

Chief Patron
Rohit Bhardwaj

President
Alok Shrivastava

President Elect
Atish Chakraborty

Patron & Past Presidents
Prasenjit Pal
S R Bhatnagar
N. K. Pandey
M P Singh
V. Prakash
P. Mahajan
Dr. K.Vasudevan

Vice President
S K Dhawan

Honorary Secretary
Anil Mishra

Treasurer
Anil Choudhary

Society Delegate
S Verma

Membership Chair
Arun Gupta

Marketing Chair
Akash Sharma

Program Chair
P P Patil

Education Chairman
R K Bassi

Web Master
Parag Tyagi

Newsletter Editor
Shashank S Garuryar

Student Section Liasion
Soumitra
Bhattacharya

Publications Chair
R S Gudipaty

ISA(D) NEWSLETTER

April-June 2011 Volume 1-Issue I

From the Desk of President:

I am extremely happy to present before the members, the long awaited News letter of ISA Delhi Section. As you all know that our team at ISA Delhi puts great efforts to bring high quality technological contents to our esteemed members.



Traditionally these are presented before the users by organizing monthly meets and yearly conferences like PNID-2011.

In order to disseminate more technological contents and to inform our members about various activities taken place/planned in future, our publication team has started to bring news- letter for the benefit of one and all.

On behalf of executive committee, I would like to compliment and congratulate the editorial team of Shri Shashank S Garuryar and Shri Manish Kumar for bringing a wonderful news letter both in its content and design in front of you. I would also like to appreciate the guidance provided by Shri Soumitra Bhattacharya in advising our editorial team. I certainly wish that with the support of our active members, there will be many more delightful newsletters that are going to be published by our very active editorial team.

With best wishes,


Alok Shrivastava
(Hon President - ISA Delhi Section)

UPCOMING MEGA EVENT

PNID – 2011, one day Conference and Exhibition on Petroleum and Natural Gas Industries Domain in Hotel “The TAJ PALACE”, Sardar Patel Marg , New Delhi on 26th September 2011(Monday).

Knowledge can only be got in one way, the way of experience; there is no other way to know.

From the Chief Editor's Desk:

Dear Members/Readers,

It gives me immense pleasure to be part of this first quarter News Letter of ISA Delhi Section- Asia Pacific District 14. Our first event in this financial year started with AGM and selection of ISA Delhi new Executive Committee Board Members.

Technical meets in the month of May'2011 and June'2011 were a grand success with enormous knowledge sharing within highly skilled technocrats representing various industries.

ISA Delhi section thanks the sponsors of these technical meets, executive committee, ISA members and Invitees who with their valuable presence and support made these events a grand success.

We all know that process instrumentation & control is a major growth accelerator for the growth of world economy. As the demand of consumer goods increases, it calls for a greater need of automation across a wider range of process control application. We have to increase performance and reduce cost & time implication to remain globally competitive under safe and green environment. This cannot be achieved unless we have a common platform for knowledge and technical skill sharing. ISA provides us the best platform for knowledge sharing in control and automation application in wide varieties of industries starting from Oil wells to Refinery Petrochemicals, Thermal to Nuclear Power, Chemicals & Fertilizers, Textile, Paper, Ferrous & Non-Ferrous, Metallurgy, Pharmaceutical industry.

You all including Student Members are invited to be part of this quarterly news letter by sharing your control & instrumentation intelligence in terms of Technical Literature which will be published in next quarter issue. We also invite your active participation in Quiz. The first two correct responses shall be awarded.

For making this News Letter a reality, I thank Mr. Alok Shrivastava, President and Mr. Anil Mishra, Secretary - ISA Delhi Section for their valuable guidance, Mr. Soumitra Bhattacharyya for his excellent technical literature on "Challenges of Control and Instrumentation System in Indian Electric Power Industry", Mr. Manish Kumar for his editorial support, Mr. Radheyshyam and Executive Committee members in publishing this news letter.

I welcome you all to be part of ISA Delhi section next Mega Event Conference and Exhibition on Petroleum and Natural Gas Industries Domain in Hotel "The TAJ PALACE", Sardar Patel Marg , New Delhi on 26th September 2011(Monday). You are invited to participate and contribute to make this event a grand success.

With best wishes,



Shashank S Garuryar
(Hon Chief Editor - ISA Delhi Section)

There are only two ways to live your life. One is as though nothing is a miracle. The other is as though everything is a miracle."

