

Light India International 2009 (Lii 2009)

Lighting is the single most important element in the visual environment. Over the last few years, the Indian Lighting Industry has seen phenomenal growth, upgradation in technology, products, product design and most importantly, a huge growth and diversification in application.

Effective lighting improves productivity and strengthens security. Lighting can consume up to 40 percent of the energy used in our buildings. A well designed lighting system reduces energy, maintenance, and potential liability costs. Both public and private interests are served by more effective lighting and reduced operating costs. Rapid improvements in lighting systems and equipment offer potential solutions, yet they have also made lighting practice more complex. On the other hand, the use of inefficient light sources and controls, and the wasteful usage of lighting results in polluting the environment leading to global warming. The need was therefore being felt for more interaction between the manufacturers and suppliers of lighting, and the user / specifier community, more specifically architects and interior designers.

With the above objective, the Light India International 2009 Conference was organised jointly by the Indian Society of Lighting Engineers (ISLE) and the Institute of Indian Interior Designers (IIID) to ensure a holistic coverage of lighting and design which together deliver a complete and efficient visual system. The Conference was held at the Bombay Exhibition Centre, Mumbai on 20th February, 2009. Over 500 delegates participated a most informative and interactive conference.

The event was inaugurated by Mr. Shrikant Nivsarkar, the first Indian to be elected as President of the International Federation of Interior Architects/Designers, a global apex body of the interior design profession, with 74 member countries and reaching out to about 65,000 members. He is also on the Board of the International Design Alliance (IDA) headquartered in Montreal, Canada. In his inaugural address, Mr. Nivsarkar mentioned that this Conference was due to the collaborative efforts of two leading professional organizations viz. IIID and ISLE. He felt that there was a need for bringing awareness amongst the users about the availability and use of appropriate light sources.

Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, Government of India who was the Chief Guest, in his address stressed the need of Public Private Partnership for promoting the use of energy efficient lighting. Prof. Christopher Benninger - a well known Architect, in his Keynote Address, made an interesting presentation on the Effective Use of Lighting.

This application oriented Conference had three sessions, each of about 2 hour's duration.

Session 1:

***LEDs - Present and Future Environments -
Mr. Nigel D'Acre of Colour Kinetics, USA.***

Mr. D'Acre presented an international picture of applications with LEDs both in the interior as well as outdoors.

While LEDs are undoubtedly the most promising light source of the future, there is a need to understand that this technology is still in the development stages and almost every

month changes and improvements can be seen. He pointed out that LEDs are not a light source in a traditional sense but a “system” contained in which is the mounting, a driver, heat sink, optic and a cover lens each contributing to an end result which of course is light output.

The efficiency of LEDs is eclipsing that of incandescent and halogens light sources and are already a preferred product in several applications. However, there is a need to fully understand the capabilities of light emitting solid state diodes since there are several myths surrounding it.

While LEDs may rarely fail, the encapsulant, the wire bonds and the die attachment may have assembly problems causing failures. The latest technical standards show that there could be 40% light depreciation within 9000 hours. Sometimes LEDs do not last forever because of incorrect choice of luminaires, improper fixture installation, wiring faults, power supply faults or incorrect cable connections. Quality not only of the LEDs but also the installation is very essential to get the best results.

LEDs do generate heat but do not radiate heat. There is therefore little heat in the beam of light in LEDs, however the biggest enemy of LED light output and life is the heat that is generated by the source and needs to be very efficiently dissipated. It is necessary to ensure that the data sheets are carefully studied before deciding on the correctness of the results proposed to be achieved.

Mr. D’Acre suggested that designers should of course keep in mind the long life and energy saving features of LEDs, but more important they must emphasise the aesthetic and dynamic possibilities that this light source offers to any lighting project. He took the delegates on a pictorial travel from Japan to USA and from China via India and the Far East to Europe showing landmark installations of LED lighting.

Session 2:

Lighting Infrastructure Projects - A case study of the DIAL - Delhi Airport Project ;

Mr. S.D. Saha, Mr. Surj Mangat and Mr. Sanjiv Sabharwal of Larsen & Toubro - the main contractor of the project

An excellent presentation was made of the multi dimensional and multi discipline nature of the project and the several new challenges that were faced for the first time in India. Thousands of kilometers of cabling, the largest air conditioning plant ever installed in India, thousands of lighting fixtures of various types, kilometers of moving platforms, etc. called for innovations in approach by architects, lighting designers, maintenance engineers, and installers.

