

17th NCB International Conference on Cement, Concrete and Building Materials
“Moving Towards Net Zero Carbon Emissions”
06 - 09 December 2022, Manekshaw Centre, New Delhi, India

TENTATIVE/DRAFT PROGRAMME
(Technical Sessions, Panel Discussions & Special Technical Sessions)

Monday, 05 December 2022

EARLY REGISTRATION

1400 h to 1800 h

Tuesday, 06 December 2022

REGISTRATION

0830 h to 1000 h

WELCOME GET-TOGETHER

1000 h to 1100 h

INAUGURAL SESSION

Zorawar Auditorium

1100 h to 1200 h

Invocation

Lighting of Lamp

1. Welcome Address & Technology Perspective

Dr B N Mohapatra
 Director General-NCB

2. Cement Industry - Future Outlook, Challenges and Opportunities

Shri K C Jhanwar, Chairman-NCB &
 President – Cement Manufacturers’ Association &
 MD, UltraTech Cement Ltd.

3. Cement Industry Perspective

Shri Mahendra Singhi
 MD & CEO, Dalmia Cement (B) Ltd

4. Outlook of Indian Cement Industry-Govt. Perspective by Guest of Honour

Shri Anil Agrawal
 Additional Secretary, DPIIT,
 Ministry of Commerce & Industry, Govt. of India

5. Release of Conference Proceedings

Release of Compendium “The Cement Industry - India 2022”

Release of book on “Alternative Fuels – A Green Solution for Indian Cement Industry”

Release of NCB Guide Norms on Cement Plant Operation

&

Inaugural Address by Chief Guest

Shri Anurag Jain
 Secretary, DPIIT,
 Ministry of Commerce & Industry, Govt. of India

6. Vote of Thanks

Dr S K Chaturvedi,
 Organizing Secretary, 17th NCB International Conference

INAUGURATION OF TECHNICAL EXHIBITION

1200 h to 1220 h

PANEL DISCUSSION-I

Zorawar Auditorium

1220 h to 1330 h

Topic: “Moving towards Net Zero Carbon Emissions in Indian Cement Industry”

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| Moderator: Sh Raju Goyal, CTO, UltraTech Cement Ltd | | |
| Distinguished Panelists: 1. Sh Mahendra Singhi, MD & CEO, Dalmia Cement (B) Ltd. 2. Sh Neeraj Akhoury, MD, Shree Cement Ltd. 3. Sh Arvind Pathak, MD & CEO, Birla Corp. Ltd. 4. Sh Jamshed N Cooper, MD, HeidelbergCement India Ltd. 5. Sh Vivek Agrawal, Business Head & CMO, UltraTech Cement Ltd. 6. Sh Rajnish Kapur, Business Head (Grey), J K Cement Ltd. 7. Sh Nilesh Narwekar, CEO, JSW Cement Ltd. 8. Dr B N Mohapatra, DG-NCB | | |
| LUNCH | | 1330 h to 1430 h |
| SPECIAL TECHNICAL SESSION-I Dr Ashok Kumar, Deputy Director General, Bureau of Energy Efficiency | Zorawar Auditorium | 1430 h to 1500 h |
| TECHNICAL SESSION – I A LOW CARBON CEMENTS | Zorawar Auditorium | 1500 h to 1615 h |
| <ol style="list-style-type: none"> Comparative study between the flow behaviour of LC³ and OPC systems: the thirst of clay <i>Ashirbad Satapathy, Manya Gupta, Gopala Rao Dhoopadahalli and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-117]</i> Laboratory trails for developing cement using clinker & fly ash with cement grade, low grade, high MgO limestone <i>Pankaj Kejriwal, Sundaram Srinivasan, Laxmaiah Munjala, Y K Singh, S K Pandey and Sanjay Kr. Chourasia, Star Cement Limited, India [FP-19]</i> Prospects of utilization and management of low-grade limestone for Indian cement industry: an overview <i>Vinod Shrivastava, Pravin Tiwari, G P Pandey, Pravesh Sharma, Saranya Gautam and Manish Kumar Singh, Prism Johnson Limited, India [FP-28]</i> Development of sustainable water resistant composite binder from FGD gypsum <i>Neeraj Jain, Soumitra Maiti, Jaideep Malik and Aakriti, CSIR-Central Building Research Institute, India [FP-38]</i> Cement additives: for achieving lower clinker factor & for cements with niche properties - case studies <i>Pinaki Poali, Samit Samanta and Gopal Bihani, Endura Construction Chemicals, India [FP-69]</i> Suitability assessment of Linz Donawitz (LD) slag for fabrication of cementitious binder <i>Jyoti, AcSIR, India</i> <i>S K Singh, CSIR- Central Building Research Institute, Roorkee, India [FP-41]</i> Qualitative aspects of limestone collected from different zones of India: formulation of Portland limestone cement for sustainable development of Indian Cement Industries <i>Sandeep Kumar Gupta, Pinky Pandey, Ashish Goyal, S K Chaturvedi and B N Mohapatra, National Council for Cement and Building Materials, India [FP-155]</i> | | |
| TECHNICAL SESSION – I B OTHER BUILDING MATERIALS & BINDERS | Ashoka Convention Hall | 1500 h to 1615 h |
| <ol style="list-style-type: none"> Mineralogical and morphological attributes of hydrated aluminate Phase incorporating silica nanoparticles <i>Aarti Solanki, U Sharma, L P Singh and S R Karade, CSIR- CBRI & AcSIR, India [FP-24]</i> Feasibility study on use of FGD gypsum replacing natural mineral gypsum in OPC & PPC: A case study <i>Satyendra Kumar, Pravesh Kumar Sharma, Dinesh Agrawal and Manish Kumar Singh, Prism Johnson Limited, India [FP-27]</i> Selection and use of natural shale as SCM <i>Raghunathan Swaminathan, Biju Karukkunnammal, Shivakumar, Shanmuga Priya and Thirumalini Selvaraj, FLSmidth (I) Pvt Ltd, Kelambakkam, India [FP-32]</i> Feasibility studies of clay near Pali regions (Rajasthan) for LC³ production <i>Sunil Kumar Saxena and Mukesh Kumar, J K Lakshmi Cement Limited, India [FP-73]</i> To utilize waste bed ash as synthetic gypsum in portland white cement manufacturing <i>R K Singh, Arvind Gupta, Vinit Purohit and Kareena Kumari, UltraTech Cement Limited-Birla White, India [FP-121]</i> A study on utilization of paper mill lime sludge in the manufacture of cement under circular economy <i>A K Dikshit, B B Sahoo, Varsha Liju, Munish Kumar, Ravendra Singh and S K Chaturvedi, National Council for Cement and Building Materials, India [FP-154]</i> Transition from linear to circular economy in gypsum in India | | |

