

IICHE-MRC E-NEWSLETTER

MUMBAI REGIONAL CENTER



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**INDIAN INSTITUTE OF CHEMICAL ENGINEERS
Mumbai Regional Center, B-18 Vardhman Complex,
Gr Floor, Opposite Home Town & 247 Park, LBS Marg,
Vikhroli (West), Mumbai - 400 083**

IICHE-MRC EXECUTIVE COMMITTEE

2023-25

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FROM CHAIRMAN'S DESK

Prof. Sanjay Mahajani
Chairman IChE-MRC



My Dear Friends, Greetings!

I am very happy of having this opportunity to address you all. On behalf of MRC, I sincerely appreciate Prof. Aniruddha Pandit, former Chairman IChE-MRC for his time and effort in making MRC more vibrant. He has successfully conducted many online and offline events, EC meetings, AGMs, and new committee elections as per IChE HQ Guidelines despite his busy schedule and constraints.

IChE is the premier professional organization providing industry and academic interactions for professional growth. Chemical engineering is a broad and diverse field that encompasses a wide range of topics, from the design of chemical plants to the development of new materials. Chemical engineers are leveraging advanced computing power to design sustainable materials and optimize processes to minimize waste and emissions. We will continue to play a vital role in our society, having these skills and knowledge. MRC continues to conduct and support many interactions in line with these objectives.

Industry institution interactions fosters innovation, addresses real-world challenges, and shapes the future. Industry provides insights into industry needs, guiding academic research towards practical applications whereas academia offers cutting-edge research, theoretical frameworks, and skilled graduates, equipping the industry with knowledge and talent. Industry funding supports academic research, while universities provide access to advanced facilities and expertise. IChE intends to bridge the gap between them through its various initiatives. Industry internships and guest lectures expose students to practical applications and industry expectations. Faculty with industry experience bridges the gap between theory and practice, preparing graduates for the workforce. Recognizing the critical role of collaboration, MRC has now planned a systematic framework to facilitate industry-institute interactions. Conducting seminars, brainstorming sessions, industry visits for academia are some of the planned initiatives. IChE-MRC will further explore various ways to increase industry participation in IChE activities. Collaboration with other regional centres is also on its agenda. We wish to reach out to as many members as possible to keep them informed about our activities through digital as well as non-digital platforms. Newsletter serves a vital role in this regard.

I wish this issue proves beneficial to the member community to encourage them to collaborate and rededicate for sustainable development. Looking forward to interesting interactions.

Prof. Sanjay Mahajani

Brief Introduction



Prof. Sanjay Mahajani, Chairman IChE-MRC

We all know Prof. Sanjay Mahajani, Core Faculty Professor, IIT Bombay and Chairman, IChE MRC Executive Committee.

Prof. Mahajani is Bachelor in Chemical Engineering from University of Bombay in 1989. He did his M. Tech. from Indian Institute of Technology Bombay in 1992 and Ph.D. from University of Bombay in 1996. He is conferred with several Awards & Fellowships like Manudhane Best Undergraduate Teacher Award (2006), Manudhane Award for Applied Research (2007) and Excellence in Teaching IIT Bombay (2008).

His Research Areas comprises of Catalysis, Reaction Engineering, Multiphase Reaction, Coal Gasification, Renewable Resources, Computational Flow Modelling (CFD), Separations etc.



EDITOR'S CORNER



Dear Fellow IICHE-MRC Members,
Warm Greetings !

We are happy to share yet another issue of IChE-MRC E-Newsletter with glimpses of recent events. We would like to thank readers for their honest feedback on previous issues. You are aware that new Executive Committee chaired by Prof. Sanjay Mahajani has taken over the functioning of MRC. The outgoing EC, headed by Prof. A.B. Pandit deserves special complements on its achievements of conducting several events despite unique challenges.

IChE-MRC has refined its activities to facilitate active collaboration between industry and institutions, driving sustainable development. We look forward to the active participation of everyone of you in furthering the objective. MRC members will surely appreciate the use of Industry Institute Interaction platform to show case their achievements. We are open to suggestions from members.

The compilation on safety documents is compilation of the information that is already known to all of us. Looking forward to your valuable comments and contributions. Unless centripetal force and centrifugal forces work in opposite direction, circular motion is not possible. Constructive criticism will put us in right orbit. A reasonable man tunes himself to the world. An unreasonable man tunes the world to him, so all the progress depends on unreasonable man.

