Glass use in Buildings – Where Next?

Deepak Gahlowt, Architect & Convener, Confederation of Construction Products and Services

Deepak Gahlowt, Architect

About CCPS

Confederation of Construction Products and Services (CCPS) is a non-profit agency dedicated to improvements in the manner construction products are installed and used in the country.

Main Objectives:

Work with Construction Industry, Government bodies, Users, and Specifiers to:

1. Contribute towards improvements in the quality and efficiency in construction in the country
2. Influence the development of the construction sector as organized, forward-looking, and responsible

About CCPS

CCPS Focus Areas:

1. Develop Standards and Code of Practices
2. Develop & Conduct Training Programs and Initiatives
3. Improve standardization and Pre-assembly in building industry
4. Setup systems to collect and disseminate market data

Deepak Gahlowt

Architect
Project Manager

Member Royal Institute of Chartered Surveyors (RICS)

Xebec Project Management Services Pvt Ltd
Xebec Property Management Services Pvt Ltd
Xebec Design and Facilities Pvt Ltd

Confederation of Construction Products and Services
Independent Consultant

Projects over 180 cities

Permanent staff across over 15 cities

End-to-end solutions

Design-Build-Manage

Some of the most prestigious and challenging projects

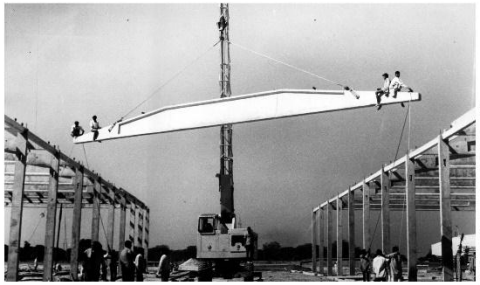
Non-profit works

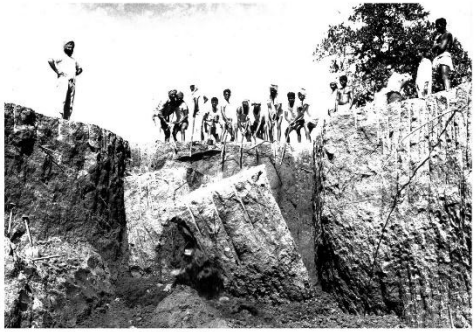