- Albert Einstein (1879-1955)

NEWS FROM ISA DELHI CHAPTER

The Annual General body Meeting of the year 2010-11 was held at Holiday Club on April 16, 2011. AGM started with welcome address by Mr. Ravinder Goyal, Secretary ISA Delhi, to the members and their family. Addressing the gathering, Mr. Goyal highlighted the achievements of ISA-Delhi Section in the year 2010-2011 e.g., Conducting regular monthly meeting of Delhi Section, visit of ISA (D)-Section Leaders at Mumbai on 11th April 2010, Conduction ISA(D)-POWID-INDIA-2010 at Mumbai on 28th -29th May'2010, DLC meet at Bangalore on 22nd August 2010 where our chief patron Mr Rohit Bhardwaj of ISA Delhi Section was declared elected as DVP of Division 14, ISA Delhi Outstation meet at Bangkok on 25th to 30th January 2011 and increase in the membership of ISA Delhi Section by 25%.

Mr. Arun Gupta, Treasurer, briefed about the present financial position of ISA, Delhi. The beauty of the occasion was enhanced by the presence of family members zooming in with fanciful creation of head, heart and mind and their active participation in eye catching activities.

Chief patron and guest of honour Mr. Rohit Bhardwaj enlightened the gathering sharing his experience about his journey in Instrumentation & Control and his association with ISA Delhi section since its inception. The election of new executive committee for the year 2011-2012 also took place by voice vote by Mr. R K Bassi based on the nomination received for various posts. President ISA, Delhi Section Mr. Prasenjit Pal thanked the members for their help in making ISA, Delhi Section vibrant and progressive. President also congratulated the new President Mr. Alok Srivastava and wished him good luck for the new assignment as ISA Delhi President for the year 2011-2012.

Mr. Alok Srivastava new President ISA, Delhi Section thanked the executive committee and members of ISA Delhi Section for showing their confidence in him and assured that the rate of growth in 2011-2012 shall be maintained as in the previous years.

The AGM ended with vote of thanks by Mr. Anil Mishra, Secretary, ISA-Delhi Section to Senior ISA members, past President and to all members for being present and electing new executive team for year 2011-2012.

All the members and their family enjoyed the mouth watering snacks and sumptuous dinner followed by colorful Magic and Musical show.

PHOTOGRAPHS OF AGM FAMILY MEET-APRIL '11



ISA Members during AGM in Holiday Club



ISA family members in Holiday Club

TECHNICAL ARTICLE

“Challenges of Control and Instrumentation System in Indian Electric Power Industry”

As per the Integrated Energy Policy developed by planning commission of Govt. of India, by 2031-32 power generation capacity must increase to nearly 8, 00,000 MW from the present level of approximately 177990 MW (As on 30.06.2011). Power requirements by 2017 would be about 300000 MW. Meeting the energy challenge is of fundamental importance to India's economic growth targets and its efforts to raise its level of human development. The broad vision behind the energy policy is to reliably meet the demand for energy services of all sectors at competitive prices.



*By Soumitra Bhattacharyya
DGM - C&I-(Project Div.)
NTPC - Noida*

The demand must be met through safe, clean and convenient forms of energy at the least cost in a technically efficient, economically viable and environmentally sustainable manner. Considering the shocks and disruptions that can be reasonably expected, assured supply of such energy and technologies at all times is essential for providing energy security for all. Meeting this vision requires that India pursues all available fuel options and forms of energy, both conventional and non-conventional. Further, India must seek to expand its energy resource base and seek new and emerging energy sources. Finally, and most importantly, India must pursue technologies that maximize energy efficiency and conservation. Coal shall remain India's most important energy source till 2031-32 and possibly beyond. Thus, India must seek clean coal technologies and, given the growing demand for coal, also pursue new coal extraction technologies such as in-situ gasification to tap its vast coal reserves that are difficult to extract economically using conventional technologies.

As already mentioned, in order to achieve reasonable energy security and to insulate the energy supply from reasonably expected supply disruptions and shocks, electricity generation through diverse fuel options and forms of energy, both conventional and non-conventional should be explored. Pursuing diverse fuel options will not only enhance energy security but also reduce carbon intensity of our power generation fleet, establishing the company's image as a clean company.

Coal has been undisputedly recognized as the most important energy source till 2031-32 and possibly beyond. While exploring technological solutions, India is therefore, concentrating on reducing environmental impact and increasing the efficiency of coal based generation, so as to optimally use this perishable resource. Clean coal technologies such as Supercritical and Ultra Supercritical technologies, SO_x / NO_x / Mercury / SPM/ RSPM reduction technologies, and development of IGCC is the key focus areas in our plans.