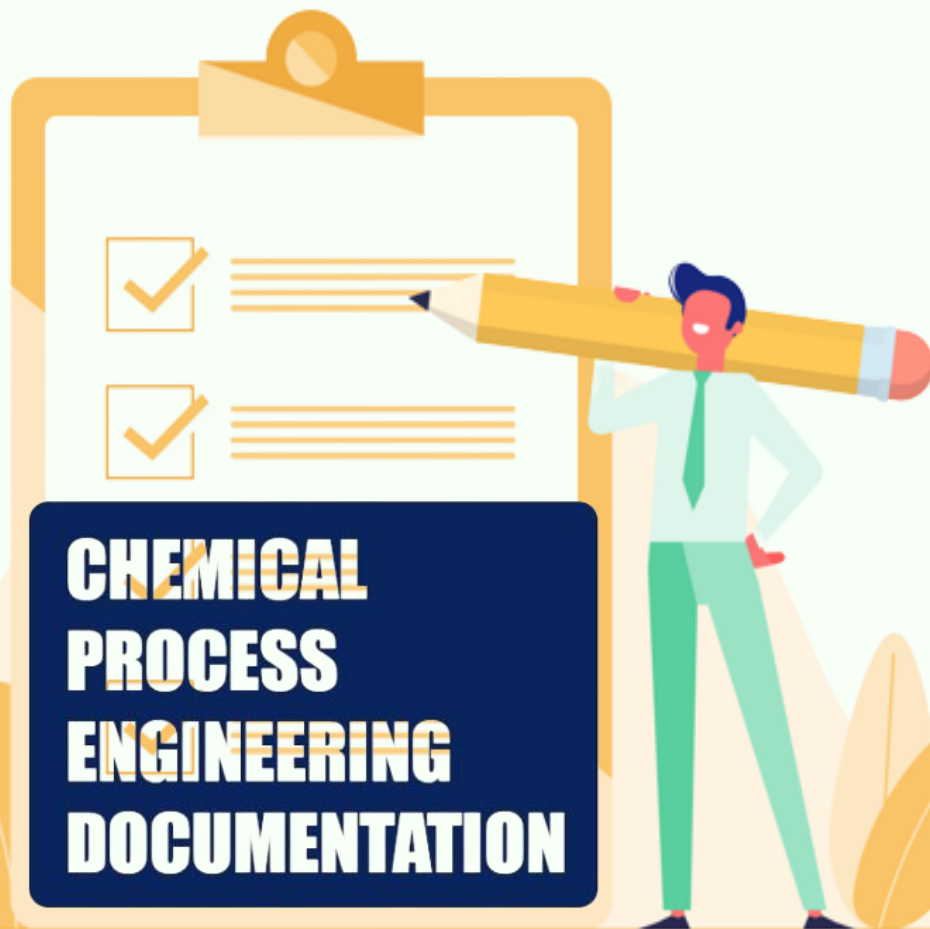
In present situation, Chemical engineers have big role to play in repositioning of Chemical engineering itself. Our ultimate goal is to have the wonderful journey with a least pain. I take the opportunity to thank editorial team, Chairman IChE-MRC for their inputs and guidance for publication of the newsletter. Let us grow and evolve as we undertake this journey together in 2024.

Happy reading! Take Care, Stay Safe !!

Jagdish Nageshri
Chief Editor, IICHE-MRC e-Newsletter

Importance of Process Documents for Safety and Efficiency in Chemical Plants

Compilation by Jagdish Nageshri



**CHEMICAL
PROCESS
ENGINEERING
DOCUMENTATION**



Document is a love letter that you write to your future self. It is an integral part of the development process. It is targeted at the intended audience and provides all the information that they need. Documents should be engaging, informative, interesting and easy to read. It is a team effort and is written and maintained by people who are familiar with the process and the industry. It is the oil that lubricates the machine of knowledge. Good document is clear, concise, and easy to understand.

The chemical process industry is a diverse sector that produces a wide range of chemicals from raw materials, such as polymers, petrochemicals, fragrances, rubber, ceramics, explosives, and flavours. It involves complex processes that require specialized equipment, strict safety procedures, and skilled workers. Therefore, proper documentation is essential for efficient, high-quality, and safe operations. The chemical process engineering documents, also known as plant documents, mainly include an operation manual, process and instrumentation design (P&ID), process flow diagrams (PFDs), isometric drawings, equipment drawings, process control drawings, machine manuals, and other engineering disciplines related docs.

New documents are developed or existing documents are revised on the basis of technological advances, new international standards, indigenous research and development, relevant operational lessons learned and institutional knowledge. Chemical plants have established procedure for development, review, revision and publication of plant documents with help of experts and stakeholders to minimize the plant's impact on human health and the environment. Plant documents depend on the type of plant and its operations. In short, a plant document management system is essential for ensuring the safe, efficient, and compliant operation of chemical plant.

Why are the plant documents needed, the purpose?

- To ensure the safe and efficient operation of plant equipment.
- To provide instructions on how to operate and maintain plant equipment.
- To comply with regulations. To prevent accidents and injuries.
- To ensure that the products are safe for consumers.
- To track the history of a plant (for troubleshooting, planning upgrades, etc).
- To communicate with stakeholders (employees, customers, and regulators.)
- To ensure that everyone is on the same page about the plant and its operations.