Standards setting

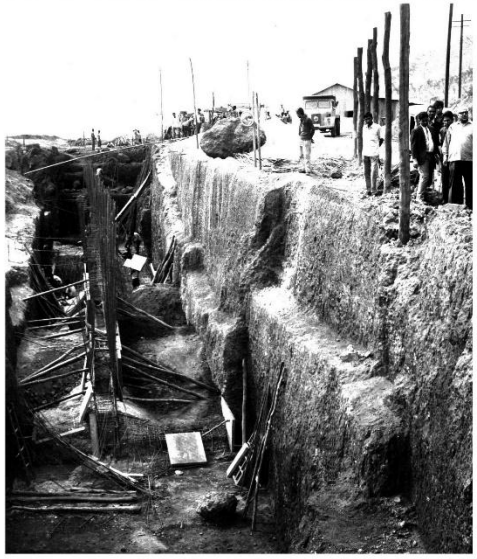
Training / writing / advocacy

Historical conservation

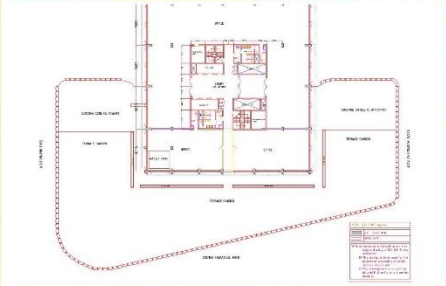

TATA-P&H

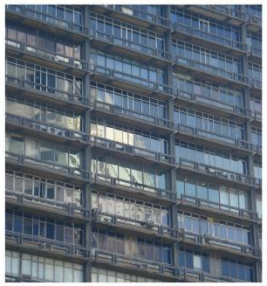


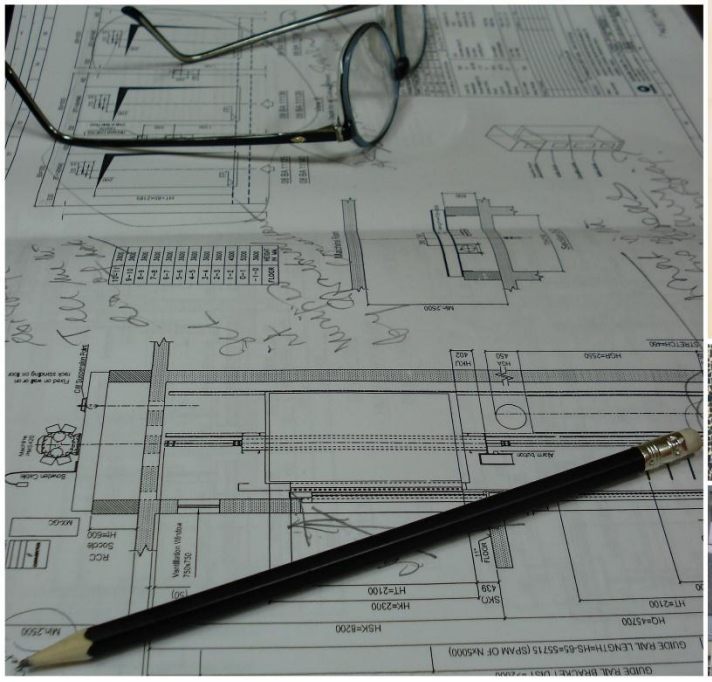


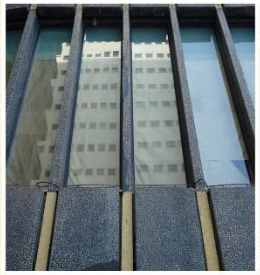


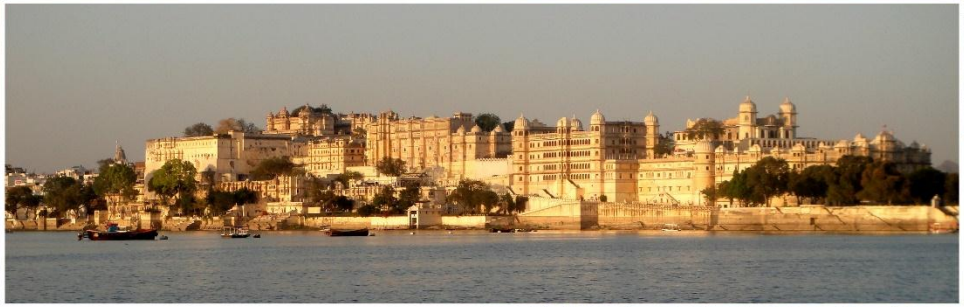

NARIMAN POINT, BOMBAY

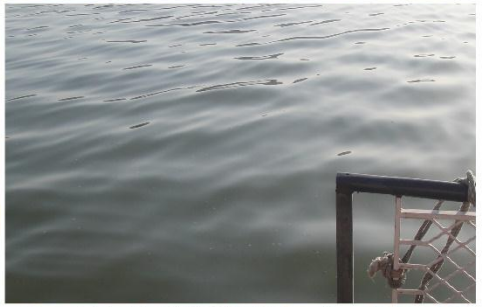


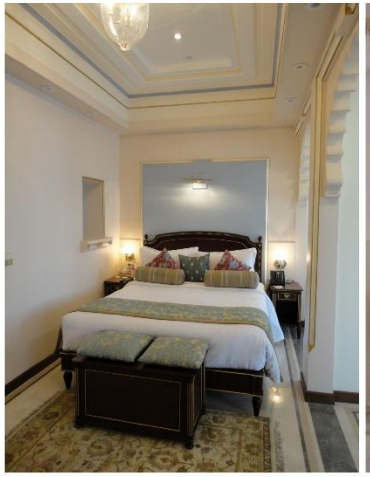


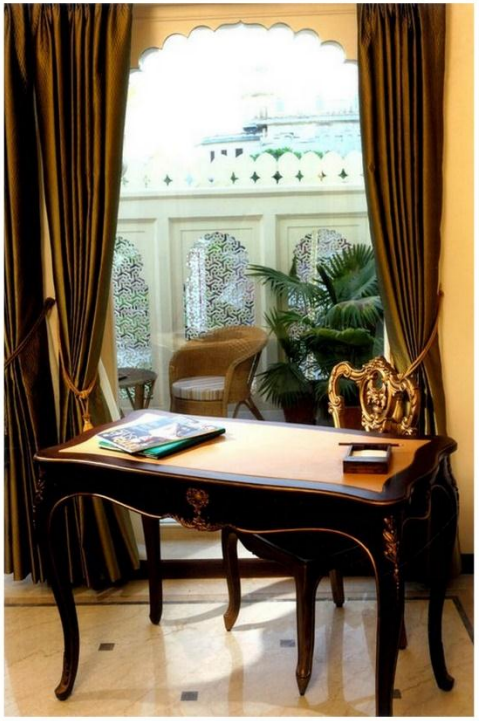










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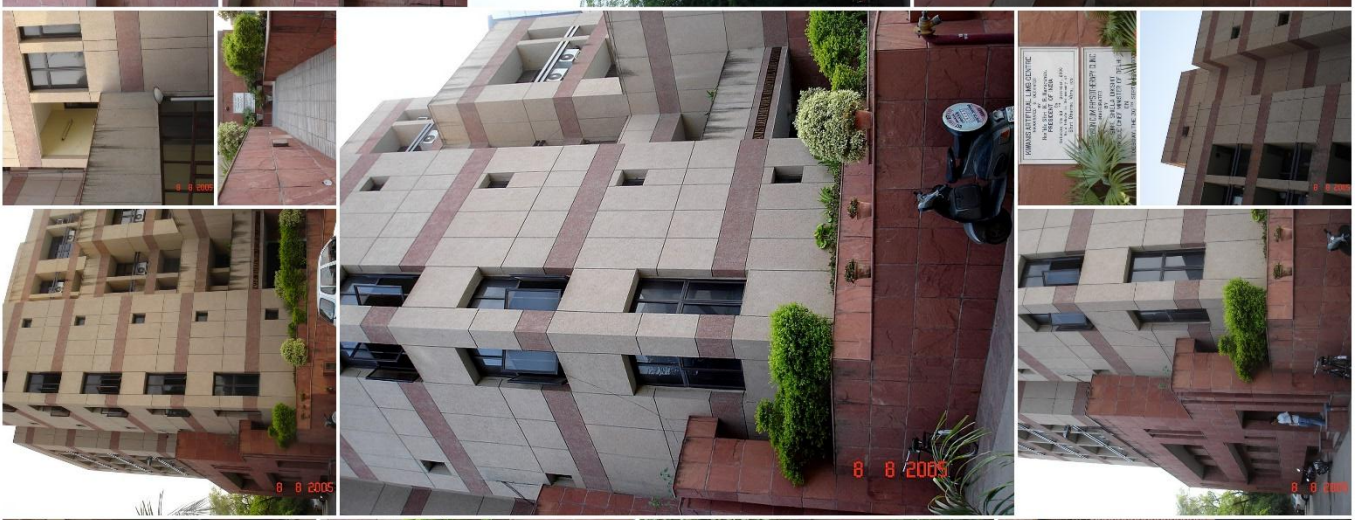
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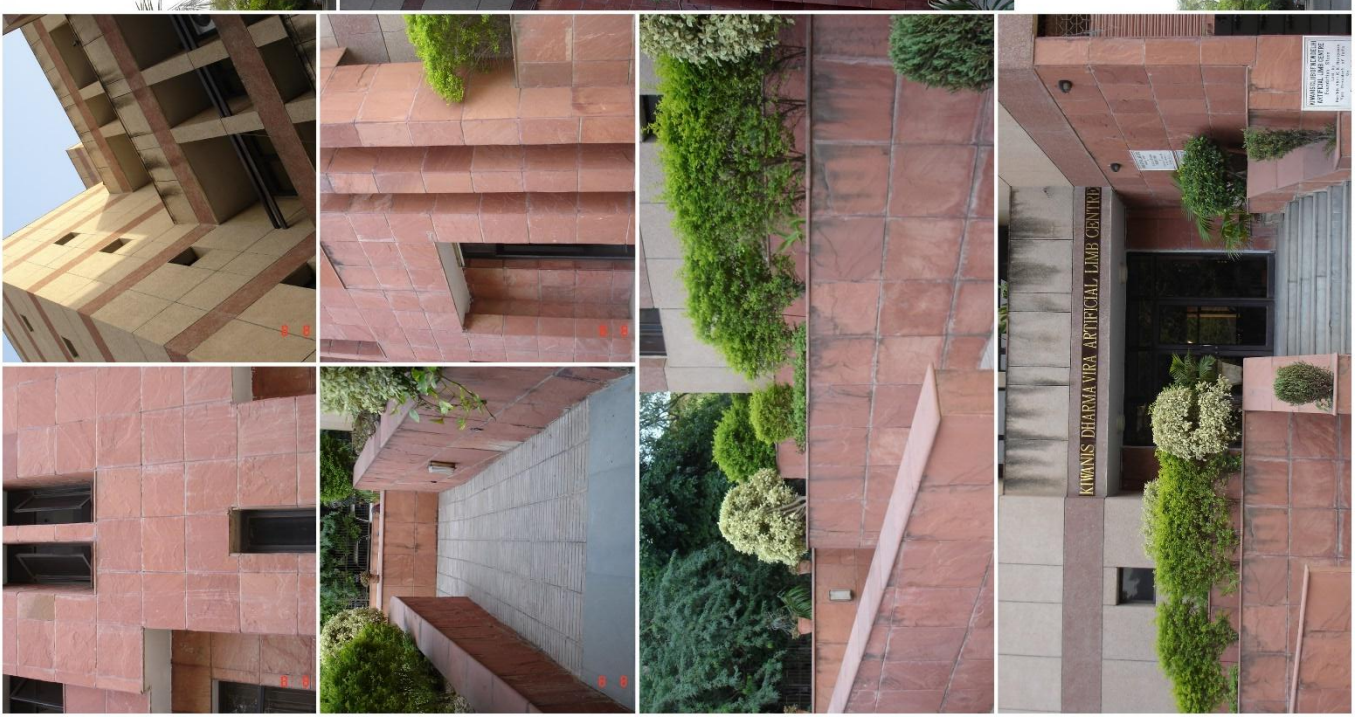
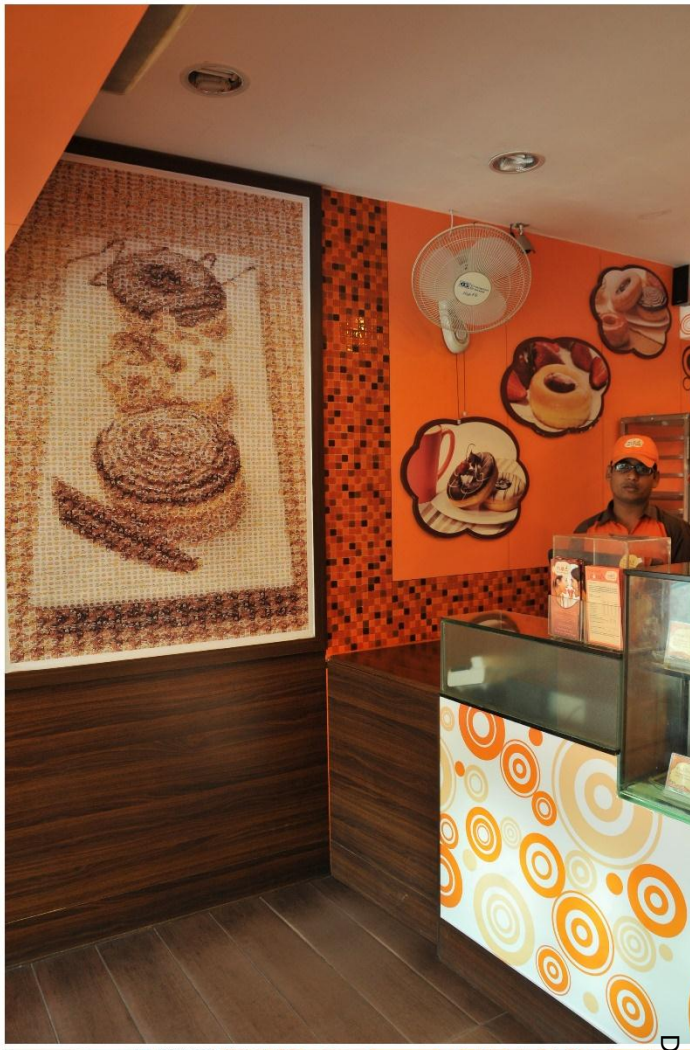

