

18th NCB International Conference & Exhibition on Cement, Concrete and Building Materials

“Cementing the Net Zero Future”



Bulletin-5

27 - 29 November 2024

Yashobhoomi, ICC Dwarka, New Delhi, India

National Council for Cement and Building Materials

(Under the Administrative Control of DPIIT, Ministry of Commerce and Industry, Govt. of India)

<https://conference.ncbindia.com>



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INTRODUCTION

National Council for Cement and Building Materials (NCB), the apex body in India for research, technology development and transfer, education and industrial services for cement, allied building materials and construction industries, is organizing this International Conference & Exhibition on Cement, Concrete and Building Materials as a follow-up of the Seventeen NCB International Conference/Seminars organized earlier, each with substantial international participation. The theme of this year's Conference is **“Cementing the Net Zero future”**. The NCB International Conferences have emerged as singular biennial events in this part of the globe which the cement and construction industries the world over look forward to for participation. The continued interest of participants over the years is indication of the benefits reaped by them and has enabled this event reach the milestone of its 18th edition. While reviewing the developments which have taken place during the intervening period since the last event in the series, especially in the areas of low carbon cements, carbon capture and utilization, application of artificial intelligence, alternate fuels and raw materials, emissions control, ready mix concrete, nano-technology, etc., the 18th NCB International Conference through the Technical Exhibition to be held as a part of the event will give additional exposure to the latest in available technologies and services for efficient operation of cement plants, making of concrete and construction activities. The event will serve as an excellent meeting point for the suppliers and the clients, especially from developing countries for mutual benefit.

Like the previous ones in the series, the 18th NCB International Conference & Exhibition has been sponsored by a number of leading international and national cement, concrete and their equipment/machinery manufacturing organizations, construction companies and government bodies.

DATES

27-29 November 2024

VENUE

Yashobhoomi, IICC Dwarka, New Delhi, India

Yashobhoomi (India International Convention & Expo Centre) Located in Dwarka, New Delhi, is India's largest convention and exhibition centre for National / International Seminars, Conferences and Exhibitions. It provides serene environment for technical deliberations and generous spreads for exhibition. IICC offers a mixed purpose tourism experience with the best location, convenient transportation, as well as various commercial facilities.



Highlights of
17th NCB International Conference
(06-09 December 2022)

1100 Delegates including 48 Delegates
from 11 Countries

160 Technical Papers Presented in
24 Sessions

120 Stalls by 83 Exhibitors in the
Technical Exhibition
organized concurrently

DELEGATE REGISTRATION

Interested participants should either complete the registration by returning the duly filled attached Registration Form on <https://conference.ncbindia.com>

Registration Fee per Participant and Payment Schedule				
Category / Sub Category	Date of Payment			
	Upto 01 November 2024		From 11 November 2024	
	National (₹)	Overseas (US\$)	National (₹)	Overseas (US\$)
Delegate	Rates are Exclusive of all Taxes/GST, as applicable.			
Delegate Fee (Industry sponsored)	20,000	1,700	25,000	2,000
Delegate Fee (Academic, R&D, StartUps)	17,000	1,600	20,000	1,900
Students*	8,000	1,000	8,000	1,000
Accompanying Persons (Spouse only)	10,000	500	10,000	500

Important	As required by the norms of Venue Management :
	<ul style="list-style-type: none"> All Overseas Delegates / Exhibitors / Accompanying Persons must indicate their willingness to participate latest by 10 November 2024 (Name, Designation, Nationality, Copy of Passport, Contact information, E-mail ID required). All Indian Nationals – Delegates / Exhibitors / Accompanying Persons must indicate their willingness to participate latest by 10 November 2024 (Name, Designation, Contact information, E-mail ID required). <p>However, to avail the discounts, the above payment schedule should be adhered to.</p>
* With Proper ID proof from University / Institute Recognized / Accredited by Government	

The Registration Fee for the Participating Delegates Covers : Conference Kit and Conference Proceedings in digital format, admission to Inaugural, Concluding and all the Technical Sessions, admission to the Technical Exhibition, Morning and Afternoon Coffee/Tea and Lunch on all Conference days.