Continued ...

Who will be using the plant documents, the audience?

- Plant operators need them in order to operate equipment safely and efficiently.
- Plant engineers need them in order to design, modify, and troubleshoot.
- Plant safety engineers need them to develop, enforce and audit safety systems.
- Maintenance personnel need them in order to repair / maintain plant equipment.
- Regulatory personnel need to ensure the plant compliance with regulations.
- Plant management needs them in order to make decisions about the operations.

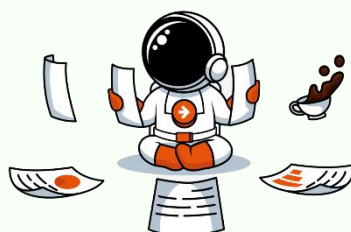
In general, anyone who is involved in the operation, maintenance, or regulation of a plant will need plant documents. The specific documents that each person needs will vary depending on their role in the organisation. However, all plant documents should be organized and accessible to everyone quickly and easily.

Which are important plant documents for safe and efficient operation?

Chemical plants are complex facilities that require a variety of documents to ensure safe and efficient operation. The specific documents required will vary depending on the size, type and complexity of the plant, the chemicals used, hazard level, industry standards, regulatory requirements, and management proactiveness.

Basic documents include block diagrams, process flow diagrams, P&IDs, process simulation, process description, factory license, list of chemicals handled, material safety data sheet (MSDS), safety manuals, fire manuals, training manuals, maintenance manuals for equipment, machines and instruments, material balance, energy balance, security manuals, information security manuals, and so on.

To meet regulatory, export, and special customer requirements, above list includes additional industry-specific plant documents, such as hazard assessment and risk assessment (HIRA), process hazard analysis (PHA), quantitative risk assessment (QRA), site emergency preparedness plan (SEP), hazardous waste management plan, site evaluation report (SER), design basis report (DBR), safety analysis report (SAR), technical specifications (TS), operators' authorization documents, in-service inspection (ISI) manuals, plant life assessment documents, and environmental impact assessment (EIA) and many more.



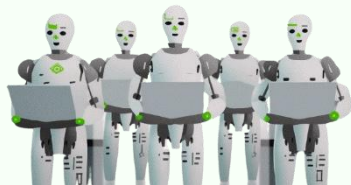
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What information do the plant documents contain, the content?

Effective chemical plant documents have following characteristics:

- Inputs from employees at all levels of the organization.
- Plain, clear, and concise language without jargon and unnecessary technical terms.
- Visuals, charts, and diagrams to illustrate complex concepts.
- Updated regularly to reflect changes in the plant's operations or policies.
- Accessible to all employees. Resource for training and troubleshooting.
- Constitutes an essential part of the quality assurance system.
- Designed, prepared, reviewed, and distributed with care.
- Approved, signed, dated by the competent and authorized persons.

In addition to these, chemical plants have a system in place for managing and storing the documents. The system ensures that documents are easily accessible to those who need them, and that they are protected from damage or loss. Some organizations implement a hierarchical document system that organizes documents by specificity. Effective management of chemical plant documentation is critical to safeguarding the plant, its workers, and the environment. A comprehensive documentation system can help prevent accidents, mitigate hazards, and ensure regulatory compliance. Some of the important documents are briefly described below.



Safety manual: Safety manual provides comprehensive instructions on how to safely operate and maintain equipment and facilities, preventing accidents, injuries, and illnesses. Key sections include hazard identification and risk assessment, chemical handling procedures, fire safety system, PPE use, work permit system, machinery and equipment isolation procedures, emergency response plan, incident investigation procedures, training needs, and safety audit plan. Safety manual also includes safety policy, safety organisation, safety committees, surveillance committees, statutory acts & rules, general safety rules, MSDS, fire order, etc.

Safety manual is essential for ensuring the safety of people, plant and the planet in addition to help comply with regulatory and legal requirements. It is written in a clear, accurate, and concise manner that is regularly updated, reviewed, and verified to reflect changes and improvements in the plant. It is a comprehensive guide for preventing, managing, and responding to hazards and emergencies.

Continued ...

Safety Manual information is typically organised into the following chapters:

- Introduction: Purpose, scope, objectives, legal obligations, and definitions.
- Chemical hazards: Exposure limits, health effects, and emergency measures.
- Risk assessment: Methods, tools, criteria, and ranking/prioritization.
- Risk management: Inspection, auditing, and strategies for risk reduction.
- Emergency preparedness: Plans, procedures, responsibilities, and communication.
- Training: Requirements, programs, methods, channels, and dissemination.
- Documentation / recordkeeping: Types, formats, reviews, retention and retrieval.

