



ISA Delhi Section

INTERNATIONAL SOCIETY OF AUTOMATION

# ISA (D) NEWS LETTER

## VOL-4 - ISSUE-1



# **ISA(D) NEWS LETTER**

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### **UPCOMING MEGA EVENT**

**FERTILIZER SYMPOSIUM – 2016, One day Event (Conference and Exhibition) at “EROS Hotel”, Nehru Place, New Delhi on 23<sup>rd</sup> Dec' 2016.**

## *From the Desk of President:*

It gives me immense pleasure to present before the members, the Volume 4, Issue 1 of this Newsletter of ISA Delhi Section after a grand success of Mega Technical Event, PPA – 2016, two days Conference and Exhibition on Petroleum and Power Automation in “EORS HOTEL”, Nehru Place , New Delhi on 8<sup>th</sup> & 9<sup>th</sup> April 2016.



I take the opportunity to thank all the dignitaries, participants, High Power Technical Committee members, executive committee members and all others who supported ISA-D to make mega events, technical meet a grand success.

On behalf of executive committee, I would like to give special thanks to all sponsors, exhibitors, speakers and also compliment them for sharing their valuable technical knowhow with all our participants from Oil and Gas Industries, Power Industries, Fertilizer Industry and other industrial sectors.

I certainly wish that with the support of our active members, our next mega event Fertilizer Symposium-2016 on 23<sup>rd</sup> Dec'2016 & PPA Meet 2017 on 21<sup>st</sup> -22<sup>nd</sup> April 2017at “EROS Hotel” in Nehru Place, New Delhi, will also be a grand success.

I would like to complement Mr. Manish Kumar and Mr. Radheyshyam Tiwari for their sincere efforts in bringing this volume 4 issue 1 of ISA-Newsletter for the members.

With best wishes,



M P Singh  
(Hon President - ISA Delhi Section)

The first rule of any technology used in business is that Automation applied to an efficient operation will magnify the efficiency. The second is that applied to an efficient operation will magnify the efficiency.

- **Bill Gates**

## **From Editor's Desk:**

Greetings to all of you from ISA Delhi-Section!

Welcome to the ISA-Delhi Section Newsletter, November'2016 edition. This provides an insight journey of ISA-D on technical events, technical development and technology knowhow news. Please feel free to share this newsletter with others in your organization.



ISA-Delhi takes the pride to share technical papers, experiences and industry analysis with you through Technical Meets, mega events like Petroleum & Power Automation Meet, Fertilizer Symposium etc. This helps in enhancing the knowledge and keeping updated about the latest technology development in various fields of industry.

We request you all to share some technical write-up and technical experiences to share with ISA members, and make this newsletter more informative. Please do write to [info@isadelhi.org](mailto:info@isadelhi.org)

**Fertilizer Symposium - 2016 is slotted for 23<sup>rd</sup> Dec'2016 & PPA Meet 2017 on 21<sup>st</sup> -22<sup>nd</sup> April 2017** at EROS Hotel, Nehru Place, New Delhi. We cordially invite you to be a part of this event individually and expect you as a sponsor/delegate for this event. You can block your dates in December'2016 and April'2017 calendar.

With best wishes,



Manish Kumar  
(ISA Delhi Section)

Cell phones, mobile e-mail, and all other cool and slick gadgets can cause massive losses in our creative output and overall productivity.

**- Robin S Sharma**

## A Tech TALK on Industrial Internet of Things (IIOT) – Switch to the Future Technical Meet by ISA-Delhi Section-October-2016

“A Tech TALK on Industrial Internet of Things (IIOT) – Switch to the Future”, a technical meet organized by ISA-Delhi Section on 26<sup>th</sup> October’2016, at Scope Convention center, Scope Complex, Lodhi Road, New Delhi.

Guest of Honour and Keynote Speaker **Ms. R. Priyamvada, General Manager, Engineers India Limited** enlightened the gathering of august audience about today’s most hot topic in Automation Industry “IIOT”. The presentation highlighted how the pervasive sensors, the analytical software, the cloud computing and the acquired wisdom through IIOT solutions are helping the users exceed reliability, safety and performance goals. The fully integrated, yet open platform encompasses enterprise data capture and analysis coupled with actions and optimization for enhancing productivity, manage proactive maintenance execution and ultimately deliver the maximum economic return on assets.

**Mr. Kaushal K. Shrivastava from Emerson** and **Mr. Binay Kumar from GE** presented Case study and Future dimensions of IIOT.

Comparison of IOT and IIOT, IIOT components, IIOT application in Industries, traditional Control Application VS IIOT and various Strategies and Road Map of IIOT were discussed. As make in India drive is gearing up, development of sensors, data analytics, data processing, data mining, developing storage and computing infrastructure were discussed in detail. Session was made very interactive with participation of all audience in this discussion.