“Compendium - The Cement Industry India 2024”, a Publication titled “Alternative Fuels – A Green Solution for Indian Cement Industry” and “NCB Guide Norms” for Cement Plant Operations shall be available in soft copy downloadable from conference App (<https://conference.ncbindia.com>)

The Registration Fee for the Accompanying Persons Covers : Participation in Inaugural and Concluding Sessions, Admission to the Technical Exhibition, Morning and Afternoon Coffee/Tea and Lunch

CANCELLATION

On cancellation of registration, refund of registration fee will be as follows:

- Upto 30 September 2024 20% deduction
- After 30 September 2024 No refund

Cancellation charges may be waived at the discretion of the Secretariat, if the originally registered delegate is in a position to arrange for an alternate in his place



PARTICIPATION

Conference content is designed to contain state-of-the-art technologies, reviews and case studies on modernization & up-gradation, retrofitting / re-engineering and plant rejuvenation along with environmental and sustainability concerns. Conference shall also cover advances in cement & concrete research and evolving issues for futuristic technology.

The Conference, therefore, provides an ideal opportunity to :

- Cement and concrete professionals from policy makers/top management personnel to senior and middle level executives as well as engineers/chemists associated with manufacture of Cement, Concrete and Ready Mixed Concrete, Lime and allied building materials.
- Equipment / machinery manufacturers, designers and consultants.
- Engineers, Technologists, Scientists, Academicians, Research scholars, Students and Economists.
- Users of cement and building materials and construction agencies to deliberate, share and assimilate the ideas of the world's leading experts on the latest national and international trends and developments.

TECHNICAL THEMES

The technical deliberations at the Conference will cover the whole spectrum, from geological exploration/extraction of limestone to manufacture and utilisation of cement & building materials and concrete & it's durability with focus on latest innovations in technology. The areas needing special attention in the present context have been identified as follows:

☞ **Low Carbon Cement**

- Advances in cement chemistry
- Optimization of raw mix design
- Use of mineralisers, fluxes and activators
- Low energy and special cements
- Hydration studies of cementitious systems
- Mineral admixtures
- Binary and ternary blended cements
- Composite and Portland limestone cements
- Calcined clay based cements

- Green cement / Eco-cement

☞ **Carbon Capture, Utilisation and Storage (CCU&S)**

- Carbon Capture techniques
- Mineral carbonisation of industrial products
- Co₂ utilization in fresh concrete
- Transportation and storage of Co₂

☞ **Alternate / Waste Fuels and Raw Materials**

- Use of alternate fuels including MSW, WDF, bio-fuels etc.
- Use of low-grade fuels
- Co-processing of hazardous wastes in cement kiln

- Alternate raw materials including industrial wastes / by-products
- Logistics & transportation issues
- Health & safety aspects

☞ **Energy Conservation Systems in Cement Plants & CPP**

- Energy efficient technologies and operations
- Energy audit and management
- Advances in combustion systems
- New and renewable sources of energy
- Waste heat recovery and co-generation of power
- Role of regulatory provisions in energy conservation
- Energy efficient buildings and structures

☞ **Cement Plant Machinery and Project Engineering**

- Optimum plant design
- Advances in cement plant machinery
- Packaging, handling and transportation of cement including bulk systems
- Technology upgradation / modernization / debottlenecking / re-engineering
- Financial restructuring and plant rejuvenation
- Ultra-high capacity cement kiln and mill systems

☞ **Productivity Enhancement and Process Optimization**

- Total productivity enhancement and cost reduction techniques
- Optimization of plant operations and trouble shooting
- Refractory engineering practices and recent advances
- Condition monitoring techniques
- Technical audit, plant maintenance and benchmarking
- Advances in instrumentation and process automation
- Supply chain management

☞ **Performance and Durability of Concrete**

- Concrete of low permeability / high electrical resistivity
- Use of stainless steel and composite reinforcement
- High strength concrete, High performance concrete, Ultra-high strength concrete
- Improvement of performance by use of fibre reinforcement in concrete

- Durability of concrete in aggressive environment
- Chemical admixtures, Corrosion inhibitors and Coatings
- Additions for enhanced durability of concrete - Blast furnace slag, fly ash, silica fume, metakaolin and other
- Supplementary Cementitious Materials (SCMs) or Pozzolanas
- Testing for durability

☞ **Performance-based Design of Concrete Structures**

- Planning for durability and Performance based design
- Structural design using high strength / ultra-high strength concrete
- Structural design using fibres / fibre composites reinforced concrete
- Service life design (prediction) / residual life assessment