KIWANIS DHARMAVIRA ARTIFICIAL LIMB CENTRE



Deepak Gahlowt, Architect

Deepak Gautam, Architect

standards

The Confederation of Construction

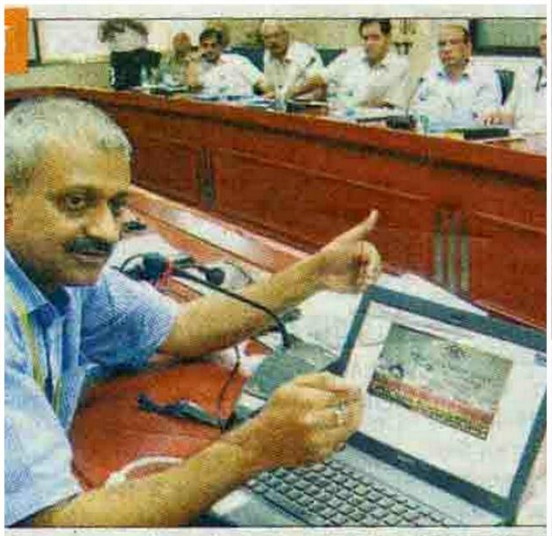
Products and Services (CCPS) has called for compulsory implementation of safety standards on use of glass in buildings as is the accepted practice worldwide. Addressing a media conference held in New Delhi, Deepak Gehlowt, convener, CCPS, informed that