The Process safety management (PSM) manual is another living document that provides comprehensive instructions on how to safely operate and maintain a process. Typical PSM manual covers hazard identification and risk assessment, operating procedures, employee training, prestart up safety review, mechanical integrity, change management, incident investigation, emergency response, documentation, auditing and compliance, and financial assurance.

Design Basis Report: The DBR for the chemical process industry is an essential document that provides the important information and assumptions for the design of a chemical process plant or facility. It also provides the foundation for detailed engineering design. Typical DBR includes project background, project objectives, scope, deliverables, product specifications, raw material specifications, process selection procedure, design criteria, site selection, economic analysis, quality procedures, summary of major equipment, facilities, interfaces and design life of the plant. It lists out project location, site conditions, environmental and geographical data, geotechnical data, codes, standards, regulatory requirements, HSE objectives, waste disposal norms, insurance requirements, lessons learned from previous plants.

DBR specifies plant design capacities & individual equipment capacities, reliability & availability requirements, individual disciplines design constraints, infrastructure availability, approved list of vendors, and project documentation procedures. All aspects of a project are considered to ensure that the final design is safe, reliable, and meets all project requirements. It helps to define the scope and direction of the project, communicate the project requirements and expectations to stakeholders and contractors, and ensure that the project is designed and constructed in a safe and cost-effective manner. The DBR is written in a clear, concise, and accurate manner using appropriate language, symbols, and formats and is regularly updated, reviewed, and verified to reflect any changes or improvements in the project.

[Continued ...](#)

Operations manual: The operation manual typically includes chapters on start-up after trip, start-up after long shutdown, normal operational features, normal shutdown, emergency shutdown, programmed actions, list of alarms, list of interlocks, and list of safety devices etc. These information help ensure the safe and efficient operation of main plant and utility systems.

The introduction chapter provides an overview of the plant, its products, and its operations. The organizational structure describes the company's hierarchy, including job titles, responsibilities, and reporting relationships. Job descriptions provide detailed descriptions of each job in the industry, including responsibilities, duties, and qualifications. Policies and procedures outline the company's policies and procedures for all aspects of its operations, such as safety and quality control. Standard operating procedures (SOPs) provide detailed instructions on how to perform specific tasks or procedures, such as operating equipment or handling chemicals.

Technical specifications for operation: TS document for the chemical process industry is a document that provides the detailed technical requirements for the safe, efficient, and reliable operation of a chemical process plant or facility. TS usually covers the following sections. Process description including its purpose, principles, steps, conditions, reactions, and equipment. Equipment specifications provides detailed information for each equipment, including dimensions, capacities, materials, design pressures and temperatures, and operating ranges. Operating parameters section lists the key operating parameters for the process, such as flow rates, temperatures, pressures, and compositions.

Performance criteria section defines the performance targets for the process, such as product quality specifications, yield and efficiency calculations, and energy consumption data. Safety and environmental considerations section identifies and assesses the hazards associated with the process, and describes the safety measures and devices that are in place to mitigate those hazards. TS is an important document for ensuring the safe and reliable operation of a chemical process plant or facility. It helps to communicate the technical requirements to operators and maintenance personnel, and it provides a reference for troubleshooting and problem solving. The TS is written in a clear, concise, and accurate manner using appropriate language, symbols, and formats. It is regularly updated, reviewed, and verified to reflect any changes or improvements in the process.

[Continued ...](#)

TS for nuclear industry typically includes abbreviations, definitions, introduction, safety limits, limiting safety system settings, limiting conditions of operation, plant surveillance plan, administrative control, basis for the technical specifications, and typical examples of significant events. TS document is essential for ensuring that the plants are operated safely and that public health and safety are protected.

Maintenance manual: Maintenance manual for civil, mechanical, electrical, instrumentation discipline provides comprehensive instructions on how to maintain facility, equipment, machine, or instrument for extending its lifespan, reducing downtime, and preventing accidents. The introduction chapter provides an overview of them, its purpose, specifications, and maintenance requirements. The physical description includes detailed drawings or schematics. The functional description explains how the it works and its operating principles. The maintenance procedures provide detailed instructions on how to perform routine maintenance tasks. The troubleshooting procedures provide instructions on how to diagnose and repair common problems, as well as a list of parts needed for repair and their suppliers.

In addition to above plant documents, there are preventive maintenance schedule, in service inspection schedule, engineering drawings, logbooks, machine history book, inspection reports, suppliers' manuals, work permit formats, predictive maintenance records, performance report formats, set of regulatory returns in vogue. Here are some of the other important documents and records, briefly described.