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| <i>Anand Bohra, S K Chaturvedi and B N Mohapatra National Council for Cement and Building Materials, India [FP-172]</i> | | |
| TEA/COFFEE | | 1615 h to 1645 h |
| TECHNICAL SESSION – II A | Zorawar Auditorium | 1645 h to 1815 h |
| CEMENT PLANT MACHINERY & PROJECT ENGINEERING –I | | |
| <ol style="list-style-type: none"> 1. Inside the VRM concept a holistic approach <i>Thomas Schmitz and Markus Hastrich, Thyssenkrupp Industrial Solutions AG, BU Polysius, Beckum, Germany [FP-78]</i> 2. Study on performance improvement of calciner using CFD simulation <i>Basavaraj K, Sagar Gulawani, Jayateerth V Joshi, Sanjeev Srivastava and Raju Goyal, Aditya Birla Science & Technology Company Pvt Ltd., Navi Mumbai India [FP-91]</i> 3. In-house fabrication and erection of primary hammer crusher for TPP <i>Rajesh Keswani, Prahlad Kumar Kabra, Mukesh Kumar and Sunil Kumar Saxena, J K Lakshmi Cement Ltd, Sirohi, India [FP-116]</i> 4. Clinker cooling solution <i>Ravi Saksena, KHD Humboldt Wedag, Cologne, Germany</i> <i>Anurag Johari, Humboldt Wedag, India Pvt Ltd, India [FP-63]</i> 5. Recuperate, cool and sustain <i>R Madhusudan & N Soundararaj, IKN Engineering India Pvt Ltd, India [FP-62]</i> 6. Utilizing curved conveyor technology for efficient long- distance material transport <i>Markus Rehbock and Alexander Tigges, Beumer Group, Germany [FP-98]</i> 7. Correlation of chemistry and process parameters on formation of alite in Portland clinker <i>Jaiprakash Vrati, Ambuja Cement Ltd, India</i> <i>Suresh Palla, Suresh Vanguri, Ramchandra Rao, S K Chaturvedi and B N Mohapatra, National Council for Cement and Building Materials, India [FP-158]</i> 8. Recent Trends in Indian Cement Industry – A Pragmatic Approach <i>A K Dembla, Sandeep Zutshi and Deepti Varshney, KHD Humboldt Wedag India Private Limited, India [FP-74]</i> | | |
| TECHNICAL SESSION – II B | Ashoka Convention Hall | 1645 h to 1815 h |
| ALTERNATE/WASTE FUELS AND RAW MATERIALS –I | | |
| <ol style="list-style-type: none"> 1. Alternate solid fuel handling equipment case study on the solution proposed to a reputed cement manufacturing unit in the middle east <i>Rhea Muthappa and Sunil Kumbhar, Altsf Process, Pune, India [FP-21]</i> 2. Enhancement of liquid AFR by optimization of nozzle system <i>Girdhar Mishra and Ketan Goel, Invotech Industrial Solutions Private Limited, India [FP-26]</i> 3. Increased usage of alternate fuels by up-gradation of full-fledged feeding system <i>T Robert, G Shankarappa and V Saravanan, Dalmia Cement (Bharat) Limited, Ariyalur, India [FP-47]</i> 4. Analysis of alternative fuel resource (AFR) by energy dispersive X-ray fluorescence (ED-XRF) <i>D Gupta and B N Srivastava, Malvern Panalytical, India [FP-53]</i> 5. Innovative solutions for maximizing alternative fuel usage <i>Sitaram Sharma and Vikram Kancharidasu, KHD Humboldt Wedag India Private Limited, New Delhi, India [FP-67]</i> 6. Co-processing solutions for handling of alternate solid fuels <i>Luc Rieffel, S K Ambasta and Indrendra Singh, ATS Conveyors India Pvt. Ltd., India [FP-86]</i> 7. Use of pharmaceutical liquid waste as alternative fuel (initiative on turning waste to wealth) <i>N S Rao and Pankaj Kumar, My home Industries Private Ltd, India [FP-89]</i> 8. Journey of green fuels utilization <i>GV Ramakrishna, Rajiv Sadavarti, Anand Pratap Singh and Gaurav Patel, Dalmia Cements (Bharat) Limited, Delhi, India [FP-103]</i> | | |