CCPS, is dedicated to the sustainable growth of construction products sector by working collectively with its members and others to improve quality and efficiency in construction. This was organized as part of the CCPS Training

ENGAGEMENTS

• Workshop on bedroom design tips by Deepak Gahlowt at Home Town, The Great India Place, Sector 38A, Noida (Tel 0120-4028100)

The Great India Place: Deepak Gahlowt to give tips on patterns of bedroom designs, furnishings and colour combinations, Unitech Mall,



में मानव सुरक्षा को ध्यान में रखकर कांच के इस्तेमाल के लिए उचित म
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तेनिधियों को संबोधित कर रहे थे

One of the posters on display

Domestic harmony depends on a natural thing like light, say experts. ANJU SHARMA writes about a lighting competition that took place recently

WHAT makes your house tick? Is it the expensive furniture, artefacts, carpets and rugs. No, if the architect is to be believed. According to him what makes a home worth living is lighting. The great Corbusier said "Architecture is the masterly and magnificent play of volumes brought together in light." Light is the soul of life. If experts are to be believed domestic harmony and peace depends on how to use a natural thing like light to create exotic roundings.

Even the best furniture, well painted walls and priceless paintings will fade out in the absence of good lighting. While on one hand a well-lit abode can make it a 'home sweet home'', on the other a poorly lit one can make life hell.

This fact was stressed at a lighting competition held here recently. The event was organised by the Indian Society of Lighting Engineers (ISLE), a

Says Deepak Gahlot, a practising architect and one of the organisers, the first design competition sought to introduce the concept of lighting design and evoked a favourable response with a record of 111 entries. Evolved from the first the second competition required participants to re-interpret the established ideas to provide a more meaningful visual environment. It also introduced the need for energy conservation, an issue of critical national importance.

THE entries were judged by an eminent jury comprising Mr Tapas Sen, lighting engineer, Prof R. K. Joshi, Industrial Design Centre Bombay, Ms Meena Mani, architect and Mr P. K. Bandopadhyay, Secretary ISLE.

Says Deepak Gahlot, light makes it possible for us to see, while providing necessary visual information, it is also a major element in the aesthetic experi-

energy produced in the country. It is important, therefore, to use this resource effectively and realise that "more" lighting does not necessarily mean "better" lighting. But Mr Gahlot laments "we are not doing anything in terms of concept of lighting. Lighting is a relevant theme while making a house, showroom or a hotel. But despite its crucial importance the concept of lighting has been ignored. Architects generally miss out on the concept. Consumers, unaware of the importance of lighting, do not stress this point while building houses."

Imagination and creativity was the hallmark of the designs. The designs attempted to break the current norms and feasibility and cost factors were ignored for once. The entries did not disappoint the organisers as creative flair was in abundance. Students let their imagination run wild — designs ranged from a self-illuminating candle stand to a translucent table lamp moulded in plastic with colourful bands.

A NOVEL scheme to light slums was presented by the first prize-winning design of K. S. Madhu of the Industrial Design Centre of Bombay. The design addressed the problem of both lighting and ventilation in crowded slums. The design makes use of a ventilator device which captures the sunlight in the morning and converts it into artificial energy for lighting at night.

A design concept should have something more than merely technical facets since that can be handled by an engineer or an architect. Mr Joshi explains that a good concept of lighting is one which makes a person feel comfortable and good in his house and not irritated.

The organisers apart from appreciating socially relevant designs also commended the exhibits which could be called utopian in concept. An eye-catching exhibit was the lighting of a tunnel incorporating the five basic elements of nature — water, fire, wind, air and earth — using coloured glasses. Mr Joshi says this design is ideal for hotels and theatres where coloured glass and lighting can be combined to create a breathtaking ambience.

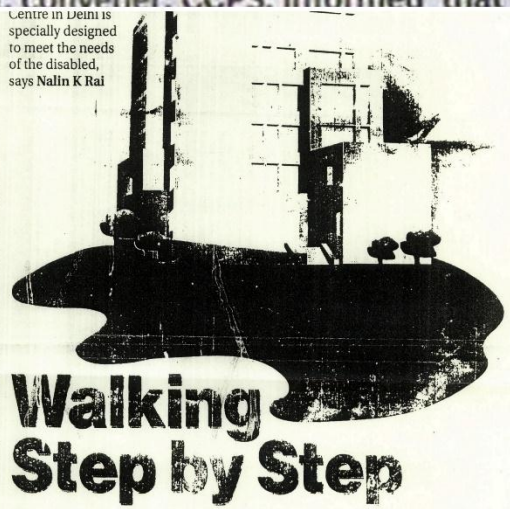
ALL designs ranging from miniature lights for watchmakers to lamp vision for television viewers to save them from light shadows to stage lighting reflected a streak of imagination and creative flair. Day-to-day problems like lighting up manholes were approached through using solar cells. Some useful designs like a light source designed to fit into spectacles framed for old people complaining about glare reflection from rims of their glasses showed the sensitivity of the students and their eye for detail.