Emergency Response Plan document outlines the steps to be taken to respond to accidents at the plant. **Safe Operating Procedures (SOPs)** provide detailed instructions on how to safely operate plant equipment and processes. Drawings and schematics provide visual representations of plant equipment and systems, which can be helpful for troubleshooting problems. **Material Safety Data Sheets (MSDS)** provide information on hazardous materials used in plant, including their properties, associated risks, and first aid procedures in case of accident. Inspection report provides the condition of plant equipment and recommend repairs or maintenance as needed. Training records presents employee training needs as against training imparted on plant safety and operations, including topics covered and dates. Logbooks of different engineering discipline record plant activities and operational parameters, to help troubleshoot problems, if any. Set of environmental licenses authorize plant operations and pollutant discharges into the environment, with respective limits.

[Continued ...](#)

Quality control records document plant testing procedures, testing dates and results. The testing is carried out for materials, products, spares, equipment, instruments etc. 'If it is not written down, then it didn't happen!' is the basic rules in any good manufacturing practice.

Conclusion: Plant documents play a vital role in the safe, efficient, and compliant operation of any chemical plant. By organizing plant documents in a systematic way, plants can ensure that their workers have the information they need to do their jobs safely and effectively, and that auditors can easily verify that the plant is operating in compliance with all applicable regulations. A well-implemented plant document management system can help plants to reduce the risk of accidents, improve productivity, reduce liability exposure, demonstrate due diligence to stakeholders. Plants must invest in a plant document management system that is tailored to their specific needs to help them to reap the benefits of organized plant documentation.



Jagdish Nageshri is a chemical engineer, Homi Bhabha gold medallist from BARC. He is Post Graduate with specialisation in financial & operations management. He has worked as corporate HSE executive and operations executive at Heavy Water Board, a flagship unit of Department of Atomic Energy, Mumbai reporting to CEO of the organisation. He has four decades of experience in the areas of strategic planning, O&M management, Project management, and HSE management. He has been faculty at Homi Bhabha National Institute guiding young engineers for their MTech.

Jagdish has extensive experience of handling set of hazardous chemicals especially large quantity of hydrogen and ammonia at extreme pressures and temperatures. He has comprehensive understanding of managing large industrial units and coordinating with its stakeholders. He has chaired numbers of important technical task forces, and was associated with commissioning Hazira plant and decommissioning Talcher plant leading team of managers of different disciplines. With his strong ability to conceptualise high-value engineering propositions, he has put across a strong focus on building robust systems, training engineers, and imbibing operational discipline in the organisation.

Nageshri has steered operations of its plants producing heavy water for nuclear reactors and implemented innumerable initiatives to improve productivity, safety and sustainability. He has been a crucial member of various high level technical and managerial committees, co-author in quite a few technical publications, member of many institutions of repute and has participated in several talks. He is passionate about advancements in chemical engineering, those focused on green hydrogen technologies. He is vice chairman, IICHE-MRC and chief editor of its publications.

IIChE Recent Events at a Glance



Continued ...

IIChE Recent Events at a Glance

First Announcement

INDIAN INSTITUTE OF CHEMICAL ENGINEERS
Celebrating 75 Years of Glorious Journey

76th INDIAN CHEMICAL ENGINEERING CONGRESS

CHEMCON 2023

An International Conference
Theme
Energy Transition: Challenges and Opportunities
27-30 December, 2023

In Association With



RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY, JAIS JADAVPUR UNIVERSITY KOLKATA HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA

Indo-Canada Joint Symposium Technical Sessions Panel Discussions

Indo-Japan Joint Symposium Industry Summit Journal/Book Chapter Publication

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Dr. H L Roy Building, Jadavpur University Campus, Kolkata - 700032

chemcon2023@iiche.org.in +91 9830752111

www.iiche.org.in/chemcon2023

Venue:- Heritage Institute of Technology, Kolkata Continued ...

CHEMCON 2023

Indian Institute of Chemical Engineers (IICChE) was instituted on 18th May, 1947 on the eve of the Indian Independence. Dr. Hira Lal Roy, the great visionary and pioneer of Chemical Engineering Education in India, along with few other senior colleagues felt the need for a platform to spread education of Chemical Engineering in India. Self-reliant and confident India will eventually ensure a sustained movement of Chemical Engineering profession through academic excellence, research, development, and industrial revolution.

Today with around 30,000 members on its roll, Institute has emerged as the apex body of Chemical Engineering Professionals in India. The activities of the Institute are spread across the country through its 42 Regional Centers and more than 168 student chapters. The Regional Centers promote and complement the activities and objectives of the Institute – within their respective territorial limits by organizing seminars, conferences, workshops, refresher courses, counseling sessions, and guiding career planning etc. The institute is recognized by the Department of Science & Technology, Govt of India as a Scientific and Industrial Research Organization and has 150 organizational members.

Ever since its foundation, mission of IICChE has been to contribute to the Nation building through dissemination of knowledge and enhancement of skill in the field of Chemical Engineering and its allied areas. In spite of a challenging path, IICChE has been always steadfast in its role. Today the Organization has emerged as a premier professional platform for Chemical Engineering Education and Profession in India, having a Pan India outreach. IICChE spreads the message and movement of Chemical Engineering by conducting classes and conferences throughout the year at regular interval.