| Wednesday, 07 December 2022 | | |
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| TECHNICAL SESSION – III A | Zorawar Auditorium | 0900 h to 1045 h |
| NET ZERO EMISSIONS, CARBON CAPTURE, UTILISATION & STORAGE (CCUS) | | |
| <ol style="list-style-type: none"> 1. Role of carbon capture and utilization (CCU) for decarbonization of cement Industry <i>B N Mohapatra, S K Chaturvedi, P N Ojha, Brijesh Singh and Anand Bohra, National Council for Cement and Building Materials, India [FP-173]</i> 2. March towards net zero carbon emission through sustainability audits and process optimization <i>Srinivasan Annamalai and Raveendran Chalil, FLSmidth Private Limited, India [FP-33]</i> 3. Opportunities for CO₂ reduction & higher efficiency <i>Roger Meier, FCT ACTech Adelaide, Australia</i> <i>Tamal K. Ghosh, ICON Scientific Systems, Kolkata, India [FP-57]</i> 4. Green cement plant technologies for the sustainable use of resources at lowest emissions <i>Uwe Mass, Thyssenkrupp Industrial Solutions AG, BU Polysius, Beckum, Germany [FP-81]</i> 5. Mitigating climate change through low carbon research initiatives in building materials <i>L P Singh and U Sharma, CSIR-CBRI, Roorkee, India [FP-25]</i> 6. Dalmia RGP carbon foot print road map <i>Chetan Shrivastav, Arbind Singh, Satish Mishra, Vikas Mangal, Alok Chaubey and Aniket Chaki, Dalmia Bharat Cement Ltd, Rajgangpur, Odisha, India [FP-100]</i> 7. BAT to augment green power production, case study of Chettinad cement – Dachepalle Plant <i>V Ganesan, Chettinad Cement Pvt Ltd, India</i> <i>Ashok Kumar Dembla and Balesh Singh, Humboldt Wedag India Pvt Ltd, India [FP-55]</i> 8. Moving towards net zero carbon emission <i>K Karpaga Jothi, R Raja Mohan, A L Nachiappan and K. Vinayagamurthi, Dalmia Cement Bharat Limited, India [FP-106]</i> 9. Sustainable solutions for net zero emissions - collaborative approach for green corridor <i>Matthias Mersmann, KHD Humboldt Wedag International AG, Cologne, Germany [FP-64]</i> | | |
| TECHNICAL SESSION – III B | Ashoka Convention Hall | 0900 h to 1045 h |
| CONCRETE DURABILITY, DISTRESS INVESTIGATION, REPAIR & REHABILITATION -I | | |
| <ol style="list-style-type: none"> 1. Mechanical and durability performance of Portland limestone cement (PLC) made with inter grinding having high fineness limestone in concrete <i>Puneet Kaura, P N Ojha and Hardik Jain, National Council for Cement and Building Materials, India [FP-142]</i> 2. Durability performance of concrete produced using limestone calcined clay cement (LC³) <i>Lupesh Dudi, Lav Singh and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-127]</i> 3. Effect of waterproofing compounds on carbonation in low clinker cement, <i>Lav Singh, Lupesh Dudi and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-126]</i> 4. Performance of concrete made with limestone calcined clay cement (LC³) <i>Prakhar Shrivastava, Gopal Gupta, Nihar Ranjan Tripathy and Pramod Sancheti, J K Cement Works, Mangrol Unit, India [FP-102]</i> 5. A study on the parameters affecting the properties of Portland limestone cements <i>Prakhar Shrivastava, Nihar Ranjan Tripathy and Arun Shukla, J K Cement Works, Mangrol Unit, India [FP-101]</i> 6. Environmental remediation for durable cementitious systems using self-healing nano additives <i>Mainak Ghosal, Engineering Colleges affiliated to MAKAUT, Kalyani, West Bengal, India</i> <i>Arun Kumar Chakraborty, Indian Institute of Engineering Science & Technology (IESTS), Shibpur, West Bengal, India [FP-1]</i> 7. Comparative study of Portland composite cement prepared with fly ash and different grades of limestone <i>Varsha Liju, Suresh Palla, Suresh Vanguri, Puneet Sharma, S K Chaturvedi and B N Mohapatra, National Council for Cement and Building Materials, India [FP-150]</i> | | |
| TEA/COFFEE | | 1045 h to 1115 h |
| SPECIAL TECHNICAL SESSION-II | Zorawar Auditorium | 1115 h to 1145 h |
| Prof Manu Santhanam Professor, Department of Civil Engineering, IIT Madras | | |
| PANEL DISCUSSION-II | Zorawar Auditorium | 1145 h to 1300 h |

