructure for quality assurance. With the support of NPL in the UK, it is anticipated that the system will be established within the coming two years.

- Dr. Gargava described real-time monitoring as an important initiative for improving environmental monitoring in India. He explained that this is not just beneficial for regulatory purposes, but also for better industrial processes, better compliance and better pollution control.



# ENVIRONMENTAL MONITORING



It is the responsibility of all stakeholders - industries, technology providers, regulators and others - to extend every support. The CPCB is studying the real-time data, understanding the need for quality improvement and implementing initiatives to achieve this goal. Dr. Gargava urged industries to follow the guidelines; to conduct proper calibration; to comply with performance requirements, and to make every necessary effort to improve data quality.

Mr. Chandra Bhushan, who has extended research support for the government's real-time monitoring initiative, explained that this represents the future of environmental compliance monitoring in India, and that this will be important for air pollution, water pollution, ambient air quality and climate change.

The three day CEM India 2019 conference was packed with case studies and technical sessions on CEMS and CEQMS (continuous effluent quality monitoring systems). Technology experts from Austria, France, India, Germany, UK and the USA provided insights into monitoring challenges in water effluent as well as VOCs, particulates, NOx, SO2, CO, CO2, trace metals, mercury and dioxins in emissions to air.

The event concluded with a panel discussion chaired by Sanjeev K Kanchan. Representatives from Tata Steel and NTPC joined the panel comprising Dr. C. Sharma- Sr. Principal Scientist, NPL India, Abhijit Pathak, Scientist at CPCB and Mr. Chandra Bhushan. Industry representatives commented that they are taking proactive steps to improve environmental monitoring; investing in new technologies, procedures and maintenance. Technology selection and operation/maintenance procedures vary between different industrial sectors, so the support of technology providers and vendors is crucial,

and Mr. Pathak emphasised the importance of support from all stakeholders. Data quality is of course a major challenge and industries are seeking guidance on issues such as onsite calibration and performance tests. He also mentioned that regulators have started to undertake remote calibration.

Mr. Sharma explained that once NPL India has established the equipment certification scheme, all technology providers will have to obtain Indian certification. He added that quality assurance and international traceability will help in the proper implementation of the monitoring schemes, as well as the 'Made in India' initiative.

Mr. Bhushan concluded by reminding delegates that real-time monitoring represents an opportunity for all stakeholders to improve current practice, with benefits in process optimisation, pollution control and resource efficiency. The public and the media are becoming increasingly environmentally aware, and the international community is encouraging India to protect the environment. Therefore, real-time monitoring will be an important tool in helping India to meet its environmental objectives and fulfill its obligations in the global community.

Rod Robinson is Principal Research Scientist of the Emissions and Atmospheric Metrology Group at NPL in the UK, and chair of the CEM India Technical Committee. Thanking all the gathered participants, he said: "Over the course of the three days there have been sessions covering CEMS, VOCs, mercury and dioxins, combustion gases, and the new topic of water monitoring. We have learnt about: the specific challenges and opportunities in India; the need for improved data quality; new and improved technologies; the need for capacity building and training, and from

many Indian companies and suppliers about the excellent work being done here.

"Some themes emerged over the conference: sampling and the issues with wet stacks; quality and data handling; calibration including remote calibration; certification and testing; the new certification scheme being developed by my colleagues at NPL India; training and capacity building; maintenance and the practical issues of operation. The overriding message was the real drive for improved data as a tool to enable the control and reduction of pollution.

"At the start of the conference I said I hoped that this would be an even more successful conference than the first CEM India in 2017 and with so many participants, I truly believe that it was. I also said I hoped we will all have the opportunity to learn, to question and discuss, and I think from the full and lively discussions between industry, regulators, vendors and researchers, and the wide range of excellent talks, as well as the interesting debates and the busy exhibition space, not to mention the fantastic lunches, that this has been a really successful conference. In the coffee and lunch breaks there was an excellent buzz with great networking, and I am sure this conference will be the start of many ongoing activities and opportunities for collaboration.

"Following this successful event, the next CEM India will include sessions with more case studies on the experiences of using CEMS in India. There will also be presentations on health and safety, as well as flow monitoring, which will become more important as mass emission reporting and trading become better established in India."

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