Mr. Ashish Manchanda (Honorary Secretary – ISA D) extended a very hearty vote of thanks to all the attendees and for sharing findings and opinions about IIOT.



## Glimpses of PPAM - 2016 Conference and Exhibition on Petroleum and Power Automation Meet by ISA-Delhi Section

A mega Technical event, “**Petroleum and Power Automation Meet – 2016**” two days Conference and Exhibition on Petroleum and Natural Gas Industries and Power Industries domain was organized by ISA-Delhi Section in “EROS Hotel”, Nehru Place, New Delhi on 8<sup>th</sup> and 9<sup>th</sup> April’ 2016. The event was graced by chief guest and dignitaries from both Petroleum and Power sectors, **Shri S C Pandey, Director (Projects)** from NTPC, **Shri V C Bhandari, Director (HR)** from Engineers India Ltd., **Mr. Tsutomu Murata** Managing Director Yokogawa, ISA members and esteemed guests from various industries.

This event started with welcome greeting of our esteemed dignitaries by **Shri Prasenjit Pal, Chief Convener (PPAM-2016)** and lighting of lamps.

**Shri Rajiv Gupta, president ISA-Delhi** in his welcome address thanked all the dignitaries for being part of this event and sparing their precious time from their busy schedule. He also thanked all senior advisors, paper presenters, High Power Technical Committee members, sponsors, participants, exhibitors and all others who supported to make this mega event a happening from beginning. He also emphasized in his address how Automation Technology is major factor in sustainability needs of Petroleum and Power sector in India.

The programme was inaugurated by Shri S C Pandey, Director (Projects) from NTPC, and Shri V C Bhandari in presence of other dignitaries.

### Shri S C Pandey and Shri V C Bhandari inaugurating PPAM-2016 by lighting lamp



The internet is so big, so powerful and pointless that for some people it is complete substitute for life.

- **Andrew Brown**

Our Chief Guest, **Shri S C Pandey**, in his key note address highlighted that Instrumentation and Automation is the key enabler of the day to meet the challenges of the Refinery & Petrochemical and Power Plant complex with higher scale configuration, increased value added product profile and increase in complexity of material handled in Petroleum and Power sectors. He also emphasized on “Make in India” concern of Government of India. He accentuated the development for Instrumentation and Automation technologies to meet the demand for high productivity, enhanced plant efficiency, increased reliability and security. He thanked ISA-Delhi for organizing this symposium on Petroleum and Power Automation Meet. He expressed his happiness about PPAM-2016 organized by ISA-D, being dedicated to Petroleum and Power Sector, two main key energy sectors.

### Chief Guest and Other dignitaries in PPAM-2016



**Mr. V C Bhandari, Director (HR) EIL**, expressed his gladness in his speech for being part of this mega event. He discussed how Power and Oil & Gas sector, being a critical energy sector are in demand in developing countries and also in developed countries. He also appreciated the Government of India drive for “Make in India” and development in Plant intelligence solutions that help in connecting and integrate systems that work in isolations.

**Shri Prasenjit Pal, Chief Convener of PPA-2016** accorded the formal vote of thanks to all dignitaries and participants for gracing this occasion and knowledge sharing platform. He also explained how engagement of various stake holders including technology providers and developers would certainly help in achieving the road map for implementing strategies for automation essential for a world class Petroleum and Power sectors and Government of India drive for “Make in India”.

When you are courting a nice girl, an hour seems like a second. When you sit on red hot cinder a second seems like an hour. That's relativity.

- **Albert Einstein**

Technical Session-1 started with following topics by eminent speakers from reputed industries with **Chairperson Mr. R K Batra** and **Co-Chairperson Mr. M K Shrivastava** from NTPC

- End User Expectation and Challenges in Oil Sector,
- Achieving Unified HMI through Inter DCS Operability,
- Fundamentals of Wireless communication and Future Trends
- Internet of Things (IOT)

**Mr. Shushanta Saha from IOCL**, in his presentation on *“End User Expectation and Challenges in Oil Sector”* highlighted various challenges faced and end user expectation, e.g. Availability of Integrated Asset Management System having capability of diagnostics from field instruments to vibration monitoring system of all types of instruments and controls in the field having features of early fault diagnostics, annunciation, history and decision making tools for preventive maintenance. He also highlighted the needs and challenges to control losses due to leaks for steam / oil etc. He emphasized on common operating systems and system software for control systems by all system vendors to have common skilled manpower for maintenance in large plants with control systems from various vendors and application of wireless instruments on large scale in process plants.

