

**INDIAN INSTITUTE OF CHEMICAL ENGINEERS**

**(NORTHERN REGIONAL CENTRE)**

Dated: 04/08/2018

**ANNUAL REPORT 2017-18**

***(This report covers the Activities of the IIChE (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. Sambi | **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 IIChE (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 | **IIChE (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 | *Mr. Prasanna Velpula, Honeywell UOP* | |
|  | | | Design | *Mr. Raj Kumar, M/s Lloyd's Register Asia* | |
|  | | | Inspection & Testing | *Mr. Puran Pathak, M/s Lloyd's Register Asia* | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2 | 18-08-2017 | IHS Markit, Gurugram, Haryana | **IIChE (NRC) Learning with the Leaders Lecture Series on**  **“A Perspective on Refining”** | |
|  | | | **Topic** | **Speaker** |
|  | | | CB&I FCC Technology | *Mr. Anil Thakur,*  *Process Engineering Manager, Lummus Refining & Gasification, CB&I* |
|  | | | Refinery Residue Upgrading- a Techno-Economic Comparison | *Mr. Rajiv Narang,*  *Director, Process Economics Program, &*  *Mr. Gajendra Kumar, Associate Director, PEP, I H S Markit* |
|  | | | Configuration and Connected Performance Services (Optimization from Concept to Plant Performance) | *Mr. Pankaj Srivastava, Honeywell UOP* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3 | 09.09.2017 | SNU, Uttar Pradesh | **IIChE (NRC) Learning with the Leaders Lecture Series on “Commissioning of Chemical Plants”** | |
|  |  |  | **Topic** | **Speaker** |
|  |  |  | Commissioning of Chemical Plants – Challenges to Chemical Engineers” | *Mr. C.P. Srivastava,*  *Ex. MD&CEO, Jordan India Fertilizer Co. LLC, (JIFCO) Jordan and MD & Principal Consultant, CP Consultancy Services* |
|  |  |  | Commissioning of Chemical Plants – Chemical Engineers Perspective | *Mr. Abhijit Bikas Pal, Honorary Secretary, IIChE (NRC)* |

**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 | **IIChE-NRC one-day seminar on “Industrial Internet of Things (IIoT) / Industry 4.0 – a disruptive change”**  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. | |
|  | | | **Topic** | **Speaker** |
|  | | | Process Automation Industry – Optimizing Process On Real Time | *Mr. Kishen Manjunath &*  *Mr. Jaideep Bhattacharya*  *Honeywell Technology Solution/ Honeywell Process Solution* |
|  | | | Unleashing Power of Digitization in Chemical Plant Operations – Predictive Maintenance and Energy Management | *Ms. Khushbu Chaplot Chaudhary*  *Emerson* |
|  | | | Industry 4.0, Digitalizing the Process plant – a life cycle approach | *Mr. Sachin Kulkarni*  *Siemens* |
|  | | | Predictive Analytics - How it affects Plant Architecture | *Mr. Vinod Oommen Ninan &*  *Mr. Ravindra Gurav*  *Rolta India* |
|  | | | Transforming Business Decision Making with Unified Supply Chain Management | *Ms. Shani Mulholland /*  *Mr. Satyendra Dubey*  *Schneider Electric* |
|  | | | Augmented Intelligence - Towards Plant Operational Excellence | *Mr. Harsh Kumar*  *IBM India* |

**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 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 & Monetizaton 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  I H S Markit | iPEP syngas module |
| 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 plastizicers 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, IIChE has taken a decision that the Regional Centres will mentor and guide the student’s chapters. Based on that, IIChE-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 |

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

## AMIIChE Examinations

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

Number of candidates appeared for the AMIIChE Exams in Sept’ 2017 - 69

Number of candidates appeared for the AMIIChE 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](http://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 IIChE (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 IIChE NRC, participating members and EC members of IIChE NRC.