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| Topic: Sustainability and Circular Economy in Cement & Construction Sector | | |
| Moderator: Sh Sudhir Kumar, Advisor, Niti Aayog | | |
| Distinguished Panelists: 1. Sh Sanjay Pant, DDG (Standardization), BIS 2. Sh Neeraj Sinha, Sr Advisor (S&T), NITI Aayog 3. Prof. D N Singh, Professor, IIT Bombay 4. Ms Madhumita Basu, CSMO, Nuvoco Vistas Corp. Ltd. 5. Sh K J Patel, Sr Executive Director, IFFCO 6. Sh V S Narang, Director (Technical), My Home Industries Pvt Ltd 7. Sh Ganesh Jirkuntwar, NMH, Dalmia Cement (B) Ltd 8. Dr S K Chaturvedi, JD & HOC-CRT, NCB | | |
| LUNCH | | 1300 h to 1400 h |
| TECHNICAL SESSION – IV A | | Zorawar Auditorium |
| | | 1400 h to 1545 h |
| PRODUCTIVITY ENHANCEMENT AND PROCESS OPTIMIZATION- I | | |
| <ol style="list-style-type: none"> Impact of rotary kiln burner design on process performance <i>Suresh Thangarasu, Fives Combustion Systems, India [FP-7]</i> Use of yellow shale from mines for improved kiln feed burnability& improved clinker quality – A case study <i>U S Choudhary, KS Dangi, Pavan Deshmukh, Venkateshwarlu K and M Nandeshwar, J K Cement Works, Muddapur, Karnataka, India [FP-9]</i> Problem solving - quality improvement tools <i>B A Agate and Mani Pangen, Cement Sector Expert, India [FP-12]</i> Case study for mitigation of yellow core appearance in clinker <i>Narendra Diwakar, Pravesh Kumar Sharma, Dinesh Agrawal and Manish Kumar Singh, Prism Johnson Limited, India [FP-30]</i> Flash activation of clay: high product quality and energy efficient process <i>Steven W. Miller and Rasmus Franklin Momme, FLSmidth Inc., Allentown, PA, USA [FP-34]</i> Reducing the manufacturing cost of cement & increasing the profitability of cement mill by using pond-ash instead of fly ash <i>Rajni Kant Manawat, Process Expert Services, India [FP-39]</i> Enhancement of kiln output by 1200 TPD through technological upgradation <i>Lokesh Bahety, Rajesh Shrivastava, Shishir Choudhury and Anshul Mishra, Dalmia Cement Bharat Ltd., DDSPL, Banjari, India [FP-43]</i> Plant optimizations & modernizations – successful case studies <i>Sitaram Sharma, Vikram Kancharidasu and Prakash Patil, KHD Humboldt Wedag India Private Limited, New Delhi, India [FP-68]</i> | | |
| TECHNICAL SESSION – IV B | | Ashoka Convention Hall |
| | | 1400 h to 1545 h |
| PERFORMANCE-BASED DESIGN OF CONCRETE STRUCTURES | | |
| <ol style="list-style-type: none"> Shear behaviour of reinforced alkali activated slag and fly ash concrete under ambient curing: comparison with opc based concrete <i>Amit Trivedi, Brijesh Singh, Abhishek Singh, P N Ojha and Dinesh Kumar, National Council for Cement and Building Materials, India [FP-138]</i> Analytical modelling of creep in blended cement paste: a literature review <i>Amit Kumar and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-132]</i> Shear behavior and capacity evaluation of normal and self-consolidating concrete <i>Sahith Gali, Iowa State University, USA</i> <i>Kolluru V. L. Subramaniam, Indian institute of Technology Hyderabad, India [FP-90]</i> Fracture and shear in high-strength recycled aggregate concrete <i>Sourav Chakraborty and Kolluru V L Subramaniam, Indian institute of Technology Hyderabad, India [FP-83]</i> Impact of longitudinal spacing between spring isolators on the fatigue strength of floating slab track | | |

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| <p><i>S. Bashir, A. R. Chowdhary and N Akhtar, CSIR-Central Road Research Institute, New Delhi, India [FP-77]</i></p> <p>6. Study on shrinkage of alkali-activated fly ash-slag blends <i>Mude Hanumananaik and Kolluru V L Subramaniam, Indian Institute of Technology Hyderabad, India [FP-133]</i></p> <p>7. Performance evaluation of ultrafine minerals on the strength of concrete <i>Ajay Pathik, Ultrafine Minerals and Admixtures Pvt Ltd</i> <i>Avijit Chaubey, Rajat Tyagi and Pawan Sen, RDC Concrete India Pvt Ltd [FP-134]</i></p> | | |
| TEA/COFFEE | | 1545 h to 1615 h |
| TECHNICAL SESSION – V A | | Zorawar Auditorium |
| ADVANCES IN GRINDING SYSTEMS- I | | 1615 h to 1745 h |
| <p>1. Empower your cement mill equipment efficiency with digital tools, data-led decisions, sustainable productivity <i>Nuser Bilal, FLSmidth, India [FP-60]</i></p> <p>2. Multiple materials, one solution – roller press comminution, sustainable & proficient systems <i>Niko Hachenberg, Humboldt Wedag GmbH, Germany [FP-65]</i></p> <p>3. Success of grinding systems raw material grinding and clinker grinding a case study <i>Stefan Diedenhofen, Thyssenkrupp Industrial Solutions AG, Beckum, Germany</i> <i>Vinod Wadile, Thyssenkrupp Industries India Pvt. Ltd., Pune, India</i> <i>Nitin Jain, Wonder Cement Ltd, India</i> <i>Anirudh Dani, JK Cement Ltd, India [FP-82]</i></p> <p>4. Reduction in VRM fan power consumption by installation of aero foil design Louver Ring in VRM-3 <i>Rajpal Singh Shekhawat and Pankaj Tiwari, J K Lakshmi Cement Ltd, Sirohi, India [FP-111]</i></p> <p>5. Wear protective coating for vertical rolling mill in cement industry <i>Harisha Kumar AP, Henkel Adhesives Technologies India Private Limited, Pune, India [FP-123]</i></p> <p>6. Enhancement of fly ash absorption by controlling particle size distribution of cement <i>Shyamal Roy, Sanjeev Srivastava, A K Singh and Raju Goyal, UltraTech Cement, Mumbai, India [FP-92]</i></p> | | |
| TECHNICAL SESSION – V B | | Ashoka Convention Hall |
| LATEST INNOVATIONS & TRENDS | | 1615 h to 1745 h |
| <p>1. Rheology control and 3D concrete printing with alkali-activated binders <i>Tippabhotla A Kamakshi and Kolluru V L Subramaniam, Indian institute of Technology Hyderabad, India [FP-107]</i></p> <p>2. Comprehensive digital twin suite for cement plants - value creating technology for the cement industry <i>Matthias Mersmann, KHD Humboldt Wedag International AG, Cologne, Germany [FP-66]</i></p> <p>3. Room-temperature cured fly ash-based geopolymers using low molarity activators <i>Kruthi Kiran Ramagiri and Kolluru V L Subramaniam, Indian institute of Technology Hyderabad, India [FP-85]</i></p> <p>4. Calcium sulphoaluminate cement: acid resistance and early-age strength development <i>Tom Damion and Piyush Chaunsali, Indian Institute of Technology Madras, India [FP-84]</i></p> <p>5. Preparation of CGA-based low-density aerated concrete utilizing single-use polyethylene bag-cuts waste <i>Madhumita Biswas, Ashok N Bhaskarwar and Narendra K Tiwary, Indian Institute of Technology Delhi, India [FP-56]</i></p> <p>6. Development of artificial limestone Aggregate using fly ash through mineral carbonation <i>Mohd Hanifa, L P Singh, P C Thapyal and U Sharma, CSIR- CBRI & AcSIR, India [FP-23]</i></p> <p>7. Effect of physical, chemical and mineralogical properties of cement on the performance of concrete <i>B N Mohapatra, S K Chaturvedi, Richa Mazumder and Sandeep Gupta, National Council for Cement and Building Materials, India [FP-153]</i></p> | | |
| CULTURAL PROGRAMME | | 1830 h to 1930 h |
| DINNER Hosted by Director General-NCB | | 1930 h |

