

Four-day State level Workshop on

**BEST PRACTICES AND HANDLING OF
CEMS IN EMISSION MONITORING**

19-22 July 2022

Venue - Auditorium, Lake Conservation Authority, Bhopal

Preamble:

The International Centre for Sustainable Carbon (ICSC) UK in coordination with M.P. Pollution Control Board organized a four-day Workshop on ‘BEST PRACTICES AND HANDLING OF CEMS IN EMISSION MONITORING’, supported by the US Deptt. of State (USDoS), at Bhopal from 19th - 22nd July 2022. The workshop was aimed to educate the workforce of all the coal-fired power plants, officials of environment regulatory agencies etc. by providing exposure to the current technology being used in the real-time monitoring field. The workshop helped in capacity building and skill enhancement by understanding fundamentals, principles and intricacies of this new Emission monitoring technology. The ultimate outcome of this workshop would help in better implementation of CEMS in real-time Emission monitoring programme in the State in its true spirit.

Proceedings:

The workshop started with the Lamp lighting ceremony by the dignitaries and floral welcome of the Chief Guest Shri Sanjay Dubey, IAS, Principal Secretary, Deptt. of Energy, Govt of Madhya Pradesh and other dignitaries. This was followed by welcome address by Dr. Rajendra Chaturvedi Scientist, M.P Pollution Control Board who gave an overview of the real-time Monitoring in the State and briefed about objectives of the workshop, including mercury emission monitoring. He extended gratitude toward Chief Guest, all the dignitaries and the participants for their valuable presence.



Lamp lighting ceremony & Floral welcome of Chief Guest and the dignitaries on the occasion

Shri A.A. Mishra, Member Secretary, MPPCB delivered the opening remark to explain the four day workshop activity on HANDLING OF CEMS IN EMISSION MONITORING and quoted it as prime demand of the present time. He appreciated the spirit shown by the industries in quick adoption of this new technology. He urged the participants to take benefit of knowledge of eminent resource persons who kindly agreed to be a part of this workshop for the cause of environment.



The Member Secretary, MPPCB addressing during Inaugural function



The Chairman, MPPCB addressing the participants

Shri Aniruddhe Mukherjee, Principal Secretary, Deptt. of Environment, Govt of Madhya Pradesh & Chairman M.P. Pollution Control Board, gave an overview of the real-time monitoring scenario in Madhya Pradesh State and highlighted the efforts of MPPCB in implementation of 'self monitoring of compliance mechanism' in the State. H'ble Chairman expressed his concern on the Quality of Data, RTM Data connectivity and

related issue and emphasized need to look into it. He also appreciated the effort of Environment Surveillance Centre and urged the participants to visit and see the activities of this centre.

The Chief Guest on the occasion Shri Sanjay Dubey, Principal Secretary, Deptt. of Energy, Govt of Madhya Pradesh in his influential speech attracted attention of



The Chief Guest addressing during Inaugural function

dignitaries and participants towards environmental issues of local as well as global interest. He shared his experience and expressed how this modern real-time monitoring technology can help in quick decision support and in managing the health of the environment. He emphasized the need of energy security, which is prime demand of the time, but also advocated the environment security and to explore the ways to ensure balance between the two. He said Energy security is for the present and the Environment security is for the future and everyone, including environmentalists, industries and even common citizens, need to create the balance between energy and environment, as both are equally important for sustenance. He wished this workshop would provide not only content, but intent too, and would prove to be a milestone in implementation of Government's Self Monitoring of Compliance programme more effectively in the State. He urged the participants to extract most out of this workshop and make it practical at work field to sound this programme a grand success.



Dr. Lesley Sloss making a point prior to extending Vote of Thanks



Chairman, MPPCB interacting with expert members during Tea session

A total of 115 participants from the Power Sector, Regional offices of MPPCB and service providers attended the workshop. Among the expert resource persons Dr. Lesley Sloss, International Project Manager, ICSC, Shri J S Kamyotra, Former Member Secretary, Central Pollution Control Board, Delhi, Shri Aditya Sharma (online), Scientist E & Head Air Network Division, Central Pollution Control Board, Delhi, Shri Sanjeev K. Kanchan, Principal Consultant, ICSC, New Delhi, Shri Sankar Kannan, M/s SICK India Pvt. Ltd. Mumbai, Shri R Sean Warden, QSTI Trainer, USA, Shri Roland Zepeck, IBD, Germany, Shri David Graham (online), Tech Consultant, Uniper, Shri Jeff Ryan (online), Sr Scientist, USPEA, Shri Ashish Gupta, Director, Envirotech, were present in the workshop.

Live Streaming of Workshop :

In order to expand the reach of this important workshop to all other target participants who could not attend the workshop, a live webcasting of programme was done throughout the technical sessions. The remarkable live streaming technology helped effectively reach wider audiences to make the workshop more purposeful and beneficial. The audiences watching the workshop live through webcast received the same training and information at the same time. All the presentations were webcasted in real time using streaming media technology.

Proceedings of Technical Sessions : (All presentations are available separately on website)



Deliberation by Dr Lesley Sloss, International Project Manager, ICSC

The workshop was scheduled for four days and was divided in 8 technical sessions apart from one day On-site practical demonstration at power plant covering all the aspects related to real-time monitoring technology as well as role of manual stack monitoring for reliability check of particulates data. The first technical session was opened with the deliberation by Dr Lesley Sloss, International Project Manager, ICSC who spoke on ‘CEMS in the coal-fired power plants - report and findings Systems’.