However, its annual event which is known as Chemical Engineering Congress (CHEMCON) stands out tall owing to its wide reach across National and International forum. CHEMCON provides an opportunity for all senior students of Chemical Engineering, research scholars, professors, industry experts to come together ensuring four days of intensive interface of knowledge and experience. These exchanges of thoughts and theories help all delegates to constantly update and equip themselves in a fast-changing scenario which calls for research and development in Chemical Engineering applications. CHEMCON 2023 was 76th Annual Session of IICChE, organized by IICChE Kolkata.

CHEMCON 2023 covered host of events, like memorial lectures, plenary lectures, seminars, panel discussions, international symposium, industrial exhibitions etc. CHEMCON 2023, the 76th Annual Session of the Indian Institute of Chemical Engineers was organized by Indian Institute of Chemical Engineers Headquarters, Kolkata from December 27 to December 30, 2023. The theme of CHEMCON-2023 was “Energy Transition: Challenges & Opportunities”.

[Continued ...](#)

GLIMPSES OF CHEMCON 2023



The World is in the midst of an energy transition to reduce its dependence on fossil-based energy sources. Further, in 21st century, transition to low-carbon energy sources is expected to be the most challenging one ever, requiring decarbonization of various sectors and minimization of greenhouse gas emissions from a variety of industries of the global economy to mitigate climate change.

The chemical industries will be no different and are transforming as they regulate to the new era of high-priced petroleum and relentless global warming. Chemical Engineers transform societies and the lives of individuals by interdisciplinary collaborations necessary to advance the societal goals of transitioning to a low-carbon energy system ensuring and developing novel and sustainable materials used in fuels, electronics, medical devices, and other products to address today's most pressing problems, including climate change and global warming.



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GLIMPSES OF CHEMCON 2023



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GLIMPSES OF CHEMCON 2023



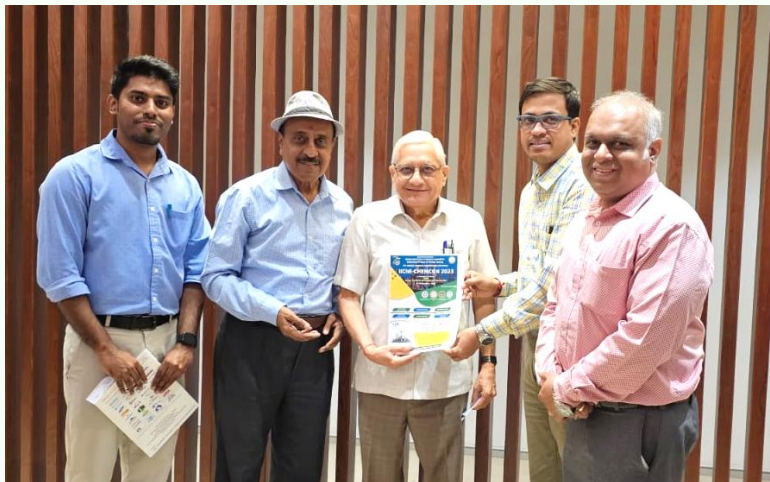
Receiving Life Fellow of Indian Institute of Chemical Engineers
on 27 Dec 2023 at CHEMCON 2023

Continued ...

CHEMCON 2023



CHEMCON Team with Shri Madhukar Parikh, CMD, Pidilite Industries at Mumbai on 3rd November 2023.



CHEMCON Team with Shri Ashwin Shroff, CMD, Excel Industries at Mumbai on 3rd November 2023.

National Council Members at Mumbai

15 April 2023



GLIMPSES OF OYCE 2023

October 07, 2023

The 15th Outstanding Young Chemical Engineer's competition was held at the Indian Institute of Technology Bombay on the 07th October, 2023. In total, 45 entries were received for the competition under 2 categories; Undergraduate students (31 entries) and working Professionals category (14 entries). The participation in the UG category comprised of students from Datta Meghe College of Engineering, Siddaganga Institute of Technology, JSS Science and Technology University, Mysore, Sri Venkateswara College of Engineering, Chennai, IIT Bombay, Institute of Chemical Technology etc. The participants in the Working Professionals category were from CSIR-National Chemical Laboratory, Pune, Shiva Pharmachem Ltd., Vadodara, UPL Ltd, Thyssenkrupp, IIT Bombay etc.

Prof Sachin Patwardhan, Dean R&D, IIT Bombay was the Chief Guest. Dr. Jogwar, Convener of the OYCE-2023, conducted the function and welcomed the participants. Prof. Sanjay Mahajani, honorable guest for the function, gave an overview about OYCE. Vote of thanks was given by Shri. Dhaval Saxena (Bhumistha).