| Thursday, 08 December 2022 | | |
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| TECHNICAL SESSION – VI A | Zorawar Auditorium | 0900 h to 1030 h |
| ADVANCES IN GRINDING SYSTEMS –II | | |
| <ol style="list-style-type: none"> 1. Optimization of VRM process with focus on energy efficiency <i>Caroline Woywadt, Gebr. Pfeiffer SE, Kaiserslautern, Germany</i> <i>Vikram Sharma, Gebr. Pfeiffer Private Ltd, Noida, India [FP-4]</i> 2. CM-3 VRM productivity improvement by separator modification <i>U.S. Choudhary, Anwar Ajaj and Deepak Narti, J K Cement Works, Muddapur, Karnataka, India [FP-11]</i> 3. Five golden rules to improve ball mill performance <i>Amit Kumar Kanojia, Ambuja Cements Limited (Adani Group Company), India [FP-13]</i> 4. Latest development for sustainable and energy efficient operation of grinding plants with MVR mills and TRT drying plants <i>Bernd Henrich, Gebr. Pfeiffer SE, Kaiserslautern, Germany</i> <i>Rahul Sharda, Gebr. Pfeiffer (India) Pvt. Ltd, India [FP-35]</i> 5. OEE, sustainability KPI monitoring & benchmarking for cement mill through IOT Data <i>R Manikandan, FLSmidth A/S, Denmark</i> <i>Kiranmai Sanagavarapu, FLSmidth Pvt Ltd, India [FP-36]</i> 6. Unlocking upgrade potential in grinding systems <i>Janardhanan Ananthakrishnan and Shankar Kannan, FLSmidth Pvt. Ltd., India [FP-58]</i> 7. Quality control in grinding stations: how fast reactivity data minimizes effects of clinker source changes <i>M A Enders and Siddharth Gajjala, Tyssenkrupp Industrial Solutions, Germany</i> <i>L. Wadsö, Calmetrix Inc & Lund University, Sweden [FP-79]</i> | | |
| TECHNICAL SESSION – VI B | Ashoka Convention Hall | 0900 h to 1030 h |
| CONCRETE DURABILITY, DISTRESS INVESTIGATION, REPAIR & REHABILITATION-II | | |
| <ol style="list-style-type: none"> 1. Condition assessment of reinforced concrete members of a fire damaged structure-<i>a case study</i> <i>Rizwan Anwar, P N Ojha, Nitin Chowdhary, Brijesh Singh and Adarsh Kumar NS, National Council for Cement and Building Materials, India [FP-136]</i> 2. Use of low clinker cement as a repair material <i>Bharati, Lupesh Dudi, and Shashank Bishnoi, Indian Institute of Technology Delhi, New Delhi, India [FP-125]</i> 3. Enhancing the service life of concrete structures by imparting corrosion resistance <i>Samidha Pathak and Pranav Desai, Nuvoco Vistas Corp. Ltd, India [FP-5]</i> 4. Low grade limestone suitability for limestone calcined clay cement (LC³) production <i>Lupesh Dudi, Ashirbad Satapathy and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-128]</i> 5. Development of sustainable and durable construction through suitable sustainable cementitious material <i>Lopamudra Sengupta, JSW Cement Limited, India [FP-15]</i> 6. Review of design considerations for cathodic protection & case study of design of CP with galvanic anodes for reinforced concrete <i>Arup Ghatak, P N Ojha, Sanjay Mundra, Rizwan Anwar and Nitesh Kumar, National Council for Cement and Building Materials, India [FP-143]</i> 7. Influence on physical and chemical characteristics of clay upon calcination <i>Mehnaz Dhar and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-124]</i> | | |
| TEA/COFFEE | | 1030 h to 1115 h |
| SPECIAL TECHNICAL SESSION-III | | 1115 h to 1145 h |
| Dr Sada Sahu Sr. Principal Scientist, Solidia Technologies, USA | | |
| PANEL DISCUSSION-III: | | 1145 h to 1300 h |
| Topic: Enhancing AF & ARM utilization in Indian Cement Industry | | |
| Moderator: | | |
| Sh G V Ramakrishna, CTO, Dalmia Cement (B) Ltd. | | |
| Distinguished Panelists: | | |
| 1. Sh Sanjay Joshi, CMO, Nuvoco Vistas Corp Ltd | | |