**Mr. R. Sarangapani and Mr. Somnath Kundu from NTPC** enlightened our audience about need of unified HMI for Control Systems. They explained various strategies and scenarios for HMI unification e.g. Single DCS, DCS Inter-operability (with proprietary gateway, OPC, TCP/IP). In their presentation they discussed with examples from NTPC projects about Inter package Unified HMI and Inter Package HMI.

**Mr. R. Sarangapani, NTPC**



**Mr. Shushanta Saha from IOCL**



**Mr. Vivek Roy from M/s Siemens, India** appraised all the participants about “Fundamentals of Wireless Technology”. He explained complexity of Radio Field, physics of radio of wave propagation, frequency sensitivity properties, bands & channels, antenna, transmission range, polarization and various characteristics of radio waves. He also highlighted the basic points of network standards IEEE 802 series.

**Industrial Internet of Things (IIOT)** is the most talked topic which was presented by **Mr. Pankaj Kumar Sharma, GE-India**. He discussed about the need and creation of the integrated all-in-one view enterprise performance management and asset health management solutions providing a holistic and quantifiable view of operations, maintenance, availability and overall operating performance for production assets. He explained the three key elements of IIOT

- Intelligent Machines connecting the world’s machine, facilities, fleets and networks with advanced sensors, control systems, software applications.
- Advanced Analytics which combines power of physics based analytics, predictive algorithms, automation and deep domain expertise.
- Connecting people at work or on the move, anytime support to more intelligent design, operations maintenance, higher service quality and safety

**Mr. Vivek Roy from M/s Siemens,**

**Mr. Pankaj Kumar Sharma, GE-India**



Technical Session-2 started after the Smart Quiz Session with special prizes and was Chaired by **Ms. R Priyamvada from EIL** and Co-Chaired by **Mr. Neeraj Agrawal from NPCIL**. Following topics were covered:

- Fibre Optic Monitoring Solutions for Oil & Gas / Water Pipelines
- Effective Measurement of Mercury in Power Plants Stacks
- Non-Contact Nucleonic Density Measurement using Sodium and Potassium source reducing hazard and security concerns,
- Measurement Technique for determination of Total Sulphur in fuels

**Shri Subhendu Roy from M/s HAWK - India** enlightened all the participants with his lecture on Fibre Optic Monitoring Solutions for Oil & Gas / Water Pipelines leak detection and significant technical and economic benefits. He explained that Fiber Optic Detection System (FOS) comprises of Distributed Acoustic Sensing (DAS), Distributed Temperature Sensing (DTS), and Distributed Strain Sensing (DSS) And Distributed Pressure Sensing (DPS). Basic principle of FOS design based on Rayleigh, Brillouin and Raman scattering along with components used in FOS was discussed in detail.

**Mr. Vijay Nair of M/s CHEMTROL - India** detailed out how Effective Measurement of Mercury in Power Plants Stacks helps in keeping our environment clean. He also explained sources of release of mercury in environment and its harmful effects. He discussed how Nobel Prize winner scientist Pieter Zeemann's work on atom absorption spectroscopy (Zeemann's AAS) method has been utilized in developing the Instrument for direct detection of Mercury concentration in the unit of  $\mu\text{g}$ .

**Shri Subhendu from M/s HAWK**



**Mr. Vijay Nair from M/s CHEMTROL**



**Mr. Vladislav from M/s EPT, Russia and Dr. Abhisek Goyal from EIP Technology, India** talked on Non-Contact Nucleonic Density Measurement using Sodium and Potassium source reducing hazard and security concerns. Refreshing the audience with basics of all Density Measuring Instruments available in the market and their advantages and disadvantages Mr. Vladislav and Mr. Abhisek explained the working principle and advantages of Nuclear Density Measurement with Na-22 (Gamma Radiation from Sodium-22) and K-40 (Gamma Radiation from Potassium-40).

**Measurement Technique for determination of Total Sulphur in fuels** was presented by **Ms. Jaya Nangia of M/s Thermo Scientific Environmental & Process Monitoring**. She discussed the present trend, various international requirements of Sulphur content in fuel (which is considered less than 10 ppm) and methodology to measure this low Sulphur content in the final product. She explained how Pulsed Ultraviolet Fluorescence Spectrometer (PUVF) used for direct determination of sulfur contamination in pipeline, fuel blending operations and validation of total Sulphur measurement.

**Mr. Vladislav from M/s EPT**

**Ms. Jaya Nangia of M/s Thermo Scientific**



In Technical Session-3, eminent specialists from industries shared their versatile expertise and experiences in their own fields. Following topics were discussed with **Chairperson Mr. Alok Shrivastava from NTPC** and **Co-Chairperson Ms. Anju Malik from Cairn**:

- Important Aspects SIS Design and recent development
- 3W and H of the Safety Requirements Specification
- Ensure Safer plant by On Line Partial Stroke Test of Emergency Shut Down valve
- Advance and Reliable Fire & Gas detection in petroleum Industry

**Mr. Arvind Sardhara, Sunil Bhandari & Subhro Sengupta from Bechtel India Pvt. Ltd, Gurgaon** in their lecture enlightened the audience with Safety Instrument System (SIS) an important points to be considered during design in a Refinery. They also talked about Safety Life Cycle, Process Hazard and Risk Analysis, Proof Test Interval, SIF, Diagnostic Coverage, Fault Tolerance, Partial Stroke Testing and highlighted key points of recent developments in IEC 61511.