☞ **Concrete Deterioration Mechanisms and Reinforcement Corrosion**

- Chloride ingress and chloride induced corrosion
- Carbonation and carbonation induced corrosion
- Initiation and propagation of corrosion of steel rebars
- Alkali aggregate reactions
- Sulphate attack (formation of Ettringite, Thaumasite, Gypsum etc.)
- Delayed Ettringite formation
- Freeze / thaw attack
- Effect of cracks

☞ **Distress Investigation, Repair / Strengthening / Retrofitting of Concrete Structures**

- Non-destructive testing of concrete
- Repair systems
- Applications of membrane & coatings
- Chloride removal techniques
- Re-alkalization techniques
- Cathodic protection of steel reinforcement
- Use of fibre wrapping
- Water proofing
- Seismic retrofitting
- External pre-stressing

☞ Sustainable Construction Practices and Use of Alternate Aggregates & Geopolymer Concrete

- Construction project management
- Construction practices with respect to speed economy & quality
- Ready mixed concrete
- Self-compacting concrete, concrete rheology and pumpability
- Special concretes such as pervious concrete, plastic concrete and controlled low strength concrete
- Geopolymer Concrete – Production, use and design aspects
- Quality control, quality assurance & technical audit of concrete construction
- Use of C&D waste, fly ash, slags and bottom ash as aggregate
- Use of other waste-based materials, sintered and manufactured aggregates, fly ash bricks, Autoclaved Aerated Concrete (AAC)
- Concrete pavements
- Newer construction technologies
- Precast concrete technology
- High volume fly ash concrete (HVFAC)

☞ Other Building Materials and Binders

- Lime, fly ash, clay & gypsum based materials
- Waste based binders / cementitious materials

☞ Marketing and Consumer Protection

- Marketing research and analysis
- Innovative marketing practices
- National and International Standards
- HRD needs and support systems for cement and construction industries
- New training tools
- Skill upgradation

☞ Environmental Management, Sustainable Development and Safety

- Environmental improvement through modern technologies in cement and construction industries
- Sustainable development initiatives
- Role of regulatory provisions for environment improvement and sustainable development
- Leaching of heavy metals in cement and concrete systems
- NO_x SO₂ control – Primary & Secondary measures
- Dust control measures
- Climate change implications and initiatives by cement and construction industries
- Life cycle assessment in cement manufacture
- Carbon footprint
- Water footprint
- EIA/ EMP studies in cement and construction sectors.
- Rehabilitation of limestone mines
- Voluntary environmental initiatives
- Safety, Health and Environment

☞ Latest Innovation Trends

- Geopolymer binders
- Nano technology application in cement and concrete
- Energy efficient materials
- Expanding the horizon of cement use
- Use of Drones for assessment of Concrete Structures
- 3D Printing of Concrete Structures, materials etc
- Use of polymers and resins with cementitious systems
- Technology trends and forecasts
- Green technologies and practices for sustainable growth
- CSR initiatives
- Novel chemical admixture
- Advanced analytical techniques

Discussions covering technical papers on the above areas will be classified and spread over various technical sessions. Authors of the papers selected for presentation will present the salient features of their papers. These will be followed by discussion from the floor.

TECHNICAL EXHIBITION

A Technical Exhibition bearing on the themes of the Conference will be an added opportunity for the delegates to have an exposure of the state-of-the-art developments around the world. Exhibits would be components, scale models, literature & books, charts, photographs, etc. There will be more than 115 leading equipment manufacturers and service providers showcasing their technological prowess, new products and services in a Technical Exhibition of 200 stalls.

INTERNATIONAL EXPERIENCES

Exchange of views with delegates, experiences from abroad, covering developments relevant to India and frontiers of achievements which could be advantageously utilized, will specially enrich the Conference. The highlights of international experiences will be the keynote Lectures by renowned international experts. Delegates will get an opportunity to have interaction with these and other experts participating in the Conference.



Prof. Surendra P Shah

Presidential Distinguished Professor, University of Texas at Arlington, USA, Walter P. Murphy, Professor (Emeritus) Northwestern University, USA



Prof. Karen Scrivener

Prof. & Head, Laboratory of Construction Materials, Department of Materials, Swiss Federal Institute of Technology (EPFL), Switzerland



Mr. Christophe Levy

Scientific Director, Holcim Innovation Center Lyon, France



Dr Anjan K Chatterjee

Fellow, Indian National Academy of Engineering Chairman, Conmat Technologies Pvt. Ltd.