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| 2. Sh Arun Shukla, CEO & President, J K Lakshmi Cement Ltd 3. Sh Vivek Agnihotri, CEO, Prism Johnson Ltd 4. Sh S K Rathore, CMO, J K Cement Ltd 5. Sh Bimal Modi, Head (AFR), UltraTech Cement Ltd 6. Sh Pankaj Kejriwal, Director, Star Cement Ltd. 7. Dr D K Panda, JD & HOC-CME, NCB | | |
| LUNCH | | 1300 h to 1400 h |
| TECHNICAL SESSION – VII A | Zorawar Auditorium | 1400 h to 1530 h |
| LOGISTIC, CSR INITIATIVES & TOTAL QUALITY MANAGEMENT | | |
| 1. Impact of CSR Initiatives On Water Foot Print of Cement Plant <i>V Rama Raju, Dalmia Cement (Bharat) Limited, India [FP-114]</i> 2. Implementation of total quality management in NCB <i>B N Mohapatra, Amit Trivedi, Suresh Shaw, P Srikanth, Anand Bohra and K R P Nath, National Council for Cement and Building Materials, India [FP-148]</i> 3. Reducing carbon footprint in cement industry: energy saving by compressed air leak elimination <i>Asha Kumari and Jigar Shah, Henkel Adhesives Technologies India Private Limited, India [FP-115]</i> 4. Usage of bamboo as alternate fuel to reduce the CO ₂ emission along with socio economy development in nearby villages community <i>Amitava Roy, Pallab Kalita and Rohini Baishya, Calcom Cement India Limited, India [FP-120]</i> 5. Investigations of burnability using microscopy with respect to the coarse and fine raw mix residue <i>Venkateshwarlu B C, Asis Kumar K, Reetam Chaudhury and Sujit Ghosh, Dalmia Cement Bharat Ltd., India [FP-70]</i> 6. Case Study: a patented innovative anti-stick hybrid coating to reduce the downtime of equipments in cement manufacturing plant <i>Jigar Shah, Henkel Adhesives Technologies India Private Limited, India [FP-131]</i> 7. Development of CRM-targeting quality product and excellency in competency <i>S K Shaw, V Nagar Kumar, A Agnihotri & Amit Trivedi, National Council for Cement and Building Materials, India [FP-146]</i> 8. Significance of proficiency testing (PT) in the field of cement and building materials <i>V Nagar Kumar, Suresh K Shaw, Abhishek Agnihotri and Amit Trivedi, National Council for Cement and Building Materials, India [FP-145]</i> | | |
| TECHNICAL SESSION – VII B | Ashoka Convention Hall | 1400 h to 1530 h |
| CEMENT PLANT MACHINERY & PROJECT ENGINEERING -II | | |
| 1. Advanced refractories solution for modern cement plants <i>Sourav Duttagupta, Sayan Ray, Parthasarathi Mukhopadhyay, Purushottam Bedare, Premanshu Jana, Abhinav Srivastava and Mithun Nath, Vesuvius India Limited, Visakhapatnam, India [FP-14]</i> 2. Development of high corrosion resistant magnesia spinel brick for cement rotary kiln <i>Avishek Mitra and S K Hazra, Dalmia Bharat Refractory Limited, India [FP-16]</i> 3. Frequent failure of alumina brick in safety & calcination zone – reason & remedy <i>Shyamal Roy, Sanjeev Srivastava, Amit Shah and Raju Goyal, Ultratech Cement, Mumbai, India [FP-93]</i> 4. Online wear monitoring & advanced metal detection system for HPGRS operation in cement plants <i>Prashant Garg and Manoj Srivastava, Diffusion Engineers Limited, India [FP-20]</i> 5. Innovative step for the improvement of equipments efficiency and best maintenance practice-a case study <i>N Diwakar, Narendra Pal Singhai, Praveen Shrivastava, Dinesh Agrawal, Sanjay Singh and Manish Kumar Singh, Prism Johnson Limited, India [FP-29]</i> 6. Travelling crushers under wagon tippers and track hoppers <i>K S Nalwaya and Jogesh Narula, KSN Tech Ventures Pvt. Ltd, India [FP-44]</i> 7. Usage of biodiesel in the heavy earth moving machineries <i>T Robert, G Shankarappa, B R Prasannakumar and C S Balakrishnan, Dalmia Cement (Bharat) Limited, Ariyalur, India [FP-48]</i> 8. State of the art performance improvement with near infra-red online analysis <i>Petra Mühlen, SpectraFlow Analytics AG, Switzerland [FP-52]</i> | | |
| TEA/COFFEE | | 1530 h to 1600 h |
| TECHNICAL SESSION – VIII A | Zorawar Auditorium | 1600 h to 1745 h |

ALTERNATE /WASTE FUELS & RAW MATERIALS- II

1. Sustainable solution for co-processing of SPL mixed fines in cement plants
Alka Mishra, Anand Pratap Singh, Rajiv Sadavarti, G V Rama Krishna, Chetan Shrivastava and Arbind Singh, Dalmia Cement Bharat Limited, India [FP-105]
2. Quest of green fuel at Kadapa Cement Works
Mukesh Kumar Sinha, Madhusudhan Nemani and S Netaji Rao, Dalmia Cement (B) Limited, Kadapa, India [FP-109]
3. An experience in co-processing of hazardous liquid waste in cement kilns at J K Lakshmi Cement Ltd
Jaykaypuram, Rajpal Singh and Manish Vijay, J K Lakshmi Cement Ltd, Sirohi, India [FP-112]
4. Right approach for transfer chute design for handling alternative fuels
Kapil Kukreja, B N Mohapatra and Soubhagya Ranjan, National Council for Cement and Building Materials, India M S Soni, Birla Institute of Technology & Science, Pilani Rajasthan, India [FP-163]
5. Techno economic analysis for co-processing of paddy stubble as an alternative fuel in Indian cement industry
Kapil Kukreja Prateek Sharma, S K Chaturvedi, D K Panda and B N Mohapatra, National Council for Cement and Building Materials, India [FP-165]
6. Modelling and experimental studies for process integration of RDF gasification in cement manufacturing process
Prateek Sharma and B N Mohapatra, National Council for Cement and Building Materials, India Pratik N Sheth, Birla Institute of Technology & Science, Pilani Rajasthan, India [FP-167]
7. Refuse Derived Fuel (RDF) co-processing in kiln main burner in a cement plant: A Case Study
Prateek Sharma, Kapil Kukreja, KRK Reddy, Ankur Mittal D K Panda and B N Mohapatra, National Council for Cement and Building Materials, India [FP-168]
8. LC³ clay mapping and their selection criteria in Indian scenario
Aastha Singh and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-135]

TECHNICAL SESSION – VIII B**Ashoka Convention Hall****1600 h to 1745 h****SMART CONCRETE, 3D PRINTING & ULTRA HIGH PERFORMANCE CONCRETE**