The facility will cater for all requirements of passengers, visitors, and those working at the location. The equipment required for the airport had to be the best in the world and fully meeting the required technical and operational specifications.

World renowned consultants were employed to ensure sectorwise descriptions and drawings to enable proper construction and subsequent installation of equipment.

Prequalification international tenders were issued on the basis of predetermined lighting requirements. Based on the responses a careful selection was made of qualifying companies.

Lighting levels were worked out for each segment of the airport in keeping with world standard requirements based on the nature of activity/applications in the concerned segment.

Energy saving is a priority and the selection of luminaires and light resources were based on this overall consideration, not only on their direct energy saving but also on the contribution to ambient heat by the lighting installation which could effect the cooling load.

A large variety of light sources and efficient luminaires had been incorporated into the design to give direct and indirect lighting effects.

The schedule of work in keeping with the completion stages was explained to show at what stage lighting is installed. This was important in order to ensure that lighting was put up at the most opportune moment to ensure that all ancillary work did not hamper the working and the dusty environment did not affect the lighting luminaires.

Very careful lighting designs and luminaire aesthetics had to be decided for shopping areas, passenger rest areas, hotels, restaurants etc.

The lighting levels varied in terms of occupancy from 50 lux to 500 lux. Intensive use of lighting controllers has been incorporated to ensure that there is no wasteful energy usage.

The airport is opening segment wise and already the plan and reality are matching in most of the areas that have been released so far. Whereas the total airport is far from ready yet, it can be confidently expected to be a landmark airport with international infrastructure and facilities.

Session 3:

Future Shock, Bright Lights, Big City

Mr. Behr Champana, Senior Vice President of TVS, USA - one of the largest firms of architects in the world

In a most original presentation Mr. Behr Champana spoke about the dangers that lie ahead for most cities. He warned that architects and town planners must devote attention to the growing urbanization, the increasing population and with it the increase in pollution levels. He gave several examples of large cities in the so called developed world and showed how the shortage of water, electricity, hygienic living conditions and poor infrastructure lived side by side. This was even truer of the developing countries. He strongly advocated that China and India must lead the world with a new approach to town and rural planning. He gave several excellent ideas on how urban cities and rural developments can coexist and support each other. For instance, water wastage in cities could be of help to a rural set up, sewage disposal can also be of interest to farms, the green farms would certainly be a strong feature for the development of urban cities. Planned infrastructure development would benefit both rural and urban areas. This would create goodwill and wellbeing in a society rather than the present conflict that exists between rural interests and urbanization.

As Chairman, Organizing Committee of the Conference, Mr. Manoj Verma, President ELCOMA and Vice-President, Crompton Greaves mentioned that this conference is the outcome of joint efforts of IIID and ISLE. Mr. Hari Mamak, Director, Exhibition & Conference - ISLE made all out efforts to get the speakers for the conference, whereas

Mr. Rashmi Bhuta coordinated all the activities to make sure that the Conference was successful. On this occasion, a Hand Book containing useful articles and information was also published. This could be made possible with the coordination of Mr. Anil Valia, well known Lighting Educator and Mr. Conrad Gonsalves of IIID. The conference arrangements were made by Expo Media Events, Noida, Ar. Nitin Kilawalla of IIID and Ar. Ashok Butala – President, IIID and Ar. Rohini Mani of IIID & ISLE. Of course, the person behind the curtain for implementation was Mr. Stan Alvares, Member, ISLE Mumbai State Centre Managing Committee. Expressing his gratitude to all the individuals and organisations for their support for the Conference, in his Vote of Thanks Dr. Prakash Barjatia, Chairman, Mumbai State Centre of ISLE specifically thanked Mr. Shekhar Bajaj, Chairman & MD, Bajaj Electricals, Mr. Ashok Butala, President - IIID and Dr. Avinash Kulkarni, President - ISLE. He thanked all speakers, delegates and their organisations for their support to make this Conference a great success.

The Conference coincided with the Lighting South Asia 2009 exhibition at the same venue from February 20 – 24, 2009. Nearly one hundred exhibitors both national and international participated in this largest lighting exhibition ever held in Mumbai. The exhibition attracted 8500 visitors It was interesting to notice that while LEDs held the central stage, electronics and decorative luminaires for homes and hotels gave a colour to the exhibition that made it an aesthetic event.

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