Continued ...

GLIMPSES OF OYCE 2023

October 07, 2023

All presentations were of exceptional quality as remarked by the judges in the valedictory function. Chief guest of the valedictory function was Mr. Prasad Khandalekar (ThyssenKrupp). Mr. Dhaval Saxena (Bhumistha) and Mr. Prasad Khandalekar gave an enlightening message to the young participants and highlighted the steps for a successful career and technology innovations.

Certificates of participation were given to all the participants by Chief Guest and Chairman of the IICHE-MRC. Mr. Akash Shinde, Co-convenor of the OYCE-2023 announced the winners in both the categories. Thyssen Krupp sponsored the prizes in the working professional category whereas the prizes in the Undergraduate category were sponsored by Bhumistha Infra.



Continued ...

GLIMPSES OF OYCE 2023

October 07, 2023

Dr. Sammit Karekar from Sine startup received the first prize, a team of Dr. Sushil and Shivam Sharma from UPL won the second prize. Ms. Preethi Arul Murugan from IIT Bombay and Shipra Gupta, Pathik Shah as team from UPL were declared as the joint winner at the third place. In the Undergraduate category, the first prize was given to a team of Krishi Mantri, Divyashree Tambade and Aryan Khanna from IIT Bombay, a team of Lakshay Vashishtha and Ballal Thakur from Bharati Vidyapeeth won the second prize. Palak Vora and Sumit Kumar, both from IITB, were jointly awarded the third prize.

A Special thanks was given to Jay Fine Chemicals Private Ltd. for being the title sponsors for the event. A special thanks was also given to Thyssenkrupp and Bhumistha for continuously sponsoring the prizes for the Working professionals and undergraduate categories for the event over the years.



ChEMERGENCE 2023

15-16 September 2023

One of IIChe's largest student chapters, IIChe-TSEC, is located at one of its largest regional centers, IIChe-MRC, or Mumbai Regional Centre. The chapter for students focuses on instilling the philosophy of giving pupils real-world industry exposure. An opportunity to compete with emerging talent is provided by the yearly technical symposium ChEMERGENCE. Since its inception in 2006, ChEMERGENCE has grown by leaps and bounds to become one of the biggest student-run festivals in the engineering arena. This is the 18th edition with events covering almost every aspect of Chemical Engineering and Applied Chemistry. Chemical Engineering born at the intersection of chemistry, physics, mathematics, and engineering, has consistently pushed the boundaries of human ingenuity to reshape industries, economies, and the very fabric of modern life. The apt theme '**Evolution of Technologies in Chemical Engineering**' has ignited curiosity, captivating exploration of this dynamic field."

The opening ceremony was graced with the presence of Mr. Jayesh Tekchandaney as the Chief Guest, the Principal, Dr. G.T. Thampi, the Head of Department, Dr. Elizabeth Joseph and the Teacher Coordinator of IIChe-TSEC, Prof. Praseeda Nambisan.

Chemic-Con is platform where a group of industrial experts brainstorm solutions regarding relevant topics in industry. Intellectuals from various chemical engineering fields shared their insights and expertise on what the future holds for Chemical Engineering. ChEMERGENCE'23 brought together a host of panelists who delved deep into the topic of "**Technical Advancement and Innovation in Chemical Processing and Manufacturing.**"



IICHe-MRC Technical Lectures

26 August 2023

IICHe MRC, Confederation of Indian Industry - Corrosion Management Division (CII-CMD), Association for Materials Protection & Performance Advocacy & Public Affairs Program Committee (AMPP), Corcon Institute of Corrosion (CIC) and Institute of Chemical Technology organized Technical lectures on “E-Waste Management” by Dr. Shrikant Parab and “Risk & Corrosion Management” by Timothy Bieri, Past Chair AMPP and Vice-President, British Petroleum, Houston at Institute of Chemical Technology, Matunga, Mumbai on 26th August 2023. The lectures were followed by MRC 63rd AGM and dinner.



Confederation of India industry Corrosion Management Division (CII-CMD), Association for Materials Protection & Performance Advocacy & Public Affairs Program Committee (AMPP), Corcon Institute of Corrosion (CIC) and Institute of Chemical Technology Extends invitation for Technical lecture.

SATURDAY
26 Aug, 2023

START AT
02:45pm - 08:45pm

INSTITUTE OF CHEMICAL TECHNOLOGY, MATUNGA, MUMBAI

SPEAKER:-

Dr. Shrikant Parab

Sustainable Development Goals by Dr. Shrikant Parab

Mr. Timothy Bieri

Technical presentation by Mr. Timothy Bieri
Past Chair AMPP and Vice-President, British Petroleum, Houston



IICHE-MRC 63rd AGM

26 August 2023

The Chair welcomed MRC members and invitees. The Chair briefed attendees on the major events conducted during the year and several planned events. The Chair informed members about the Executive Committee election process and the results.