1. Mix optimization for development of 3D printed concrete
Manish K Mandre, Brijesh Singh, Amit Trivedi, P N Ojha and B N Mohapatra, National Council for Cement and Building Materials, India [FP-137]
2. Properties of thixotropic rapid hardening mortar and concrete for 3D printing
K Suresh, Manish Kuchya and Raju Goyal, Ultratech Cement Limited, Mumbai, India [FP-130]
3. Effect of curing regime on compressive strength of ultra high strength concrete
Brijesh Singh, P N Ojha, Amit Sagar, Abhishek Singh, Pranay Singh and Ravi Yadav, National Council for Cement and Building Materials, India [FP-139]
4. Development of Green Mineral Admixtures for High Performance Concrete
Mukesh Kumar and Sunil Kumar Saxena, J K Lakshmi Cement Ltd, Sirohi, India [FP-122]
5. Comparison of creep coefficient of normal, high and ultra-high performance concrete
P N Ojha, Brijesh Singh, Abhishek Singh, Amit Sagar, Amit Prakash and Ravi Yadav, National Council for Cement and Building Materials, India [FP-141]
6. Establishing strength co-relation factor for cube vs cylinder strength in high grades
Aswathy Rajendran, Samidha Pathak and Pranav Desai, Nuvoco Vistas Corp. Ltd., India [FP-6]
7. Application of industrially produced LC³ to pavements, AAC blocks
Mukesh Kumar and Sunil Kumar Saxena, J K Lakshmi Cement Limited, India [FP-72]

| Friday, 09 December 2022 | | |
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| TECHNICAL SESSION – IX A | Zorawar Auditorium | 0900 h to 1100 h |
| ENERGY CONSERVATION SYSTEMS | | |
| <ol style="list-style-type: none"> Electrical power optimization for free of cost export <i>U S Choudhary, R Durgaram and Kherajram Chowdhary, J K Cement Works, Muddapur, Karnataka, India [FP-8]</i> Process stablization & energy conservation at PH fan SPRS (breaking the loss iceberg by technological exploration) <i>N S Rao and K P Srivastava, My Home Industries Private Ltd., India [FP-76]</i> Advantages and developments of waste heat recovery system in cement plants <i>Abhay Patil, Thyssenkrupp Industrial Solutions AG, BU Polysius, Beckum, Germany[FP-80]</i> Energy efficient technologies and operations in Mellacheruvu Cement Works (MCW) <i>N S Rao and R V Krishna Kumar, My Home Industries Private Ltd, India [FP-87]</i> An innovative vortex reducer to reduce pressure drop by 20% in preheater top cyclones <i>Mohammad Fazil, Jayateerth V Joshi, Sanjeev Srivastava and Raju Goyal, UltraTech Cement, Mumbai, India [FP-95]</i> Upcoming technologies for renewable sources of energy <i>Sunil Shah, Pawan Mathur and Raju Goyal, UltraTech Cement, Mumbai, India [FP-96]</i> Development of green battery by industrial waste using geopolymers technology <i>Mukesh Kumar and Sunil Kumar Saxena, J K Lakshmi Cement Ltd, India [FP-118]</i> Energy reduction through innovative approach & adopting energy efficient technologies <i>Suman Nath, Chandan Singh and Anil Kumar, Calcom Cement India Limited, India [FP-119]</i> Committing green cement manufacturing process <i>Om Prakash Verma, Jabir Khan and Manish Kumar Singh, Prism Johnson Limited, India [FP-31]</i> | | |
| TECHNICAL SESSION – IX B | Ashoka Convention Hall | 0900 h to 1100 h |
| ENVIRONMENTAL MANAGEMENT, SUSTAINABLE DEVELOPMENT & SAFETY | | |
| <ol style="list-style-type: none"> How predictive maintenance can help achieve net-zero emission goals for cement manufacturers <i>Suraj Pisharodi, Sunil Vedula and Prashant Verma, Nanoprecise Sci Corp, India [FP-17]</i> Energy savings measures for cement production in cement industry <i>P K Choudhary, Jayant Kandpal, Amit Dixit and Harsh Mishra, Birla Corporation Limited, India [FP-22]</i> XRD: An Effective and Economic Solution to Probe Addition of Supplementary Cementitious Materials (SCMS) <i>Mangesh Mahajan, Malvern Panalytical, India [FP-54]</i> An incredible journey of highest green fuel co-processing in cement kiln - a commitment towards sustainable future <i>Raj Kumar Singh, Chandra Kanta Nayak, Ajay Kumar Singh and Prabhat Kumar Singh, Dalmia Cement (Bharat) Limited, Belgaum, Karnataka, India [FP-110]</i> Impact of low carbon cements on carbon footprint of Indian cement industry <i>B N Mohapatra, S K Chaturvedi, Anand Bohra and Varsha Liju, National Council for Cement and Building Materials, India [FP-171]</i> Investigation for the use of thermal power industrial waste flue gas desulphurization gypsum in cement as mineral gypsum replacement <i>G J Naidu, T M Rajan, Richa Mazumder, G Bhatnagar, O P Sharma, S K Chaturvedi and B N Mohapatra, National Council for Cement and Building Materials, India [FP-149]</i> Enhancing fly ash utilization in Portland pozzolana cement (PPC) beyond BIS limit of 35% using mechanical activation methodology <i>Varsha Liju, Suresh Palla, S K Chaturvedi and B N Mohapatra, National Council for Cement and Building Materials, India [FP-151]</i> <i>N K Soni, Rajiv Satyakam, Pranay and A K Das, NTPC Energy Technology Research Alliance (NTPC-NETRA), India [FP-151]</i> A world without waste dump <i>Chetan Shrivastav, Arbind Singh, Kishore Rathore, Ravi Sharma, Vikas Mangal, Aniket Chaki and Md. Nawaz, Dalmia Cement (B) Ltd, Rajgangpur, Odisha, India [FP-99]</i> | | |
| TEA/COFFEE | | 1100 h to 1145 h |
| | Zorawar Auditorium | 1145 h to 1300 h |
| PANEL DISCUSSION-IV: | | |
| Topic: “National Mission on Sustainable Habitat -2030” | | |
| Moderator: | | |
| Prof. Shashank Bishnoi, Professor, IIT Delhi | | |
| Distinguished Panelists: | | |