Another interesting design was the Autolit — a device to accentuate historical artefacts in museums. The system is regulated by a photovoltaic circuit

Deepak Gahlowt, Architect

Walking Step by Step

Centre in Delhi is specially designed to meet the needs of the disabled, says Nalin K Rai



to a long-felt need. Once complete, the institution will serve as a centre for fitting and repairing artificial limbs, providing research facilities and will also be equipped to teach disabled people to walk.

Spread over an area of over 1,800 square feet, work at the Centre is running three weeks behind schedule and the building likely to be complete by the end of the year. According, to architects Deepak Gehlot and Chandra Bhusan, there were two main factors which determined the structure of the building: the patient movement analysis and the site of the building.

The site is rectangular in shape, with roads on the nor hern and eastern sides. The southern end of the site is enclosed by a protected forest and the western side is blocked by another building.

The main building, which is a three-block structure, has been designed on a north-south axis. The main activities are going to be located in two wings in these blocks while the public area in the centre is going to be connected to the forest at the back.

Special provisions have been made for placing the artificial limb-fitting machinery on the ground floor. This floor is also going to be connected to the first floor through a ramp so that it is easy for the disabled to move on the two floors.

According to Gehlot, this is the first artificial limb-building centre in the country which has been specifically designed keeping in mind the needs of the disabled.

Addn O. P. Mehra, one of the convenors of the building committee, "The need for an artificl limb centre in Delhi came up (in 1981 when I was serving as the governor of Rajasthan. Even though Jaipur is still not directly connected to most parts of the country it has a lot of people coming to the artificial limb centre there. It then became apparent to me that such a centre in Delhi would be of immense help to people."

And as it to be expected, it has faced a number of problems in achieving these goals.

According to the architects, the basic problem they faced was that the Municipal Corporation of Delhi (MCD) has no provision for such special buildings and reserves this status only for hospitals. but these buildings are not hospitals and hence their requirements too are

limb-fitting centre and the area where disabled people will be trained to walk with the help of the artificial limbs, the Centre also has areas earmarked for research, examination rooms, working and welding rooms for making the limbs, measurement and plaster rooms and the mandatory accounts and record rooms as well.

stone. And in order to give every floor a different character, the second floor has been done in taqform of an exposed grid pattern in Dholpur stone.

According to Gehlot, they opted for only this much of variety in the design and by and large confided to stick to conventional materials because they were looking more at the utility aspects of the building

to be done once the building is complete so that these add-ons not only help in adding to the overall serenity of the building but also provide the right colourful touch. At the moment, the only thing that differentiates the site from the adjoining buildings is a simple, green shrub. The open areas which are going to be used by the people have, however, been planned.

DNA PINK CITY

JAIPUR | THURSDAY, MAY 26, 2011 | www.dnaindia.com | epaper.dnaindia.com | 4

Bylaws on glass use in bldgs

JDA will soon forward proposal to govt regarding rules on use of glass in residential and commercial constructions

DNA Correspondent

The Jaipur Development Authority (JDA) will soon forward a proposal to the state government regarding drafting of bylaws on the use of glasses, ensuring safety of people in residential and commercial buildings.

The Confederation of Construction Products and Services (CCPS) on Wednesday organised a workshop for JDA officials. Representatives of the confederation suggested bylaws regarding the use of glass. The JDA has decided to go through the bylaws and

Glass – material of the future..

Deepak Gahlowt, Architect

Issues – Energy

- **The embodied energy in glass is high and production leaves deep environmental footprint**
- **Glass use on facades increases energy consumption in buildings**

Issues – Safety

- **Breakage due to impact hurts people**
- **In case of fire, glass hurts and kills**

Yet glass use is increasing!

Is Glass here to stay?

Deepak Gahlowt, Architect

Social Needs

- **Democracy – inclusive political and social systems require openness**

- **Transparency – emerging changes in lifestyles and businesses require transparent living and work environment**

Psychological and psychological needs

- **Need to stay connected with outside**
- **Daylight stimulates our metabolism**

Glass use in buildings – Where Next?

