



INDIAN INSTITUTE OF CHEMICAL ENGINEERS **(NORTHERN REGIONAL CENTRE)**

Dated: 04/08/2018

ANNUAL REPORT 2017-18

(This report covers the Activities of the IICChE (NRC) during the period 1st July 2017 to 30th June 2018)

The Executive Committee formed for the year 2017-2018 was:-

Chairman	Prof. S. S. Sambhi	Vice Chairman	Prof. A K Saroha
Honorary Secretary	Mr. Abhijit B. Pal	Honorary Joint Secretary	Dr. S. Nand
Honorary Treasurer	Dr. Anil Verma		
Members	Prof. S. Basu	Dr. S. N. Chakravarty	Mr. D. D. Maheshwari
	Prof. V. K. Srivastava	Prof. K. K. Pant	Dr. Anand Mukherjee
	Dr. Dinesh Kumar	Mr. Amitava Banerjee	
Co-opted Members	Mr. Shyam Bang	Mr. Ranjan Goel	

Activities of NRC

This account covers the period from 1st July, 2017 to 30th June, 2018.

In the year 2017-18, we have been able to organize number of activities on behalf of IChE (Northern Regional Centre) and jointly with other organizations as mentioned below.

Learning with the Leaders Lectures Series

S. No.	Date	Venue	Title	
1	15-07-2017	NRC Auditorium, New Delhi	IChE (NRC) “Learning with the Leaders” Lecture Series on “Application of Codes and Standards in Chemical Process Industry”	
			Topic	Speaker
			Regional Codes Application for Chemical Industry	<i>Mr. Prasanna Velpula, Honeywell UOP</i>
			Design	<i>Mr. Raj Kumar, M/s Lloyd's Register Asia</i>
			Inspection & Testing	<i>Mr. Puran Pathak, M/s Lloyd's Register Asia</i>
2	18-08-2017	IHS Markit, Gurugram, Haryana	IChE (NRC) Learning with the Leaders Lecture Series on “A Perspective on Refining”	
			Topic	Speaker
			CB&I FCC Technology	<i>Mr. Anil Thakur, Process Engineering Manager, Lummus Refining & Gasification, CB&I</i>
			Refinery Residue Upgrading- a Techno-Economic Comparison	<i>Mr. Rajiv Narang, Director, Process Economics Program, & Mr. Gajendra Kumar, Associate Director, PEP, I H S Markit</i>
			Configuration and Connected Performance Services (Optimization from Concept to Plant Performance)	<i>Mr. Pankaj Srivastava, Honeywell UOP</i>
3	09.09.2017	SNU, Uttar Pradesh	IChE (NRC) Learning with the Leaders Lecture Series on “Commissioning of Chemical Plants”	
			Topic	Speaker
			Commissioning of Chemical Plants – Challenges to Chemical Engineers”	<i>Mr. C.P. Srivastava, Ex. MD&CEO, Jordan India Fertilizer Co. LLC, (JIFCO) Jordan and MD & Principal</i>

				<i>Consultant, CP Consultancy Services</i>
			Commissioning of Chemical Plants – Chemical Engineers Perspective	<i>Mr. Abhijit Bikas Pal, Honorary Secretary, IChE (NRC)</i>

Foundation Day of Indian Institute of Chemical Engineers (Northern Regional Centre), New Delhi -

The foundation day program was held on 16th December, 2017. During this occasion, Prof. R.K. Khandal, President - R&D and Business Development, India Glycols Ltd. presented a paper on Sustainability of Indian Chemical Industry - Role of Institutions of Engineers.

During the foundation day celebration, merit-cum-means scholarships were distributed to 20 students from DCRUST Murthal, IIT-Roorkee, USCT-GGSIPU and Dr.SSB UICET-Panjab University.

Seminars / Workshops

S. No.	Date	Venue	Title						
1	20.03.2018	India International Centre, New Delhi	<p>IChE-NRC one-day seminar on “Industrial Internet of Things (IIoT) / Industry 4.0 – a disruptive change”</p> <p>This conference had aimed towards providing a platform to industry experts from all the three segments of industry namely manufacturers or service providers, engineering company and end user. Objective was to exchange of ideas, technical advancements and requirements and come up with practicable solutions which will nurture, cultivate, and accelerate the adoption of IIoT technologies and applications for the benefit of industry. The sessions also aimed towards evolving a clear roadmap towards implementation of the concepts of IIoT and Industry 4.0 in a process industry from crude management, implementation of predictive analytics on process plants, process plant optimization, management plant machinery and assets, power management to product distribution and logistics. To get a more comprehensive view across the field, the successful implementation of IIoT plants such as pharmaceutical and cement industries were also discussed.</p>						
			<table border="1"> <thead> <tr> <th>Topic</th> <th>Speaker</th> </tr> </thead> <tbody> <tr> <td>Process Automation Industry – Optimizing Process On Real Time</td> <td><i>Mr. Kishen Manjunath & Mr. Jaideep Bhattacharya Honeywell Technology Solution/ Honeywell Process Solution</i></td> </tr> <tr> <td>Unleashing Power of Digitization in Chemical Plant Operations – Predictive</td> <td><i>Ms. Khushbu Chaplot Chaudhary Emerson</i></td> </tr> </tbody> </table>	Topic	Speaker	Process Automation Industry – Optimizing Process On Real Time	<i>Mr. Kishen Manjunath & Mr. Jaideep Bhattacharya Honeywell Technology Solution/ Honeywell Process Solution</i>	Unleashing Power of Digitization in Chemical Plant Operations – Predictive	<i>Ms. Khushbu Chaplot Chaudhary Emerson</i>
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Unleashing Power of Digitization in Chemical Plant Operations – Predictive	<i>Ms. Khushbu Chaplot Chaudhary Emerson</i>								

