

Glass in Buildings – Façade of the Future



In the modern lifestyle, increased Glass use in buildings offers many advantages. However, fatal accidents due to glass impact are reported in media from time to time which could be averted if appropriate glass had been used at critical locations. Confederation of Construction Products and Services (CCPS) – organised a conference and prepared the “Guidelines on use of Glass in Buildings – Human Safety” for the first time in India adopting consensus with the support of industry in 2007. *Energy Next* reports

During last few years, glass became a favoured material and feature in buildings of all types and is used extensively in both exterior and interior applications. As per an estimate domestic float glass sale of 886 MT/day in 2000-01 has been increased to 4006 MT/day in 2014-15 (April-June). Glass is popularly utilized in the construction of several elements which include facades, display windows, skylights, skywalks, entrances, revolving doors, canopies, winter gardens and conservatories.

Glass being fragile in nature therefore selecting glass can be a challenge and the decision for right type of glass for different applications, in terms of type of building, uses, requirement, performance, quality,

eminence etc was very crucial. Wrong selection of glass type was widespread and resulted in increased heat gain/loss in buildings, the higher risk of human injuries to humans and problem faced by the fire brigade while carrying fire fighting and rescue operations.

Among the tragic accidents are (Cheap Glass Culprit in Boy's Death – Ahmedabad Mirror- 12 Nov. 2008 and Victim allegedly walked through a glass door at Naaz Saloon, Sector 20-D, Chandigarh succumbed to death reported in Tribune-27 July 2009). Recent news of death of 11 years old boy at Indore on 17th November 2014, fire incidences of buildings with glass façade at a call centre at Kochi on 23rd November 2014, 21st floor of Lotus Business Park at Mumbai on July 18, 2014, forced to think

for immediate need for imposing strict regulations to check untoward incidences and save property and human life in future.

CCPS made all efforts to propagate and getting them executed in the country which include organising workshops, training programmes, seminars, presenting papers and giving presentations, attending meetings, writing letters to all concerned. The effort resulted in the implementation of guidelines by 19 states and central & state government departments, public sector units and eminent construction agencies which include Central public works department, government of Andhra Pradesh, government of Rajasthan, National Buildings Construction Corporation Ltd. (NBCC), Airport Authority of India,



Haryana Public Works Department (PWD), Delhi PWD, Delhi Development Authority (DDA), JDA, ITPO, Amity School of Engineering and Technology, Ahluwalia Contracts (I) Ltd., Mumbai Fire Brigade BMC etc. Bureau of Indian Standards (BIS) has also formulated IS: 16231 (Part 4): 2014 on “Code of Practice on use of Glass in Buildings - Safety Related to Human Impact” which is derived and based on CCPS Guidelines.

As a mandate, CCPS is committed to propagate right and safe use of glass in buildings organised Conference on “Use of Glass in Buildings – Façade of the Future; and need for Regulations relating to Human Impact, Fire Safety & Energy” on 13 and 14 March 2015 co-located with Glasspex India 2015 at Bombay Convention & Exhibition Centre, Goregoan (E), Mumbai. The conference was inaugurated by Sunil H Nesarikar, Chief Fire Officer, Mumbai Fire Brigade. Kamal Preet Singh, Special DG, CPWD (Western Zone) was the Guest of Honour and the conference was presided over by Sanjay Ganjoo President All India Glass Manufacturers’ Federation.

Sunil H Nesarikar, Chief Fire Officer, Mumbai Fire Brigade appreciated for holding this Conference in Mumbai to spread the message of safe, appropriate and properly installed glass in buildings to ensure fire and human safety. He mentioned that as a follow up of presentation given by CCPS in October 2012 in MCGM office, Mumbai Fire Brigade initiated and issued

‘Standing Order’ regarding fire safety requirements for glass walls and façade in buildings. Keeping in view the importance of the subject, seven officers of Mumbai Fire Brigade were deputed to attend this conference with an aim to get updated with the proceedings and latest know how.

Kamal Preet Singh, Special Director General, CPWD (Western Zone) emphasised on using glass in buildings according to the norms and guidelines. CPWD, not only partnered with CCPS while developing guidelines on the use of glass in buildings, but also released during 155th CPWD Day on 12 July 2009 and mandated its implementation in the department throughout the country.

The two day-long conference was attended by about 120 delegates, which included senior offices from Central PWD, Bureau of Energy Efficiency, Mumbai Fire Brigade, Glass manufacturers, Façade consultants, Processors, Consultants and Professionals, Engineers, Fire Engineers, Glass related companies and many dignitaries from the industry. Three sessions titled Glass Scenario in India, Façade: Future, Emerging Directions & Challenges and Modern Façade-Regulations and Standards covering 15 subjects which were presented by eminent speakers from government of India, Mumbai Fire Brigade, Consultants, Architects, Academicians and Industry experts.

Sessions were followed up by panel discussions and the enthusiasm shown by delegates in participating in question/answer hour revealed the importance of the

subject and the proficiency of the speakers.

The atmosphere turned grip when Ar. Conrad V Gomes from Indore, narrated the tragedy that struck his family on 15 November 2014, when his 11- year- old son crashed into glass pane, sustained deep gash and bled to death. One minute silence was observed in the memory of the departed soul at such a young age due to fault of others. The news appeared in all the papers but taken as routine, except CCPS, who took the matter with Madhya Pradesh government.

Shashi Kant, Adviser, CCPS and former deputy adviser, Planning Commission informed that news appeared on 17 November in Indore News papers and they immediately wrote Shivraj Singh Chouhan, Chief Minister, Madhya Pradesh, K Vijayvargiya, Hon’ble Minister for UA & H, Anthony J.C. Desa, IAS, Chief Secretary, GoMP, SN Mishra, IAS, Parliamentary Secretary, UAE, Tejaswi S. Naik, Commissioner, Bhopal Municipal Corporation and Commissioner, Indore Municipal Corporation informing the existing provisions of safe use of glass recommended in IS: 16231 (Part 4) , CCPS Guidelines which are implemented by 19 States and departments and requesting to initiate action for imposing conditions in bylaws to avert reoccurrence of such incidences. Kant added that they had offered to give presentation but despite rigorous follow ups, there was no response from any addressee.

Need for such awareness programs was unanimously recommended by the participants and suggested next should be at Indore to sensitise the state government.

Deepak Gahlowt Convener, CCPS in his presentation explained the critical locations where selection of appropriate glass and precautions may lead to safety. Implementation of parameters of Energy Conservation Building Code 2007 and green rating was elaborately discussed by Abdullah N Siddiqui, the representative of BEE, Fire seals and motorised hardware solutions presented by Ravi Shankar and Deepak Chugh attracted the attention of the delegates. Sanjay Ganjoo President AIGMF thanked the all the speakers, delegates, media, CCPS for making the conference successful. 