A new architectural vocabulary is required that

a. Integrates need for

- **Transparency and communication**
- **Energy efficiency**
- **Safety and security**

b. Rediscovers

- **Transitional spaces and sun cutting devises**
- **Planning principles**
- **Siting wisdom**

"Well, SURE they'd like me to come up with bold and innovative ideas... but I've got a career to protect!"

And evolves an architectural language that is not a copy of the west but is responsive to our climate, culture and aspirations

Deepak Gahlowt, Architect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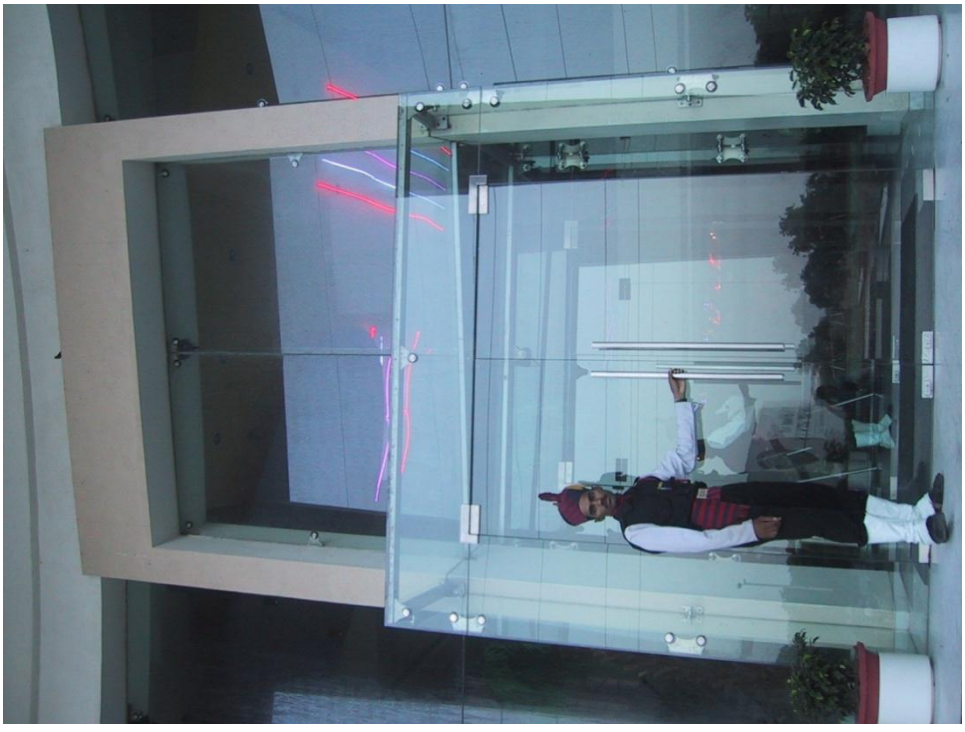

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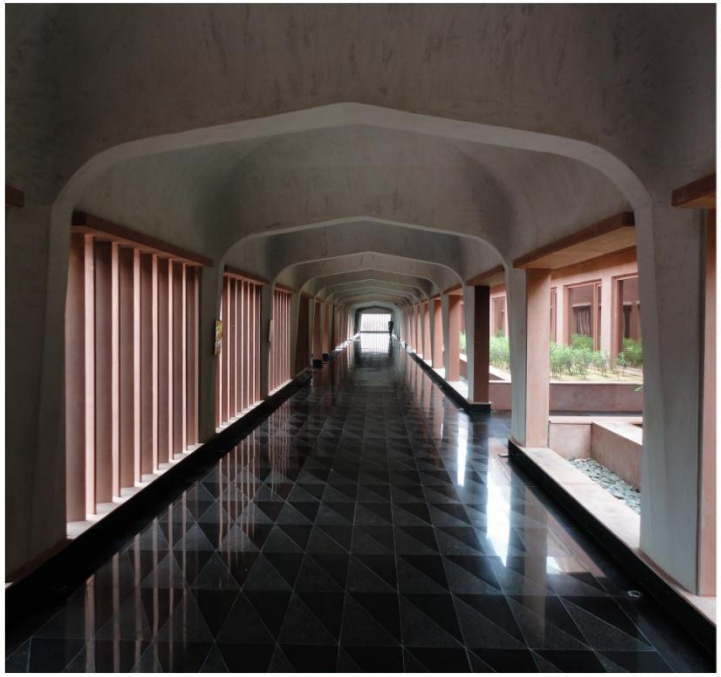