Presentation by Shri Sanjeev K Kanchan, Principal Consultant, ICSC

The 2nd speaker of the day Shri Sanjeev K Kanchan, Principal Consultant, ICSC spoke on Basics of CEMS, experiences in India and challenges, with reference to thermal

power plant suitability and limitations Maintenance - alignment, cleaning, calibration factor etc.

Shri J S Kamyotra, Former Member Secretary, CPCB, deliberated on equipment selection, suitability, correct implementation of CEMS etc. He explained CEMS measurement techniques, industrial specific CEMS analysis etc. Extractive CEMS methodologies were quite absorbing and informative to the participants.



A talk by Shri J S Kamyotra, Former Member Secretary, CPCB during the workshop

On day of workshop Shri R Sean Warden, QSTI Trainer, USA made presentation on Performance test requirements, tests procedures, test for quality assurance, quality control – USA, reference to thermal power plant Correct installations - PM, SO₂ , NO_x, O₂ , CO₂ , Hg, correct setting, data connectivity and standardization, reference to thermal power plant Calibration system setup - tubing and cylinder set-up, calibration check, remote calibration etc details of which are available separately on this portal.



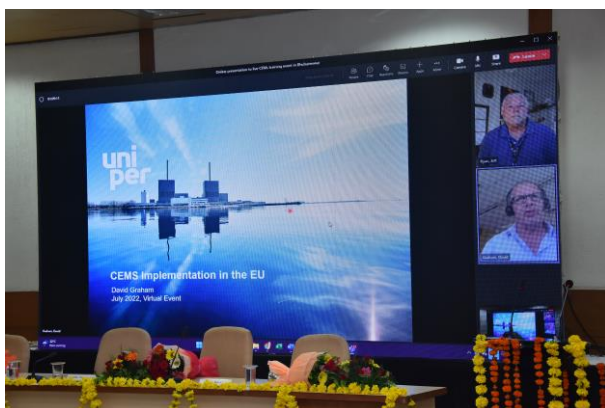
Deliberation by Shri R Sean Warden, QSTI Trainer, USA.

Shri Roland Zepeck, IBD, Germany made his presentations on QAL system, AST Laboratory-based and field test procedures, infrastructure requirements, reference to thermal power suitability and limitations - PM, SO₂ , NO_x, O₂ , CO₂ Maintenance - span, drift, alignment, cleaning etc and solutions. He also deliberated on Mercury monitoring-reference to thermal power plant Suitability, limitations, CEMS, sorbent-trap, maintenance issues and solutions.



A talk by Shri Roland Zepeck, IBD, Germany during the workshop

Shri David Graham, Tech Consultant, Uniper and Shri Jeff Ryan, Sr Scientist, USPEA, made their presentations online on CEMS implementation in EU, Experience of CEMS, regulation and implementation, new trends & CEMS implementation in USA Experience of CEMS, regulation and implementation.



David Graham, Tech Consultant, Uniper and Jeff Ryan, Sr. Scientist, USPEA during Online session

Mr. Sankar Kannan, M/s SICK India Pvt. Ltd, spoke on CEMS selection, PM and gaseous - reference to thermal power plant. His deliberation highlighted Guidance for specification of RTM equipment, tendering, selection, after sales support.

DAY 3– 21 July 2022

On-site practical demonstration and hands-on training on PM and Gaseous monitoring was conducted at M/s Vardhaman Yarns (Captive Power Plant) at Mandideep Industrial Area, Dist. Raizen.

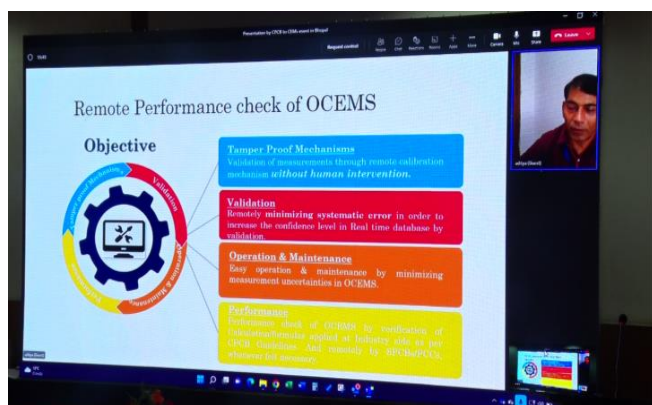


Visit to M/s Vardhaman Yarns (CPP), Mandideep Ind. Area



On-site practical demonstration and hands-on training to the Participants

Shri Aditya Sharma, Scientist-E & the Head, Air Network Division, Central Pollution Control Board, Delhi made an online presentation on Data acquisition & handling system, DAS architecture, regulatory requirements and protocols, data management, analysis and the ways to ensure genuineness and reliability of real-time monitoring data.



Shri Aditya Sharma during his online session



File Pic

The Last Presentation of the workshop conduct by Shri Pracheer dixit From MPPCB on MPPCB data handling system, System experiences and lessons learnt.



A talk by Shri Pracheer Dixit during the workshop

On the last day the Feedback, assessment and closing of event session was summed up by Dr. Rajendra Chaturvedi, Scientist, Environment Surveillance Centre, MPPCB and Shri Sanjeev K. Kanchan, ICSC. There was recap of topics discussed during the four-day workshop and later the Vote of Thanks was extended by Dr. Lesley Sloss, International Project Manager, ICSC. The prevailing grey areas in CEMS implementation in the country were highlighted during the workshop and measures were also suggested to overcome them.