**Mr. Amit K Aglave from Flour, India** discussed about 3W and H (Who, What, When and How) of the Safety Requirements Specification (SRS). In his presentation he highlighted Safety Lifecycle phases of IEC 61508 and IEC 61511. He also talked about importance of SRS and typical format for SRS base document and how to ensure correctness of the SRS.

The world is dangerous place to live; not because of the people who are evil, but because of the people who don't do anything about it.

- **Albert Einstein**



**Mr. Kajal Saha from Dresser Valve, India** discussed the importance of On Line Partial Stroke Testing (PST) of Shutdown Valves to ensure safe running of process plants. He explained the requirement of PST devices with Smart Positioners on valves, its implementation and functioning of the PST system, online diagnostics with sample PST software and its integration with Plant Control System.

**Mr. Arpan Bhattacharya from Honeywell, India** presented Advance and Reliable Fire & Gas detection in Petroleum Industry. He elaborated the customer need in F&G System for upgradation in process plants e.g. new F&G system shall act as autonomous local protection system, Reliable F&G system (minimum SIL 2) with fast response time, high IP rating etc. He also explained the need of one header single window architecture, performance based criteria in F&G system design and implementation in accordance with ISA84.00.01 / IEC 61511.

**Mr. Kajal Saha, Dresser Valve**

**Mr. Arpan Bhattacharya, Honeywell India**



**Day-2** Started with Technical Session-4. This session was chaired by Chairperson **Mr. Prasenjit Pal from NTPC** and Co-Chairperson **Mr. Mainak Nandi from EIL**. Following are the topics covered in this session:

- Evolution of Industry 4.0

- Mass Spectrometers in Oil & Gas / Petrochemicals/ Fertilizer industry.
- Use of Advanced Optical Technologies (TDL and Raman Effect) for Gas Phase measurements in Refineries and Petrochemicals Industries.
- SMART City Concept & Role of Instrumentation

**Mr. Rajeev Lochab from Rittal, India** talked on Evolution of Industry and explained how digitization and flexible IT infrastructure is secure for configuring highly automated production process. He also briefed about the importance of IT infrastructure components for secure, safe and reliable digitized process industry e.g IP address for each device, cooling system and dust proofing of electronic components etc.

**Mr. Frank D Thomas, Mr. Mukesh Arora, Mr. Brijesh Chowdhary from Spectrum Automation & Controls, India** highlighted the increase in use of Quadruple Mass Spectrometer (QMS) for process gas analysis in Process industry. They explained basic QMS principle and components of QMS, response time, limit detection range (ppb / ppt) and common application areas e.g. flare gas concentration, ammonia / methanol production unit, ethylene cracker unit etc.

**Mr. Rajeev Lochab, Rittal**

**Mr. Frank from Spectrum Automation & Controls**



**Mr. Jivan Jain from M/s Endress & Hauser, India** enlightened the audience with Tunable Diode Laser Absorption Spectroscopy for trace gas measurement, On line Raman Analyzer and Oxygen Measurement with Quench Fluorescence technology. He explained working principle, various components and applications of gas analyzers equipment.

Smart City Concept and Role of Instrumentation was presented by **Ms. Swati Dhawan and Ms. Neha Singh of M/s Technip, Noida-India**. In their presentation they highlighted the core infrastructure elements in a Smart City. They discussed in detail complete scenario for Smart City needs, its challenges, its implementation strategy and solutions. They explained how smart instrumentation and control technology contributes in making of Smart City e.g. Smart meters and Integrated Smart Grid system in Energy sector,

Automatic Surveillance System for traffic management, Access Control for safety management of the city, water management system, waste management and disposal, environment monitoring etc.