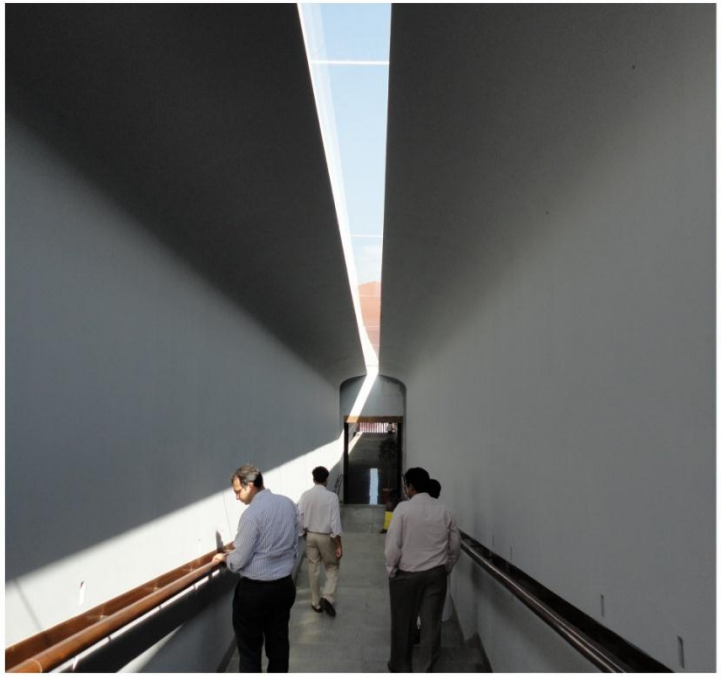

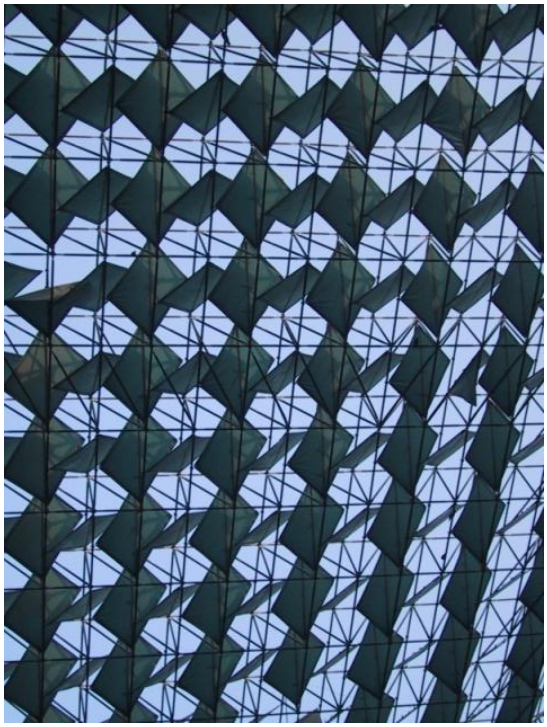


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What needs to be done

Recommendation - 1

- **Establish standards for products**
  - **Upto date product standards will provide a level playing field and will allow manufacturers to invest in quality**
  - **In absence of standards, the user has no way to distinguish quality and consequently often gets cheated**
  - **Only those with short term interest and out to make a quick buck at any cost benefit**

Recommendation - 1

Which include -

- **Standards for products**
  - **Glass**
  - **Processed Glass**

- **Standards for glass use**
  - **Building byelaws**
  - **Code of practice**

Recommendation - 1

Setup collaborative systems to produce standards

- **Do not wait for the government to act**
- **The industry must initiate the process of making standards in collaboration with user groups**
- **Support**
  - **CCPS – coordinate the process and will bring users groups on board – CREDAI, IIA, IBC and government organizations**
  - **ISLE – Will bring issues relating to daylight**
  - **ASHRAE / ISHRAE – Energy use in building**

Recommendation - 2

- **Conduct training programs of selection on materials w.r.t. energy impact / safety / security**
  - **Train professional to understand issues / relationships between material and use**

Recommendations - 3

- **Collate existing information / research / data available in the country and make available to users and professionals**
  - **Detailed metrological data for Indian cities**
  - **Solar insolation / radiation data (both direct and diffuse, on horizontal and vertical surfaces) for Indian cities**
  - **International Daylight Measurement Program data. MNES paid CBRI to collect the data but has never been released**

Recommendations - 4

- **Setup / promote testing standards and facilities**
  - **Will encourage user/designers to innovate by being able to demonstrate the performance of non-standard systems**
  - **Will help integrate traditional systems and products in mainstream practice**
  - **Will help the building industry upgrade itself**
- **Example – BEE Ratings**