

# 18<sup>th</sup> NCB International Conference & Exhibition on Cement, Concrete and Building Materials

*"Cementing the Net Zero Future"*



Bulletin-3

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27 - 29 November 2024

Yashobhoomi, IICC 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>



DEPARTMENT FOR PROMOTION OF  
INDUSTRY AND INTERNAL TRADE  
MINISTRY OF COMMERCE & INDUSTRY  
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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 18<sup>th</sup> 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 18<sup>th</sup> 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 18<sup>th</sup> NCB International Conference & Exhibition will also be 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  
17<sup>th</sup> 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 31 October 2024		From 01 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"><li>• All Overseas Delegates / Exhibitors / Accompanying Persons must indicate their willingness to participate latest by <b>31 October 2024</b> (Name, Designation, Nationality, Copy of Passport, Contact information, E-mail ID required).</li><li>• All Indian Nationals – Delegates / Exhibitors / Accompanying Persons must indicate their willingness to participate latest by <b>31 October 2024</b> (Name, Designation, Contact information, E-mail ID required).</li></ul> However, to avail the discounts, the above payment schedule should be adhered to.
* 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 book 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.

## PAPERS AND TIME SCHEDULE

Papers covering any of the theme areas are invited from interested persons. The following time schedule will be followed

	Submission	Acceptance by Secretariat
Full paper & One Page (max) Abstract (final) with figure, if any	31 <sup>st</sup> August 2024	30 <sup>th</sup> September 2024

Soft copy of one page abstract and final manuscript done in MS-Word and PDF are to be submitted. All abstracts as also the final papers received will be reviewed by Conference Technical Committee. Soft copy of full manuscripts of accepted papers from registered delegates only will be provided in Conference Kit. Full manuscripts should be prepared as per prescribed guidelines, which will be communicated to the authors of accepted abstracts. Detailed guidelines can be seen at [www.ncbindia.com](http://www.ncbindia.com)

Only a limited number of papers from Registered Delegate will be selected for presentation. The authors of the papers will be informed accordingly. **Papers can be submitted at “<https://conference.ncbindia.com>”**

# 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
- CO<sub>2</sub> utilization in fresh concrete
- Transportation and storage of CO<sub>2</sub>

## ☞ 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
- Waterproofing
- 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 (HVFA)

### ☞ **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<sub>x</sub> SO<sub>2</sub> 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

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 be requested to briefly 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.

- 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



Category of Exhibitor	Service Charges per sqm	Free Delegates for Each Stall	
		Size (mxm)	Category of Delegate
		(3x3)	
National	Rs. 25,000/-*	02	Indian Nationals only
Overseas	US\$ 750	02	Overseas or Indian Nationals

\* Plus Taxes/GST, as Applicable

- Only 200 stalls are available
- Stalls shall be booked on First-Pay-First-Served basis and to be booked on conference App.
- Details of layout, facilities and terms and conditions will be sent to interested exhibitors on request
- Visit : <https://conference.ncbindia.com> for details



# 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 Invited Lectures by renowned international experts. Delegates will get an opportunity to have interaction with these and other experts participating in the Conference.

# 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.

# ADVERTISEMENT RATES

Advertisement will be provided in the digital publication of Conference Proceedings. The details are as follows:

Advertisement Position	National (₹)*	Overseas (US\$)
Full Page	10,000	500

\* Plus Taxes/GST, as Applicable

All advertisements (limited to one page) will be in colour. Advertisement material (Soft Copy) may be provided in Corel Draw, Illustrator or Photoshop in open format together with EPS or PDF, not less than 300 dpi.

Payment can be made through bank transfer / RTGS / NEFT. The advertisement material should reach latest by 30 September 2024.



# 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.



# ADVISORY COMMITTEE

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

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

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<b>Shri K Gautam</b> Managing Director, NCL Industries Ltd.	<b>Prof. Caijun Shi</b> Hunan University, China
<b>Shri K R S Narayan</b> Business Leader, Carbon Abatement Initiatives, Reliance Industries 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 31<sup>st</sup> August 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.

## INFORMATION

All communications may be addressed to :

**The Organising Secretary**

18<sup>th</sup> NCB International Conference

National Council for Cement and Building Materials

34 Km Stone, Delhi Mathura Road (NH-2) Ballabgarh 121 004, Haryana, India

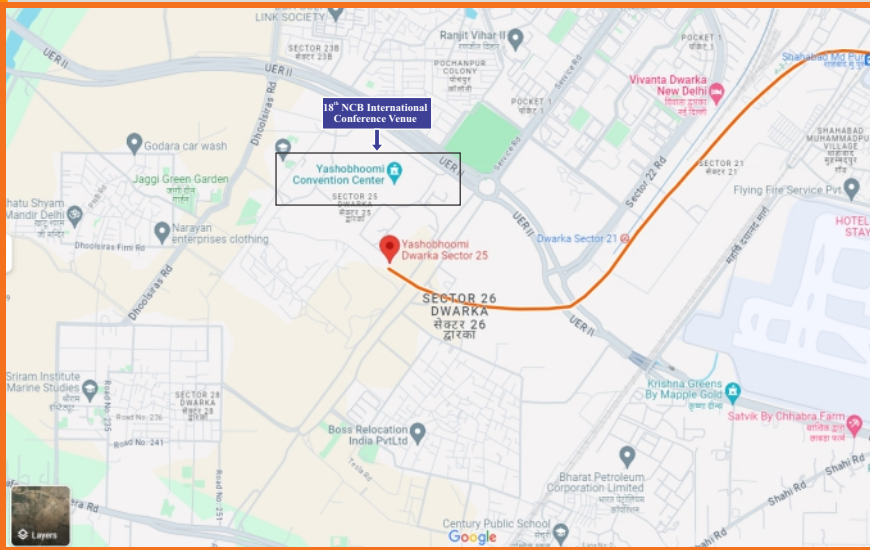
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Visit our Website : <a href="https://conference.ncbindia.com">https://conference.ncbindia.com</a> .			



# 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.



**18<sup>th</sup> NCB International Conference & Exhibition on Cement, Concrete and Building Materials**  
*Organised by :*  
**National Council for Cement and Building Materials, India**

*Photographs used in the Bulletin have been taken from various websites.*