The member secretary presented a complete report to the members and responded to their queries and noted suggestions. The Treasurer presented the audited accounts for the financial year 2022-2023. The Chair thanked all the members and invited for dinner.



Glimpses of S-CHEMCON 2023

22-23 September 2023

SCHEMCON, the Students' Chemical Engineering Congress, is an annual event organized by the Student Chapters of the Indian Institute of Chemical Engineers (IIChE) under one of its Regional Centres. It provides a platform for the Chemical Engineering students to interact, learn and gain exposure to the expanding arena of Chemical Engineering. SCHEMCON-2023 is the 19th Annual Session jointly organized by the IIChE KEC Student Chapter, Department of Chemical Engineering, Kongu Engineering College, Perundurai and the Coimbatore Regional Centre, Indian Institute of Chemical Engineers. The theme of SCHEMCON 2023 is Engineering for a Sustainable Future and being organized in one of the premier institutes in Chemical Engineering, SCHEMCON will be unique in its scope and ideas, considering the participation of stalwarts and leaders from industry, research laboratories, academia and the brightest students from across a plethora of disciplines.



Inauguration Function



Valedictory Function



Industrial Panel discussion

Glimpses of Networking Visit

26 November 2023



Congratulations Prof. G.D. YADAV !!!



Bestowed SASTRA CNR Rao Award for Excellence in Chemistry and Material Science on 28th February 2024 at Thanjavur. Prof CNR Rao himself chooses the Awardee.



Conferred Hon. Fellowship of the International Society for Energy, Environment and Sustainability today at MNIT Jaipur on 4th Dec 2023



Prof. GD Yadav, Felicitation and life time achievement award function at Nagpur by the Engineers Forum on 07 October 2023.

Congratulations Prof. A.B. Pandit !!!



Congratulations to Prof. Aniruddha Pandit, Vice Chancellor, ICT and former Chairman, IChE-MRC on his recent induction into the prestigious US National Academy of Engineering ! It has been a well-deserved recognition for his pioneering contributions in advancing cavitation reactors.

Congratulations Shri Dhawal Saxena !!!



Shri Dhawal Saxena, Member Secretary, IChE-MRC-EC awarded IChE Life Fellowship at CHEMCON-2023 Platinum Jubilee Celebration and Elected as Registrar for IChE National Council for 2023-24. It has been an honour to receive the award from Prof. M.M. Sharma, in presence of Prof. G.D. Yadav, Prof Anil Saroha, Prof. Kartikeyan and Shri Rajanandam.


Proud of you!



The best brains in chemical engineering today in the world, in one photo.
The collective brain power is probably more than 1000 years of
Chemical engineering...

Become IChE Member

The Indian Institute of Chemical Engineers (IChE) is the apex professional body of chemical engineers in India. It has a membership of about fifteen thousand including Corporate Members and Student Members. There are forty-one Regional Centers and forty-seven Student Chapters of the Institute in different parts of India. The Institute represents the chemical engineering profession in India. Many members of the Institute serve on various technical committees of the Government of India and of chemical and allied industries. Here are some of the benefits that a member of the Institute enjoys.

- Since IChE is the recognized forum, membership of the Institute itself is considered as a professional accomplishment of a person.
- Member can join numerous seminars, symposia, workshops, training programme, special lectures, industry visits and other professional activities. Participation in such programme is either free or may involve a subsidized fee.
- Corporate member is eligible to contest in the annual election to the 25-member Council, which is the highest policy-making body of the Institute.
- IChE has an active consultancy programme. An interested member may seek and get help from the Institute in his endeavor to offer consultancy services to potential industrial customers.
- Member can join the four-day Annual Professional Meet called CHEMCON at a subsidized fee. Various professional meets organized by IChE acts as a forum for interaction and networking of the professionals
- The student members may join as member of seminars specifically meant for them and can participate in a number of competitions. One of such popular seminar is SCHEMCON which is organized by one of the IChE Student Chapters.
- Corporate member may be nominated to various government and non-government bodies in different areas, if found suitable.

Details about types of membership, membership fees & subscriptions, membership card etc. are available on IChE website.

<https://www.iiche.org.in/joiniiche.php>

Online Application forms for Life Fellowship, Life Membership, Life Associate Membership, Student Membership, Organisational Membership are also available on IChE website.

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**Indian Institute of Chemical Engineers
Dr H L Roy Building
Jadavpur University Campus
Raja S.C. Mullick Road
Kolkata 700 032**



IICHE-MRC E-NEWSLETTER EDITORIAL TEAM

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B-18 Vardhman Complex, Gr Floor, Opposite Home Town & 247 Park,
LBS Marg, Vikhroli (West), Mumbai - 400 083.

Email: iichemrc@gmail.com