**Mr. Jivan Jain from M/s E&H**

**Ms. Swati Dhawan of M/s Technip**



Following are the topics covered in Technical Session-5 chaired by **Mr. Rajeev Khanna from NTPC** as Chairperson and **Mr. R J Thomas from Technip** as Co-Chairperson:

- Insight of the Challenges & the Steps to Improve Cyber Security for Industrial Control Systems
- Cyber Security in COTS
- ESD system for Multi-plant Complex project: Design & Implementation.
- Industrial growth, Improved productivity, Efficiency, sustainability through advancements in Metrology

**Mr. Rahul Gupta from Wood Group Mastang(M)**, presented the most talked topic of the present trend “Insight of the Challenges & the Steps to Improve Cyber Security for Industrial Control Systems”. He explained Cyber Security challenges faced by Plant Manager, CEO, and Information Security Officer. He also enlightened audience with Oil & Natural Gas Cybersecurity Capability Maturity Model (ONG-C2M2), Information Technology (IT) & Operation Technology (OT) relationship with ICS and ICS Architecture (combination of IT-OT). He also discussed ICS cybersecurity recommended actions for end user for specification phase, design phase, integration phase, test phase and to cover all risks safety and cybersecurity shall be dealt together for overall safe control system design.

Cyber Security in Commercial of the Shelf (COTS) product was discussed by **Mr. Neeraj Agrawal, NPCIL, Mumbai, India**. He highlighted cybersecurity issues in COTS, Network Security, Data Security, Software Security and Hardware Security. He also discussed Cryptographic Building Blocks, Firewall and precaution during O&M of COTS.

“To live is the rarest thing in the world. Most people exist, that is all.”

— Oscar Wilde

**Mr. Rahul Gupta, Wood Group Mastang**

**Mr. Neeraj Agrawal, NPCIL, Mumbai, India**



**Mr. Saikat Bhowal, DGM (Instrumentation) from EIL**, in his lecture spoke on ESD System Design and implementation. In his presentation he covered all aspects starting from ESD Philosophy conceptualization w.r.t. multiple control rooms / Central Control Room & Satellite Rack Room etc. and grouping of ESDs, PLC configuration & SIL requirement w.r.t. DMR / TMR and Quad PLC, Interface of ESD and BPCS, IO List, ESD specification, System Engineering, FAT and SAT.

Industrial growth, improved productivity, efficiency, sustainability through advancements in Metrology was presented by **Mr. Sandeep Sharma of Isothermal Technology Pvt. Ltd.** He explained how all instruments periodical tests and calibration minimizes the losses and increases the production by 20-25%. He discussed in detail precision temperature measurement and universal calibration Test Bench complying with BS, IS, ISO9001, ISO 14001 and ISO17025 standards.

**Mr. Saikat Bhowal of EIL**

**Mr. Sandeep Sharma of Isothermal Technology**



Following are the topics discussed in Technical Session-6 and this session was chaired by **Mr. Rohit Bhardwaj** and **Mr. S Bhattacharya**.

- 3D Volumetric Analysis : Open & Closed Stockpiles
- High frequency Radar level measurement : Universal sensor
- Smart Microchip Based Natural Gas Chromatographs for Calorific Value Measurement
- RVMS – Remote Vibration Monitoring System a New Trend

**Dr. Abhishek Goyal and Mr. Rajat Goyal, Director, EIP Technologies Pvt. Ltd.**, highlighted the advantages of 3D Laser technology in 3D Volumetric Analysis for Open and Closed Stockpiles compared to other technology available in market for such application e.g., Acoustic devices, Theodolite based system, Total Stations (portable device), Radar Level Sensors, Ultrasonic Sensors. They also explained the basic working principles and components involved in this 3D Laser based Volumetric Analysis along with the areas of application like, Coal Fired Power Plants, Cement Plant, Fertilizer Plant, Alumina Plant, Mining and Mineral Industry etc.

“High frequency Radar level measurement-Setting New Standards with 80 GHz” was the topic discussed by **Mr. Abhijit Sarathe of M/s VEGA**. He presented how high frequency Radar with smaller beam angle (about 3 deg. typical value) and smaller antenna are useful for installation in Vessels with internal installations or heavy build up in walls, as high frequency radar waves beam simply avoids these obstacles. He also discussed about the application of VEGAPLUS 64 (for liquid) and VEGAPLUS 69 (for bulk solid).

**Dr. Abhishek Goyal, Director EIP**

**Mr. Abhijit Sarathe of M/s VEGA**



**Mr. Manoj Singh from SIEMENS** talked about Smart Microchip Based Natural Gas Chromatographs for Calorific Value Measurement. He explained how Micro-Electrical-Mechanical Systems (MEMS) technology being used to develop new products for process industry (mainly Gas Chromatograph for Natural Gas application) due to low manufacturing cost, compact size, low weight and low power consumption etc. He also discussed advantages of Micro GC e.g. installation directly near sampling point, reduced space, practical service concept with easy monitoring of the analyzer status from remote location and short time to repair, highly tuned system with best accuracy, repeatability and detection limits etc.

**Mr. Yokosuka and Mr. Mukesh Vyas** from Forbes Marshall spoke on Remote Vibration Monitoring System a new trend. They enlightened the audience with Remote Vibration Monitoring System Configuration, Data Acquisition system with infiSYS for non-Shinkawa Monitors, Vibration Analysis and Diagnostic System, Signal Data Flow, sample monitors screens etc.

