



**TRAINING PROGRAM ON
DESIGN OF CHIMNEYS AND
STACKS FOR POWER
PLANTS & OTHER
INDUSTRIAL APPLICATIONS**

About CEAI Academy

Consulting Engineers Association of India (CEAI) is the apex body of consulting engineers in India, with membership spanning both organizations and individuals. CEAI is a Member Association of the International Federation of Consulting Engineers (FIDIC), representing the Indian consulting engineering fraternity globally.

CEAI Academy is its training arm, offering capacity-building programs including technical workshops, short-term modules, and professional development opportunities, empowering engineers across India.

Course Description

The **“Design of Chimneys and Stacks for Power Plants & Other Industrial Applications”** is a structured and industry-relevant online training program jointly organized by **CEAI Academy** and the **CEAI Eastern & North East Region**. The course is planned and conceived by a core team of experts led by Ms. Sayona Phillip and Mr. Anirban Datta.

The 10-session series, spread across five weekends, will bring together top experts from the field to deliver in-depth knowledge on the design, analysis, advanced design techniques, innovation, safety and risk aspects in chimneys and stacks used in power plants and other industrial setups.

Participants will gain knowledge on types and functions of chimneys and stacks, learn about environmental and regulatory considerations, and dive deep into thermofluid dynamics, structural stability, load analysis, and vibration control. The course explores advanced design tools like **Computational Fluid Dynamics (CFD)** and **wind tunnel analysis**, alongside dedicated sessions on both **steel** and **RCC stack designs**.

In addition to technical aspects, the program highlights **safety management**, **risk mitigation strategies**, and introduces **emerging technologies** and **state-of-the-art construction methods**. The final session focuses on **real-world case studies**, helping participants connect theory with practical applications.

Whether you are a professional, aspiring, or otherwise, from academia, the energy sector, industry, engineering consulting, or EPCs, this program offers valuable insights and a deep understanding to enhance your capabilities in chimney and stack design.

Program Schedule

Topics	Lecture No.	Sub-Topics	Faculty	Lecture Date/ Day	Lecture Time
		Welcome Address	Mr. Alok Bhowmick	30th August Saturday	10.20am - 10.30am
Basics of Industrial Chimney and Stack Design	L1	Functions of Chimneys and Stacks in Industries	Mr. R L Dinesh	30th August Saturday	10:30am - 12:30pm
	L2	Types of chimneys and stacks			
	L3	Environmental considerations and dispersal of particulate matters including regulatory compliances	Mr. Anirban Datta		
	L4	Thermofluodynamic design considerations and sizing of chimneys			
Design and Analysis of Steel Stacks	L1	Load analysis and wind load considerations	Mr. R L Dinesh	31st August Sunday	11:00am - 1:00pm
	L2	Assessment of structural stability			
	L3	Design for thermal expansion and contraction			
Advanced Design Techniques	L1	Computational fluid dynamics (CFD)	Dr N Bandyopadhyay	6th September Saturday	10:30am - 12:30pm
	L2	Vibration analysis			
	L3	Wind tunnel analysis	Dr K Suresh Kumar	7th September Sunday	11:00am - 1:00pm

Program Schedule

Topics	Lecture No.	Sub-Topics	Faculty	Lecture Date/ Day	Lecture Time
Design and Analysis of RCC Stacks	L1	Load analysis and wind load considerations	Mr. R L Dinesh	13th September Saturday	10:30am - 12:30pm
	L2	Assessment of structural stability			
	L3	Environmental considerations and dispersal of particulate matters including regulatory compliances		14th September Sunday	11:00am - 1:00pm
Safety and Risk Management in Chimney and Stack Design	L1	Focus on safety aspects in design of chimneys and stacks	Mr. Anirban Datta	20th September Saturday	10:30am - 12:30pm
	L2	Risk assessment and mitigation			
Innovations in Chimney and Stack Design	L1	Optimization of design for efficiency and costeffectiveness	Mr. Anirban Datta	21st September Sunday	11:00am - 1:00pm
	L2	Emerging technologies in chimney and stack construction			
	L3	State-of-the-art fabrication/construction techniques for Chimneys & Stacks			
Case Studies	L1	Analysis of real-world chimney and stack designs	Mr. R L Dinesh	27th September Saturday	10:30am - 12:30pm