Meeting the energy needs of the future requires rapid capacity addition using all the possible energy options including coal, hydro, nuclear, and renewable resources. In addition to this the available fuel options should be utilized in the most efficient way so as to meet the environmental and economical challenges. Supply-chain management, Life cycle optimization, and advanced process automation to operate most efficiently are essential to build the energy infrastructure of the future so as to meet the rapidly increasing demand in safe, efficient, environmentally clean and economical ways.

Anger and intolerance are the enemies of correct understanding.

By : MK Gandhi

Meeting these challenges will create new opportunities in building innovative solutions for project planning, management, construction, operation, and R&M encompassing the three dimensions of lifecycle optimization, automation, and the chain management from customers to suppliers.

Control & instrumentation systems for the power industry:-

Control & Instrumentation systems are the prime movers behind the successful functioning of power plant equipment & rightfully, termed as brain and the nervous system of the power plant. The key demands from Control & Instrumentation systems for the power industry are :

- **Improvement in Plant Availability :**
- **Reliability:**
- **Efficiency:**
- **Asset management:**
- **Environmental norms:**
- **Safety:**
- **Security:**

These parameters are very vital for power plant & by proper designing of the control & instrumentation systems, these can be improved upon.

C&I technologies of the future:

The power industry have a come a long way in the field of control & instrumentation systems; from relay based systems to solid state, to microprocessor based DDCMIS with advanced software. Based on continuous learning and experience gained over the years, the C&I engineers have adopted proven state of the art technologies, and embarked on study on new vistas of technology.

Some of the latest technologies generally adopted include

- Smart positioners for control valves resulting in reduced commissioning and improved diagnostics;
- Temperature transmitters adoption for improved availability, reduced inventory, improved diagnostics and reduced cabling for on going projects;
- Selectively introduced Wire-less communication technology for having operation of the most remote location of power plant without using expensive cables.
- Latest instruments, based on Radar/Ultrasonic principle
- Large video Screen (LVS) based operation, Boiler Flame and CCTV integration on main plant LVS screen for improving the overall operation and maintenance of power plants.
- Field Bus for selected areas to avail of its benefits
- Several innovative concepts have been adopted like introduction of combined control room for main power plant as well as off site areas, adoption of DCS based unified hardware for main plant as well as off site areas, Plant wide integration of all auxiliary plants for monitoring and control through integrated station wide LAN

- A state of the art integrated simulator for 660 MW /800MW
- DCS network architecture designed for better security while ensuring connectivity with ERP systems

Some of the challenges & end user concerns are:-

- **Obsolescence-**
Suitable solutions needs to be devised so that effect of obsolesce is not felt at the end user level. At the same time, end user should also not be deprived of the latest technology/ offering.
- **Interoperability of the automation systems:-**
One particular requirement of interoperability is the operation of control system of one DCS with HMI of another so that the power plant operator can be presented with a single unified user interface.
- **Skill development and domain expertise:-**
Power plant being a very specialized area, domain expertise is required for automation professionals. Training facilities matching these requirements needs to be developed.

Effective tools for analysis & operator training: There is always a increasing demand for more facilities & suppliers should aim at bridging this gap as much as possible.

Conclusion

In spite of the challenges ahead, we the C&I engineers irrespective of belongingness to public sector or private sector, we need to gear up so that control and monitoring of the main equipments come to the optimum level. Thus, the older station will come to the level to new power station after renovation while the new power station shall exhibit highest efficiency along with full reliability and safety.

TECHNICAL QUIZ – 01

1. Who sent the first email and in which year?
2. Which Indian is called “The father of Fiber Optics”?
3. What is an Orsat Analyser?
4. What was the original APPLE COMPUTER logo?
5. What is SMTP?

Democracy does not guarantee equality of conditions - it only guarantees equality of opportunity."
- Irving Kristol

TECHNICAL MEET: MAY'11

ISA, Delhi Section arranged a Technical Meet in association with M/s Pyrotech Electricals on 27th May 2011 (Friday) at Mosaic hotel, Sector -18, Noida, UP; with mission of proliferation of knowledge in the field of Instrumentation & Control which has provided a common platform for exchange of views and ideas, provide opportunities par excellence for users, consultants, manufacturers, system integrators, test houses and academic institutions.

The Topic was: **Sensor to Control Room - A walk through Technology development in the Last two decades - Key Issues & Challenges.** The event brought together a huge number of instrumentation engineers from various industries and also operational engineers from various plants.