**Mr. Manoj Singh, SIEMENS**

**Mr. Mukesh Vyas, Forbes Marshall**



After a long two day session of technology know how sharing, Panel Discussion Session on most popular topic of our country **“Make in India – Challenges & Opportunities”** took place at the end. Eminent personalities from various industries Mr. Suresh Chopra, Executive Director (IOCL), Mr. Niraj Sethi, Executive Director (EIL), Mr. Noor Ahmed Sr. DGM (ECIL), Mr. Nand Kumar, MD (CHEMTROL) enlightened the audience with numerous developments and opportunities for Automation Industry in this “Make in India” drive by Indian Government. This session was very useful for all enthusiastic entrepreneurs in Automation industry.

Efforts of all the participants, sponsors, exhibitors, speakers were analyzed by High Power Technical Committee and best participants in each category like Best Stall and Best Paper were rewarded with token memento by ISA-D.

**Token of appreciation Memento for Best Technical paper was presented by ISA Delhi section**



**Token of appreciation Memento for Best Stall was presented by ISA Delhi section to exhibitors**



**Winners of Smart Quiz and Lucky Draw**



Work out your own salvation. Do not depend on others.

- **Buddha**



## Esteemed Audience enjoying the Tehnical Presentations



ISA Delhi Section acknowledged the active participation of all veterans from industries for being the Chairpesron and Co-Chairperson for various Technical sessions by presentening a token of appreciation.

ISA Delhi Section also arranged lucky draw for all the esteemed audience, delegates who visited the exhibition and stalls in PPAM-2016, winner was presented with prizes.

This mega event concluded with vote of thanks by **Mr. Prasenjit Pal, Chief Convenor-PPAM-2016, ISA-D section and networking gathering** with all esteemed guests and members and heartfelt memorable moments.

## **AWARDS FOR ISA DELHI SECTION**

ISA Delhi has been awarded the best section award in Asia Pacific District 14 during the Automation India Week 15<sup>th</sup> October 2016.

Shri B R Mehta, President ISA-Asia Pacific District 14 presented the award to representatives from ISA Delhi, Ms. Arundhati Bhattacharya, Executive Director NTPC, Mr. Ashish Manchanda, Secretary ISA Delhi, Mr. Ravinder Goyal, Managing Director-EIP and other ISA Delhi executive members in Automation India Week 15<sup>th</sup> October 2016.



I never see what has been done; I only see what remains to be done.

- **Buddha**

ISA Delhi also got appreciation for Membership Growth & Contribution in Oil & Gas Power Sector from District 14 during Automation India Week 15<sup>th</sup> October 2016.



**UPCOMING MEGA EVENT**

**PETROLEUM AND POWER AUTOMATION MEET – 2017, Two Days Event (Conference and Exhibition) on 21st - 22nd April 2017 at “EROS Hotel” in Nehru Place, New Delhi**

## **CYBER SECURITY-DEFENCE IN DEPTH APPROACH**

ISA, Delhi Section arranged a Technical Meet on “*Cyber Security – Defence in Depth*” on 23<sup>rd</sup> Sept’2016, at Scope Convention center, Scope Complex, Lodhi Road, New Delhi.

Renowned experts on this subject Mr. R. Sarangapani and Mr. Amit Kumar Singh from NTPC presented today's most talked topic in this technical meet. Their presentation highlighted the critical issue of cyber-attacks towards control systems of important infrastructures, power plants, oil and gas industry, other process industries etc. They also explained the available methodologies about how to develop the Cyber Security system for process industries and the consequent national security and risk management we might expose ourselves to a possibility of outage of control systems of important infrastructures and leakage of confidential information.

An open house Q & A Session was the most useful part of the event to seek expert advice on the subject which highlighted the various security concerns of the industry. The discussion not only highlighted industry concerns of external threat to the higher level control infrastructure from rogue elements but also stressed on the aspect of detection and mitigation of “dormant malicious code” within the firmware of the actual control systems that could be activated through remote triggering. The house also discussed the aspect of certification control system firmware from various Foreign OEMs for the end users.

ISA Delhi section had already formed one separate team for cyber security system comprising of Users, Consultants and specialists from system suppliers. Profile of the team is to understand the need of control system's cyber security and implementation techniques for security measures to their plant meeting the latest security measures requirements. Mr. Sarangapani is the convener of the team.

Mr. Ashish Manchanda (Honorary Secretary – ISA D) accorded the formal vote of thanks to all the attendees and who contributed in organizing this meet.