	Maintenance and Energy Management	
	Industry 4.0, Digitalizing the Process plant – a life cycle approach	<i>Mr. Sachin Kulkarni Siemens</i>
	Predictive Analytics - How it affects Plant Architecture	<i>Mr. Vinod Oommen Ninan & Mr. Ravindra Gurav Rolta India</i>
	Transforming Business Decision Making with Unified Supply Chain Management	<i>Ms. Shani Mulholland / Mr. Satyendra Dubey Schneider Electric</i>
	Augmented Intelligence - Towards Plant Operational Excellence	<i>Mr. Harsh Kumar IBM India</i>

Programme with Lovraj Kumar Memorial Trust:

LKMT has two annual events, similar in line with other years. This included both the annual workshop and annual lecture.

Annual Workshop –

The Lovraj Kumar Memorial Trust two-day workshop on “Petrochemical – Beyond Bulk Products” was organized on 13th & 14th October, 2017 at India International Centre, New Delhi. The concept of integrated Refinery cum Petrochemical complexes has found ready acceptance in the Hydrocarbon Processing Industry, given the widespread interest in maximum valorization of Hydrocarbon molecules in Crude Oil and Natural Gas. Planners and Operators are therefore looking at options to valorize streams which would otherwise be sold as fuels or intermediates. A number of projects have been implemented to produce Bulk petrochemicals in conjunction with fuel products and the initiative is being carried forward to look at derivatives, which might not be produced on the same scale as bulk olefins and aromatics, but provide excellent valorization options. A total of 74 delegates participated in the conclave. Following were the topics and presenters for the conclave:

Ms. Rekha Misra IDS	Petrochemicals Demand Supply scenario in India with special focus on Derivatives and Niche products
Mr. Manu S. Miglani Engineers India Ltd.	PVC Value Chain
Dr. (Mrs.) Anshu Nanoti CSIR-IIP	Separation Technologies for Petrochemicals and Value Added Products from Refinery Process Streams
Mr. Rajeev Singh KBR	Maximizing Refinery Margins by Petrochemical Integration
Ms. Manisha Bhargava Indian Oil Corp. Ltd.	Recovery & Monetization of lean Ethylene from FCC Off Gas
Mr. Bharat Goenka Shell	EO/EG Technologies
Mr. Srikanta Ghosh CB&I	Steam Cracker Design and Operating Considerations to Enhance Feed Flexibility
Mr. Rajiv Narang	iPEP syngas module

I H S Markit	
Mr. Pulkit Agarwal Honeywell UOP	Cumene/Phenol Technologies
Dr. S. Sivakumar SABIC	Outlook and technology overview for BisphenolA/Polycarbonates
Mr. Xavier Liège Axens India	Ethanol and ethers derivatives in the gasoline pool & High value niche products: octenes from refining C4's for plasticizers industry, butene and hexene alpha olefins for polyethylenes
Mr. Rakesh Kumar CB&I	Recovery of Ethylene and Production of Ethyl Benzene/Styrene from FCC Off-gas
Dr. Sreenivasa Rao SABIC	Special address on Petrochemicals
Mr. K.V. Mujumdar & Mr. Shanatanu Gite Supreme Petrochem Ltd.	Derivatives of Styrene (Polystyrene, Expandable Polystyrene and other derivatives)
Dr. Siddhartha Mukherjee Air Liquide	Acetic acid through Coal gasification & Acrylic Acid – a Technology Perspective
Ms. Vartika Shukla Engineers India Ltd.	Methanol Economy
Dr. Gurmeet Singh Indian Oil Corp. Ltd. R&D	Developments in the catalysts especially with respect to polyolefin catalysis

Annual lecture -

The annual lecture of Lovraj Kumar Memorial Trust was conducted on 13th November, 2017 at India International Center. It was delivered by *Shri R.C. Bhargava, Chairman, Maruti Suzuki India Ltd.*, on Accelerating Manufacturing – Impediments & Strengths.