Prof. Dr.-Ing. Thomas Matschei

Chair of Building Materials, Institute of Building Materials Research, RWTH Aachen University

DIGITAL PUBLICATION

A digital publication of proceeding of Conference containing one page abstract and full manuscript of accepted papers will be brought out and provided in the Conference kit.

ADVISORY COMMITTEE

Chairman: Shri Neeraj Akhoury, Chairman – NCB and MD, Shree Cement Ltd.

Convener: Dr. L P Singh, Director General, NCB

Dr. S P Shah Emeritus Professor, University of Oklahoma	Shri Mahendra Singhi Director, Dalmia Cement (B) Ltd.
Dr. A K Chatterjee Chairman, Conmat Technologies	Shri M S Gilotra MD, Saurashtra Cement Ltd.
Shri Mahesh Tandon MD, Tandon Consultants	Shri Madhav Singhania Deputy MD & CEO, J K Cement Ltd.
Prof. Karen Scrivener EPFL, Switzerland	Shri Deepak Khetrpal MD & CEO, Orient Cements Ltd.
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Dr Ashok Kumar DDG, Bureau of Energy Efficiency	Shri Arun Shukla President & Director, J K Lakshmi Cement Ltd
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Dr Christophe Levy Research Director, Holcim	Shri V S Narang Director (Tech.), My Home Industries Pvt Ltd.
Prof. KVL Subramaniam Department of Civil Engineering, IIT Hyderabad	Shri Raju Goyal Chief Technical Officer, UltraTech Cement Ltd.
Prof. Shashank Bishnoi Department of Civil Engineering, IIT Delhi	Shri S Srikanth Reddy Joint MD, Sagar Cement Ltd.
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Mr. Justus Von Wedel Managing Director, IKN Germany	Shri D Lakshmikantham Director (Technical), Penna Cement Ind. Ltd.
Dr Deepak Bansal Regional Chief, HUDCO	Shri Pankaj Kejriwal Whole Time Director, Star Cement Ltd.
Mr. Detlef Blümke Managing Director, Loesche GmbH	Prof. Caijun Shi Hunan University, China
Dr Sada Sahu Chief Technology Officer, BatugaTech	Dr B N Mohapatra Consultant & Advisor, UltraTech Cement Ltd
Prof S K Singh Professor, CBRI Roorkee	Shri K Gautam Managing Director, M/s NCL Industries Ltd.,
Dr Ing. Roger Meier GM – Business Development EMEA CIS & India FCT ACTech	Shri R A Krishna Kumar Chief Operating Officer ChettinadCement Corpn. Pvt. Ltd
Shri KRS Narayan Business Leader – Carbon Abatement Initiatives, Reliance Industries Ltd.	Dr Abhishek Rai Corporate Quality Head, Shree Cement Ltd

CONFERENCE LANGUAGE

The official language of the Conference is English. All papers therefore should be drafted in English only. All deliberations during the Conference will also be conducted in English language.

BEST PAPER AWARDS

Authors of few selected papers which are adjudged by the panel of judges, appointed by NCB, as the best contributions to the Conference from the point of view of serving the needs and closest to implementation in cement, concrete and building materials industries, will be given awards and certificates at the Concluding Session. Some of the best papers will be published in leading Journals and Magazines.

NATIONAL AWARDS FOR INDIAN CEMENT INDUSTRY

National Awards will be given to best participating Cement Plants for Energy Excellence, Environment Excellence, Circular Economy and Total Quality Management in the Indian Cement Industry for the years 2022-24 to create motivation in the cement industry for competitive improvement in both Integrated and Grinding Units. These awards will be given during the Conference. The Questionnaire for these Awards can be downloaded by using the link <https://conference.ncbindia.com>. Last date of submission is 7th September 2024.