### **Participants during Technical Meet “Cyber Security – Defence in Depth”**



## **ANNUAL GENERAL BODY MEETING**

After one glorious year, April'2015 to March'2016 with happenings of Technical mega events, Technical Meets and Leadership Meet, ISA Delhi Section executive body elected new ISA-D Executive Committee members for the year 2016-2017, mixed with some experienced veteran and some new leaders in **Annual General Body Meeting held on 9<sup>th</sup> April'2016 in "EROS Hotel", Nehru Place, New Delhi.**

AGM started with welcome address to the members and their family by **Ms. Anuja Thukral, Secretary ISA Delhi.** She called the meeting to order and requested Shri Rajiv Gupta, President ISA-Delhi section, to take over the proceeding of meetings.

**Shri Rajiv Gupta, President ISA-Delhi** thanked all the members of ISA Delhi Section for their support and immense efforts in making ISA-Delhi progressive and achieving the entire milestone for the year 2015-2016 successfully. While addressing the gathering, he highlighted the achievements of ISA-Delhi Section in the year 2015-2016, about all the events, technical meets and how the same have been useful to Automation fraternity in enhancing their knowledge, skills and utilizing the same in their field.

**Shri. Arun Gupta, Treasurer ISA-Delhi,** briefed about the financial position of ISA-Delhi and presented the balance sheet for the year 2015-2016 to the members. The balance sheet was accepted by all the members with voice.

**Shri Rajiv Gupta – President**



**Shri Arun Gupta, Treasurer & Ms. Anuja, Secretary**



Shri Rajiv Gupta congratulated the new President Shri M P Singh and new executive committee team and also wished them good luck for the new assignments as ISA Delhi Executive Committee members for the year 2016-2017.

Shri M P Singh new President ISA, Delhi Section thanked the executive committee and members of ISA Delhi Section for showing their confidence in him and assured that legacy of all good work in ISA-Delhi

Section shall be continued and many more technical meetings, training, essay competitions and mega events will be organized.

**Shri Rajiv Gupta President ISA(D) 2015-2016 welcoming Shri M P Singh, President ISA(D) 2016-2017**



## TECHNICAL MEET: FEBRUARY'16

A Technical Meet on *“Evolving World Class Manufacturing Facilities In Tier – 2 City”* in association with **Pyrotech Group** was organized by ISA Delhi Section on 19<sup>th</sup> Feb'2016, at Mirza Ghalib Chamber, Scope Convention center, Scope Complex, Lodhi Road, New Delhi.

Mr. N K Pande from Pyrotech enlightened the audience with basic concept, various evolving Tier-2 cities in India with world class facilities. He also discussed points of improvement and other infrastructure development required in these cities to become a world class manufacturing cities. He briefly touched the role of Indian Government for developing these cities.

Audience from various industries attended this technical meet and technical presentation was very informative.



## ISA DELHI LEADERSHIP MEET: NOV'15

ISA-D organized an outstation **Leadership Meet** in Bhutan, with all its ISA-D Section Senior Leaders and HPTC Members and their families on 24<sup>th</sup> November'2015. This visit was planned to encourage team building, leadership development & to seek strategic direction for future from senior leaders of the automation industry and also to develop execution plan for mega events, technical meets, membership drive, students section developments, trainings etc., with executive committee members and also for development of cohesiveness and relationship among family members of all ISA-D members. This outstation meet was a memorable event for all ISA-Delhi members and their families.

Following are the points of discussions and suggestions by our various ISA-D leaders:

- Check the possibility of having Corporate memberships to increase the overall membership numbers
- Working Groups should be formed on various sections e.g., working group on Cyber Security is formed with Sh R Sarangpani as group leader with 6-7 members representative from users (Indian Oil, EIL) and 2 members from Manufacturer along with participation from academics.
- Student Section should focus on the enrolment of members from IIT's and Department of Science and Technology.
- Section should work on ISA India Awards to work at national level recognizing the contribution of the leaders in the Automation Industry
- Print media visibility should be increased
- Customer care number should be allotted in India and made available to offer better services to our members
- Focus should be made on developing New Leader who can take up the responsibilities of the section, groom them with the help of existing leaders so that ISA-D can be taken to the new height.
- Engineers from different industry segments like Electrical, should be invited to be a part of the Membership drive

### **Memorable Moments of ISA-D Outstation Meet**



## Fertilizer Symposium 2015

“Fertilizer Symposium–2015” one day Conference and Exhibition on Fertilizer Industry domain was organized by ISA-Delhi Section in “EROS Hotel”, Nehru Place, New Delhi on 10<sup>th</sup> of October’2015. The event was graced by chief guest **Shri Rasmus Breivik-Director (Haldor Topsoe)**, **Guest of Honour Mr. Sagar Mathew-Director Technical (NFL) & Shri S K Gupta-Group GM (PDIL)**, other dignitaries from Fertilizer and other process industries and ISA members.