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| 1. Sh Sanjay Seth, Senior Director - Sustainable Habitat Division, TERI 2. Dr Shailesh Aggarwal, Executive Director, BMPTC 3. Dr Monto Mani, Professor, IISC Bangalore 4. Dr K V L Subramanian, Professor, IIT Hyderabad 5. Dr Amit Hajela, Director, Amity School of Architecture, Infra and Planning 6. Sh P N Ojha, JD & HOC-CDR, NCB | | |
| LUNCH | | 1300 h to 1400 h |
| TECHNICAL SESSION – X A | | Zorawar Auditorium |
| | | 1400 h to 1530 h |
| PRODUCTIVITY ENHANCEMENT & PROCESS OPTIMISATION -II | | |
| 1. Innovative approach to increase CVRM- PPC productivity and reduction of specific power <i>T Robert, G Shankarappa and V Saravanan, Dalmia Cement (Bharat) Limited, Ariyalur, India [FP-50]</i> | | |
| 2. Process optimization by implementation of industrial <i>T.Robert, G.Shankarappa, N.Nagaraj and V.Rajendran, Dalmia Cement (Bharat) Limited, Ariyalur, India [FP-51]</i> | | |
| 3. Improvising kiln maintenance by virtue of strengthening inspection checks <i>Kedar Godbole, Neeraj Dalal and Raju Goyal, UltraTech Cement, Mumbai, India [FP-94]</i> | | |
| 4. Avoiding bell mouth issue in kiln shell at outlet end <i>Kedar Godbole, Neeraj Dalal and Raju Goyal, UltraTech Cement, Mumbai, India [FP-97]</i> | | |
| 5. Increase in cement mill-2 productivity with the use of online particle size distribution analyzer <i>Rajpal Singh Shekhawat and Pankaj Tiwari, J K Lakshmi Cement Ltd, Sirohi, India [FP-113]</i> | | |
| 6. Instrument role of energy audit for accelerating plant energy efficient - a case study <i>Ankur Mittal, Prateek Sharma, K P K Reddy and B N Mohapatra, National Council for Cement and Building Materials, India [FP-170]</i> | | |
| 7. Estimation of OPC, fly ash and slag contents in blended and composite cement by selective dissolution method <i>Suresh Palla, Suresh Vanguri, Rashmi Gupta, S K Chaturvedi and B N Mohapatra, National Council for Cement and Building Materials, India [FP-156]</i> | | |
| TECHNICAL SESSION – X B | | Ashoka Convention Hall |
| | | 1400 h to 1530 h |
| SUSTAINABLE CONSTRUCTION PRACTICES & USE OF ALTERNATE AGGREGATES | | |
| 1. Recent research on iron, steel, copper and ferrochrome slag for utilization in construction industry <i>P N Ojha, Abhishek Singh, Brijesh Singh, Amit Trivedi and Puneet Kaura, National Council for Cement and Building Materials, India [FP-140]</i> | | |
| 2. Application of LC ³ in non-structural paver block <i>Narendra Kumar, Lav Singh and Shashank Bishnoi, Indian Institute of Technology Delhi, India [FP-129]</i> | | |
| 3. Properties of pavement quality concrete with BOF steel slag coarse aggregates <i>Binod Kumar, CSIR-Central Road Research Institute, India [FP-108]</i> | | |
| 4. Challenges met during construction of extruder & purge- bin buildings of LLDPE/HDPE swing unit of petrochemical complex- a case study <i>C R Rajasekar, Engineers India Limited, New Delhi, India [FP-75]</i> | | |
| 5. Utilization of mining waste as an aggregate <i>Arunachala Sadangi, Aswathy Rajendran and Pranav Desai, Nuvoco Vistas Corporation Ltd, India [FP-71]</i> | | |
| 6. Precast concrete pavement construction: A technology perspective <i>Aishwarya Badkul, Rakesh Paswan and S K Singh, CSIR- Central Building Research Institute, Roorkee, India [FP-45]</i> | | |
| 7. Performance of EAF steel slag as aggregates in concrete- a review <i>Sheetal and S K Singh, CSIR- Central Building Research Institute, Roorkee, India [FP-42]</i> | | |
| 8. Development of eco-friendly white cement based wall putty product for sustainable growth of white cement business <i>Rajesh Singh, Arvind Gupta, Vinit Purohit, Rakesh Kumar and Kareena Kumari, Ultratech Cement Ltd., India [FP-37]</i> | | |
| CONCLUDING SESSION | | Zorawar Auditorium |
| | | 1530 h to 1630 h |
| 1. Welcome Address & Highlights of the 17th NCB International Conference Dr B N Mohapatra, Director General, NCB | | |
| 2. Address by Shri K C Jhanwar, Chairman-NCB & President – Cement Manufacturers’ Association & MD, UltraTech Cement Ltd. | | |
| 3. Industry Feedback | | |

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| 4. Address by Guest of Honour Shri Shashank Priya, Special Secretary and Financial Advisor, DPIIT, Ministry of Commerce & Industry, Govt. of India | |
| 5. Distribution of National Awards for Indian Cement Industry and Distribution of Best Paper Awards & Valedictory Address by Chief Guest Shri Som Parkash, Hon'ble Minister of State, Ministry of Commerce & Industry, Govt. of India | |
| 6. Vote of Thanks Dr S K Chaturvedi, Organizing Secretary, 17th NCB International Conference | |
| Farewell Get-together | 1630 h - |