The topics of the seminar had a wide coverage from field transmitters to control room instrumentation as well as engineering to commissioning services. M/s Pyrotech Technical team made a nice presentation on technology development starting the journey from pneumatic transmitter to HART transmitter, FF and now wireless. Their team members also provided the concept of inception to commissioning about the luxurious ergonomic control room. They also gave details on the development of Large Video Screen from CRT, PLASMA, LED-HD to 3-D concept and their utility and advantages in plant operation and control system. They also arranged a display of their various products which gave audiences opportunity to know about the latest development and their usage in Instrumentation & control.

PHOTOGRAPHS OF TECHNICAL MEET-MAY'11



Presentation by M/s Pyrotech Representative and esteemed audience in Hotel Mosaic

There are only two tragedies in life: one is not getting what one wants, and the other is getting it."
- Oscar Wilde (1854-1900)

TECHNICAL MEET: JUNE'11

Technical Meet in the month of June'11 was organized by ISA-Delhi Section on the most burning topic “**Advancements in Predictive Monitoring Technologies**” on 24th June 2011(Friday) at Tagore Chamber, Scope Convention Center, SCOPE complex, Lodhi Road, New Delhi with **M/s GE Energy Measurement & Control Solutions**. This technical topic was designed and presented by Mr. Shrinivas Neje, Product Line Leader – Bently Nevada Product Line, Measurement & Control Solutions, India.

Mr. Nene gave descriptive picture on technical know-how of the predictive maintenance technology and Condition Monitoring of Reciprocating Compressors in today's petrochemical and process industry. Bently Nevada's latest technology for comprehensive monitoring of virtually every major portion of reciprocating compressor train, from prime mover, to the gear box, to the compressor and its components – valves, rings, pistons, rods, riders bands etc. were also discussed.

He also highlighted the utility and cost effective approach of wireless condition monitoring solution and how it provides easy method of swiftly deploying condition monitoring throughout the plant – even in most inaccessible areas. It is easy in quick installation, straightforward, economical, and enables most plants to go from start of deployment to data collecting in less than two days. Bently Nevada Essential Insight mesh wireless condition monitoring solution gives plant personnel a key advantage by minimizing the amount of time that one need to spend in gathering information and identifying the problem. This enables plant operators to improve plant reliability, availability and efficiency.

Mr. Nene gave a detailed account of Motor Anomaly Detector solution which is a very cost effective solution that continuously monitors electric motor driven machine trains in Oil& gas, power generation, pulp & paper, steel making, mining and other industries. This utilizes advanced processing algorithms to perform anomaly detection for three phase electric motor driven equipment including assets in upstream, offshore, remote, submerged, cryogenic, harsh duty, difficult access motor, in semi critical duty.

Further, he explained how all the above solutions are supported by Bently Nevada's System1 Plant Asset Management system. This technical meet from start to end was full of technical knowhow with live demo of all the system. This occasion was graced by audiences from consultants, Oil & Gas, Power, Cement, Paper & Pulp, Fertilizers & Chemicals and Pharmaceutical industry.

Target of ISA Delhi for 2011-2012

During the last AGM, newly elected President proposed the following goals for the coming year.

- ✚ To organize a symposium on Petroleum & Natural Gas Industrial Division
- ✚ To increase the efforts for a strong student chapter and have more interaction with academicians
- ✚ To increase the number of members and develop virtual leaders.
- ✚ To communicate regularly with members and other stake-holders related to instrumentation fraternity through newsletters, active web-site, user forum etc.

PHOTOGRAPHS OF TECHNICAL MEET-JUNE'11



Presentation by GE Representative in SCOPE

Appeal from ISA Delhi Section

1. All members are invited to contribute in making this quarterly newsletter more informative by sharing their technical expertise in the form of technical literature on latest technology for the next quarter newsletter.
2. Members can provide the Answers to the Quiz Questions by sending an email to isadelhi.org@gmail.com, with CC: manish.kumar@eil.co.in. Early correct answers will be rewarded and answers with names will be published in next Newsletter.

Contact Us

For further queries and suggestions contact our editorial board comprising:-

1) Shashank S Garurvar

shashank.garurvar@polixel.in

Mobile: +91-9711147900

Email: isadelhi.org@gmail.com

Office phone no:- 011-41759416

2) Soumitra Bhattacharya

soumitra@ntpceoc.co.in

Mobile: +91-9650991570

Web-site:- www.isadelhi.org

3) Manish Kumar

manish.kumar@eil.co.in

Mobile: +91-9810890933

The man who does not read good books has no advantage over the man who cannot read them."

- Mark Twain (1835-1910)