SPONSORSHIP SCHEMES

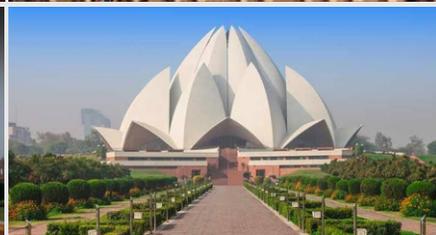
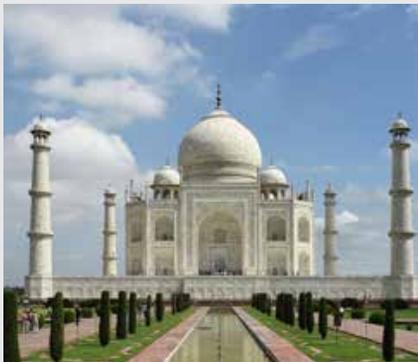
Many organizations have shown interest for being associated with the Conference as Sponsors. The Secretariat has drawn up very attractive schemes with host of complimentary benefits to the Sponsors under different categories. Details of the schemes are available on request. The interested organizations can also associate themselves with the event for gaining additional publicity as under:

- Sponsoring Lunch with publicity through special signages at the venue, and Announcement through slide in the Conference.
- Sponsoring the delegate kit bag with logos of company / organization and the Conference.

TOUR AND VISIT

Technical visits to cement and building material manufacturing plants, construction sites and industrial complexes as well as sightseeing tours to places of historical and cultural interest would be arranged after the conclusion of the Seminar, details of which will be sent to those who register for the seminar. Post-seminar tours include attractive proposals to visit places of historical and cultural interest like Agra, Goa, Jaipur, Kathmandu and Khajuraho, if sufficient response is received from the participants.

For the accompanying ladies, special programmes, like local Shopping, Yoga, Mehndi, Rangoli and Herbal therapy demonstration, visit to Fashion Shows and Boutiques will be arranged.



INFORMATION

All communications may be addressed to :

The Organising Secretary

18th NCB International Conference

National Council for Cement and Building Materials

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Visit our Website : https://conference.ncbindia.com .			

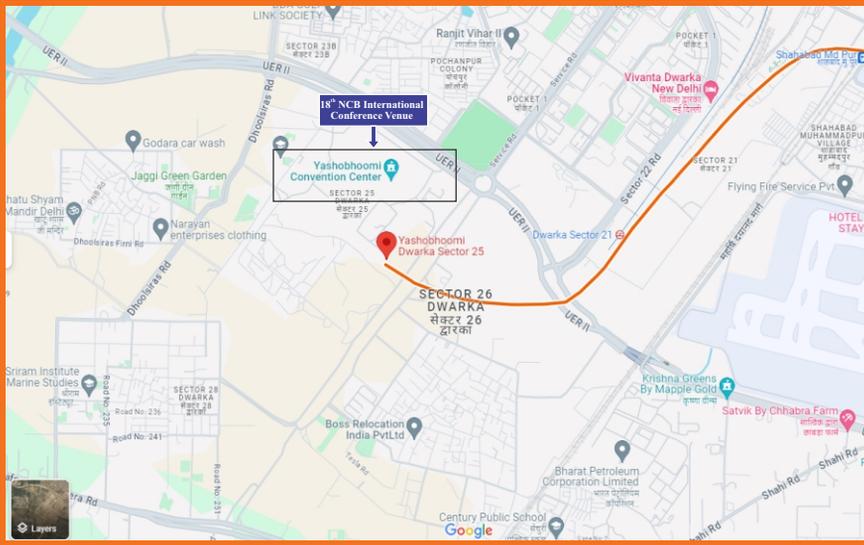
List of Hotel Near Venue :

<https://www.iicnewdelhi.com/accommodations>

VENUE DETAILS

Nearest Landmarks from Yashobhoomi, IICC Dwarka, New Delhi are mentioned below:

- ▶ From Yashobhoomi Dwarka Sector - 25 Metro Station : 0 Km
- ▶ From IGI Airport : 11 Kms
- ▶ From New Delhi Railway Station : 24 Kms
- ▶ From Delhi Cantt Railway Station : 14 Kms
- ▶ From Gurugram Railway Station : 12 Kms



TERMS OF PARTICIPATION

NCB is not liable for any acts of a Third Party in respect of the Conference & Exhibition. In addition and without limitation, NCB is not responsible for any injury, loss, inconvenience, or damage, to person or property in connection with the holding of the Conference & Exhibition, whether resulting from, but not limited to acts of God or Force Majeure. NCB reserves the right to change the itinerary for the Conference & Exhibition, or its features at any time and for any reason, with or without notice, and NCB shall not be liable for loss of any kind as a result of any such change. The Courts at New Delhi, shall have exclusive jurisdiction in respect of all matters concerning or related to the Conference & Exhibition. All such disputes shall be referred to a Sole Arbitrator to be exclusively appointed by NCB.



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Organised by :
National Council for Cement and Building Materials, India

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