Student Chapters

During recent year, IICChE has taken a decision that the Regional Centres will mentor and guide the student's chapters. Based on that, IICChE-NRC takes keen interest in the student's chapters. This is the consecutive third year, when a new student chapter is added in NRC. Following are the details of the student's chapters in NRC:

Sl. No	Student Chapter	Coordinator	Activity Report
1.	DCRUST, Murthal	Dr. Manju Rani	N/A
2.	Delhi Technological University	Dr. Manish Jain	Attached
3.	Shiv Nadar University	Dr. Dhiraj Kumar Garg	Attached
4.	USCT - GGSIPU	Dr. Dinesh Kumar	Attached
5.	AMU Aligarh	Dr. Sadaf Zaidi	N/A

6.	Galgotias University	Dr. Anamika Paul	Attached
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We are pleased to inform that Galgotias University student chapter is formed in the year 2018 and is enrolled as a regular student chapter.

Annual Plant Visit

Annual Plant visit is one of the eagerly awaited events in NRC. This year total 13 NRC members and 29 students from IITD, DTU, GGSIPU and SNU visited the distillery and chemical plant of Daurala Sugar Works in Meerut.

- Date : 17th February, 2018
- Venue : Daurala Sugar Works, Meerut
- Coordinator : Prof. A.K. Saroha

AMIChE Examinations

We have conducted two AMIChE Examinations - one in **September 2017** and the other one in **March 2018**.

Number of candidates appeared for the AMIChE Exams in Sept' 2017 - 69

Number of candidates appeared for the AMIChE Exams in March' 2018 - 65

Library

NRC has well-furnished library having large number of books on Biotechnology, Catalysis and Reaction Engineering, Chemical Engineering (General), Chemical Technology, Chemistry, Energy Conservation and Thermodynamics, etc.

Publications

- 24th Lovraj Kumar Memorial Lecture
- All the events presentations, photographs and videos are available on our website www.iichenrc.org which is continuously updated.

New Student Members

We are glad to inform that this year we have added 48 new student members from GGSIPU chapter and 32 student members from DTU chapter. We are hopeful that we will be able to continue such performance this year as well.

An updated list of members' directory is also available on our website.

Get-together

The following get-togethers were organized in 2017-2018:-

1. 17th June, 2017 - 44th AGM
2. 16th December, 2017 - Foundation Day Celebration of NRC

Scholarship

18 students (13 B. Tech/ B.E. Students and 5 M. Tech/M.E. Student) were awarded the Golden Jubilee Scholarship for the year 2017-18. Out of this, one scholarship** has been instituted by G. J. Samaj Kalyan Nyas. Scholarship cheques of Rs. 20,000/- each and certificates were distributed by senior members of IChE (NRC) during the Foundation Day celebration of NRC held on 16th December, 2017 to the following students:-

S. No.	Student's Name	University	Year in which studying
1	Mr. Pushkal Sharma	IIT Roorkee	III (B.Tech.)
2	Mr. Suraj Jain	Dr. S.S.B. UICET, Panjab University, Chandigarh	IV (B.E.)
3	Mr. Mahesh Sharma	USCT, GGSIPU	III (Dual Degree)
4	Mr. Ritam Ghosh	Dr. S.S.B. UICET, Panjab University, Chandigarh	IV (B.E.)
5	Mr. Sachin Kumar	DCRUST Murthal	III (B.Tech)
6	Mr. Prem Chaudhary	DCRUST Murthal	III (B.E.)
7	Mr. Nitin Saxena	Dr. S.S.B. UICET, Panjab University, Chandigarh	II (B.E.)
8	Mr. Arpan Katiyar	DCRUST Murthal	III (B.E.)
9	Mr. Nikhil Khunger	DCRUST Murthal	II (B.E.)
10	Mr. Vikram Kumar	DCRUST Murthal	III (B.Tech)
11	Mr. Vijay Pal	DCRUST Murthal	II (B.E.)
12	Mr. Virender	DCRUST Murthal	III (B.E.)
13	Mr. Manish ** **(Awarded to G. J. Samaj Kalyan Nyas Scholarship)	DCRUST Murthal	III (B.E.)
14	Ms. Preeti	Dr. S.S.B. UICET, Panjab University, Chandigarh	II (M.E.)
15	Mr. Zaid Imran	IIT Roorkee	II (M.Tech)

16	Ms. Neha	DCRUST Murthal	II (M.Tech)
17	Mr. Pankaj	DCRUST Murthal	II (M.Tech)
18	Ms. Monika	DCRUST Murthal	II (M.Tech)

Forthcoming Events:

S. No.	Event	Date
1	Annual General Meeting of Northern Regional Centre	July 14, 2018
2	Workshop on Design of Experiments (DoE)	Sept, 2018
3	Short term course on “Chemical Reaction Engineering”	Oct 10-15, 2018

We were able to conduct all the above stated activities because of the hard work and untiring efforts of all the employees of IChE NRC, participating members and EC members of IChE NRC.