Faculty Profile



Mr. RL Dinesh

*Former Discipline Head & Senior General
Manager
Tata Consulting Engineers Ltd.*

Mr. R L Dinesh graduated as a Civil Engineer from Mysore University in 1987 and completed his postgraduation in Industrial Structures from Regional Engineering College, Suratkal, in 1989. He began his career as a Structural Engineer at Sterling Engineering Consultancy Pvt. Ltd., where he served for five years and in 1995, he joined Tata Consulting Engineers Ltd. He had a remarkable career there for 30 years and superannuated in May 2025 as Discipline Head and Senior General Manager. Throughout his distinguished career, Mr. Dinesh was deeply involved in the detailed engineering of power plants and the design of special structures such as chimneys, silos, bunkers, and other critical industrial infrastructure.

Faculty Profile



Mr. Anirban Datta

*Chartered Engineer &
Chairman, CEAI-Eastern & North-Eastern
Region
Honorary Secretary, The Institution of
Engineers (India)- West Bengal*

Mr Anirban Datta is a Graduate Mechanical Engineer with over 25 years of industry experience, specializing in the design and analysis of critical piping systems and pressure vessels across refineries, petrochemical units, thermal power plants, and steel and metallurgical plants. He holds an MBA in Energy Management and is the Founder & CEO of PIMECAS Engineering Solutions. He has worked in CESC and TATA Consulting Engineers Limited. His expertise extends to the engineering and design of plant utilities such as steam, water, air, gas, HVAC, and systems for loss prevention and materials handling. He has worked on major projects involving chimneys and flue gas systems for CESC, NTPC, and TATA Consulting Engineers Limited. Mr Anirban has led teams for project feasibility, detailed project reports, contract and project management, cost estimation, and techno-commercial evaluation. He is certified in ASME codes, GHG accounting, and SDG implementation, and actively contributes to training and skill development. He is a Chartered Engineer and currently serves as Chairman CEAI-Eastern & North-Eastern Region and Honorary Secretary of The Institution of Engineers (India)- West Bengal.

Faculty Profile



Dr. N Bandyopadhyay

*Former Director
STUP Consultants Pvt. Ltd.*

Dr N Bandyopadhyay is a professional Civil Engineer primarily in the area of bridge and structural engineering. He has been responsible for design of a large number bridges in various parts of India and abroad. His specialization is in Analysis, Finite Element Analysis and Numerical Methods. He has excellent exposure to multiple aspects of Computer Aided Engineering in Consulting Engineering Organizations. He has actively participated in professional bodies and has been a member of Indian Road Congress (IRC) Code Committees and IABSE Working Commissions. Dr Bandyopadhyay has published several articles in professional journals.

Faculty Profile



Dr. K Suresh Kumar

*Principal/Vice President
Global Consulting, RWDI*

Dr K Suresh Kumar is a Principal/Vice President – Global Consulting, RWDI. Currently based in Dubai, UAE, Dr Suresh is a recognized leader in the field of wind engineering. He has 35+ years of experience internationally as a Wind Engineering Researcher/ Consultant. Dr Suresh spearheaded the establishment of RWDI's 5th wind tunnel in Thiruvananthapuram (Trivandrum), India, where he successfully led a team of 50 technocrats for 15 years before moving abroad. He has had the privilege of working as a wind consultant on many iconic structures worldwide including the world's tallest tower, the Burj Khalifa in Dubai, and a few supertall towers. Dr Suresh has published/ presented numerous papers in international journals/ conferences and is active professionally worldwide.

Fee

Registration Fees

CEAI Members: ₹4,500 + 18% GST

Non-members: ₹6,000 + 18% GST

Students: ₹2,000 + 18% GST

Foreign Nationals: \$85 + 18% GST

CEAI Bank Details

Account Name: Consulting Engineers Association of India

Account No: 028394600000592

Bank Name: YES BANK LTD

Account type: Saving

IFSC CODE: YESB0000283

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