After inauguration of the event by Chief Guest Mr. Rasmus Breivik and Guest of Honour Mr. Sagar Mathew & Mr. S K Gupta, technocrats from various industries enlightened the audience with their high impact presentations.

Topics presented are **Application of LOPA in Fertilizer Industry** by Mr. Amit K Aglave (Flour), **Power and Process Integration** by Mr. Sujit Gohil (ABB), **Development and Utilization of APC and Operator Training Simulator** by Mr. K R Dureja and Mayank Ojha (Tata Chemicals), **Catalytic Denox Technology-Smart Solution-Green Revolution** by Mr. Sachin Panwar (Haldor Topsoe), **Remote Machine Condition Monitoring and Efficient Metering Monitoring Techniques** by Mr. Sanjay Kumar and Mr. Ezaz Hyder (Forbes Marshall), **Upgradation of DCS in Urea Plant** by Mr. Vivek Gupta (DCM Shriram), **Advance Instrumentation Technologies in Fertilizers Plant** by Ms. Ritu Agarwal and Mr. Nadeem (PDIL), **Improving Safety in Design** by Ms. Prema Suresh and Mr. Rejith Thomas (Technip), **Environmental and Community criteria** by Ms. Dolan Bhattacharya & Mr. Ravi K Tata (Bechtel), **Mass Spectrometer** by Mr. Mukesh Arora (SPECTRUM Automation & Control).

Various Process Automation Professionals had shown interest in enhancing their knowledge of industry best practices and understanding existing trends in process Safety System Design, Environmental Compliances, Maintenance of Automation Systems, Best Practices of Plant Operations and Latest Technology Trends.

### Mr. Rasmus Breivik inaugurating the Symposium with other dignitaries



## **TECHNICAL MEET: JUNE'15**

ISA, Delhi Section arranged Technical Meet on “*Latest Trends in Instrumentation Cables & International Standards*” in association with **LEONI Cable Solutions (India) Private Limited** on 26<sup>th</sup> June'2015 , at Mirza Ghalib Chamber, Scope Convention center, Scope Complex, Lodhi Road, New Delhi.

The Topic covered was:

- *Latest International Standards for Instrumentation Cables*
- *Manufacturing of Instrumentation Cables*
- *Types of Instrumentation Cables and their application*
- *Types of Insulation of Instrumentation Cables w.r.t. application*

Mr. Pushpendra Singh – Managing Director and Mr. K R Chandrasekar – National Sales Head of Leoni Cable Solutions (India) Private Limited, presented the technical session on the above topics.

The event was attended and graced by audience from consultant, Oil & Gas, Power, Cement, Paper & Pulp, and Fertilizers & Chemical Industry. Live demonstration of various types of cables with applications gave the audience an opportunity to know about latest developments and their relevance in automation of plants.

### **PHOTOGRAPHS OF TECHNICAL MEET-JUNE'15**



I am not the first Buddha who came upon Earth, nor shall I be the last. In due time, another Buddha will arise in the world - a Holy One, a supremely enlightened One, endowed with wisdom in conduct, auspicious, knowing the universe, an incomparable leader of men, a master of angels and mortals.

- **Buddha**

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**QUIZ TIME**

CHOOSE THE RIGHT ONE FROM OPTIONS GIVEN:

- Q1:** In a typical PLC timer, what does the function of the preset value determine?
- a) the resolution of the time base such as 1/10 sec or 1/100 sec
  - b) the length of time before the timer is energized or de-energized
  - c) the length of time the timer has been active
  - d) the on-delay or off-delay setting that determines the reset of the timer
  - e) none of the above
- Q2:** Which PLC programming languages consist of contacts, timers, and counters?
- a) sequential function charts (SFC)
  - b) ladder diagram (LD)
  - c) function block diagram (FBD)
  - d) structured text (ST)
  - e) all of the above
- Q3:** The continuous sequence of steps or “operating cycle” performed by a PLC processor is known as:
- a) updating
  - b) scanning
  - c) polling
  - d) rectifying
  - e) none of the above
- Q4:** In most process control systems, the final control element is a:
- a) transmitter
  - b) sensor
  - c) controller
  - d) valve
  - e) none of the above

- Q5: What is full for of MEMS.....?
- Q6: 3W and H stands for .....
- Q7: ONG-C2M2 stands for .....
- Q8: FF-844 H1 stands for .....
- Q9: Maximum Attenuation of FF Cables Type A ..... dB/Km?
- Q10: LOPA stands for .....

**NOTE:** Members can send the answers by email to the following email address:

**To:** radheytiwari@gmail.com with **CC:** info@isadelhi.org, manish.kumar@eil.co.in

Correct entries of answers will be awarded in Technical Meet.

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