



The All India Glass Manufacturers Federation

Glass as vital building material for Smart/Solar Cities and

Book Launch: “Glass - A Sustainable Building and Packaging Material”

Mumbai, March 12, 2016: The last quarter meeting of The All India Glass Manufacturers' Federation *(**AIGMF**) was organized at Hotel Sea Princess in Mumbai in association with Western India Glass Manufacturers' Association (WIGMA).

In the recent past, AIGMF has made sincere efforts to adopt two most important projects of the Indian Government i.e., Smart/Solar Cities and Swachh Bharat Abhiyaan- Clean India Campaign. Glass Industry has attempted to showcase goodness of glass by organizing special sessions in Delhi, Firozabad and Jaipur involving government and non-governmental organizations.

While in Mumbai an exclusive session on Glass as vital building material for Smart and Solar Cities was organized with active support of CPWD and other stakeholders. The session provided an opportunity to debate on use of Glass as a Green Building Material. Presentations were given on Smart Approach in Using Performance Glass to Design Smart Cities, Why Glass is here to Stay and to Grow, Smart Solar Glass for Smart and Solar Cities, Glass for Contemporary Architecture, etc.

Central Public Works Department's (CPWD) perspective on glass as green building material was shared by Mrs. Usha Batra, Additional Director General and Dr. K M Soni, Chief Engineer, West Zone. CPWD's presentation covered its role in glass buildings in Mumbai with emphasis for use of more solar and flat glass for building Smart Cities. Some of the main points covered in the presentation were:

- Use of Glass allows great amount of natural light giving pleasing aesthetics and better panoramic views, reduces the need for artificial lighting and energizes the interiors
- Double glass can induce acoustic comfort getting control over the outside noise
- Glass tremendously reduce the weight of the structure
- Solar control glasses can reflect heat or UV rays and maintain optimal temperature inside the building

Mr. Sanjay Ganjoo, President AIGMF and COO, Asahi India Glass highlighted that Glass is a very important material for daily life in the entire world. He spoke that Glass is almost synonymous with buildings and packaging, as the building construction industry in pursuit to conserve natural resources and keep earth clean cannot survive without having a strong relation with the glass. It is a natural material for packaging particularly items like food and medicines consumed in abundance by humans. With the advent of 'Smart Cities', glass has more significance even for solar panels for renewable energy.

Mr. V Ramaswami of Gujarat Borosil spoke on Smart Solar Glass for Smart and Solar cities. He mentioned that Solar glass plays an important role in the Photovoltaic module as it protects the solar cells against vagaries of nature. The best Solar glass is the glass which has the lowest iron, highest transmission, lowest potential induced degradation, lower incident angle effect and lowest light induced degradation ensuring that the module lasts for much more than the normal 25-year lifetime"

Mrs. Madhavi Patri of HNG float Glass Ltd presented an overview of the use of glass in contemporary Architecture for both interior and exterior applications with special emphasis of performance glasses for delivering energy efficient buildings"

As a part of the social responsibility, AIGMF decided to compile some of the articles, published in their quarterly journal called KANCH (Glass), encompassing different subjects to release a book on glass entitled as “**Glass - A Sustainable Building and Packaging Material**” by a well-renowned glass technologist, ****Prof. (Dr.) Asis Kumar Bandyopadhyay** with a strong International background to serve the purpose of rejuvenating both the building and renewable energy sectors so that a ready-made knowledge is available at hand.



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The book was launched by **Mr. Kamal Preet Singh, Special Director General (Western Region) CPWD**, Mumbai. Mr. Singh emphasized that for buildings, the float glass or sheet glass is used for mainly doors and windows, but in the modern buildings, there is also need for facades in different colours. Book contains Technical articles written by **Dr. Bandyopadhyay** covering Smart/Solar cities, Glass Packaging and more.

To appropriately gel with the event, an Online Library of Indian Articles in Association with Glass Worldwide was also launched. All Indian Articles published in Glass Worldwide since 2009 have been uploaded online at <http://aigmf.com/glass-worldwide.php>. Articles are freely available and can be downloaded from the website.

Mr. Dave Fordham, Publishing & Events Director, *Glass Worldwide** said that “We are very pleased to be associated with this new initiative that will provide an easily accessible round-up of previous Indian-related articles published in Glass Worldwide. In addition to being circulated to our global readership, many of these market reports and interviews already received extra exposure when also being published in Kanch as part of our exclusive cooperation with the AIGMF. Now their shelf lives have been extended indefinitely via the AIGMF archive library and we are very confident that Indian and global glass professionals will find this resource very useful now and in years to come”.

As a Corporate Social Responsibility, AIGMF gifted 300 glass water bottles (*specially manufactured by Hindustan National Glass and Industries Ltd.*) to the CPWD for use in their Secretariat, which carried a logo of Swachh Bharat Abhiyaan enabling people demand responsible and safe packaging. 50 glass water bottles were also gifted to Hotel Sea Princess by **Mr. H R Bhandari, President, WIGMA** under Swachh Bharat Abhiyaan initiative.

Mr. Arun Kumar Dukkupati, Sr. Vice President, AIGMF said that apart from flat glass, container glasses are also used in modern 'Smart Cities' for tumblers, bottles, cooking wares, etc., at home and eateries. He said that Glass is the trusted and proven packaging for health, taste and the environment and is directly linked to Swachh Bharat Abhiyaan as it is 100% recyclable and can be recycled endlessly without loss in quality or purity. He further stated that Glass has an almost zero rate of chemical interactions, ensuring that the products inside a glass bottle keep their strength, aroma, and flavor.

In addition to AIGMF members, the participants included from CPWD, flat and solar glass companies (i.e., Asahi India Glass, Saint Gobain, HNG Float, Gujarat Borosil), Confederation of Construction Products and Services (CCPS), Federation of Safety Glass (FOSG), Architects, Engineers, Glass Technologists, etc.

The event concluded with question answer session moderated by author of the book Prof. (Dr.) Asis Kumar Bandyopadhyay, who mentioned that there is low emissivity glass called E-glass which is normally used in modern buildings for keeping them cooler in hot summer months and warmer in old winter periods. It is also used as flat-screen products, such as Tablets, TVs, Computers, Cellphones, Public Signboards, etc., for information dissemination. The advantage of glass in terms energy saving and in producing renewable energy far outweigh the so-called bad effects of using glass in our buildings -- not to forget that glass is definitely environment-friendly.

Presentations and select photographs of the event are available at http://www.aigmf.com/past_events.php

***The All India Glass Manufacturers' Federation (AIGMF):** The AIGMF, founded in 1944, is the only Umbrella organization of all categories of glass manufacturers from large, medium and small-scale segments of the industry in different parts of India. More details about Federation are available at www.aigmf.com

****Prof. (Dr.) Asis Kumar Bandyopadhyay** is a truly materials scientist with specialization in glass technology with about 38 years of experience in Industry, Academia and Research in diverse fields of materials science and engineering. Dr. Bandyopadhyay is also Member Editorial Board of KANCH (quarterly journal of The All India Glass Manufacturers Federation). For the benefit of readers, AIGMF decided to compile select Articles contributed by Dr. Bandyopadhyay in KANCH <http://www.aigmf.com/kanch.php> which is presented in this book.

*****Glass Worldwide** is the preferred international journal of The All India Glass Manufacturers' Federation (AIGMF), in association with Kanch. In the new archive library at www.aigmf.com, visitors can download invaluable information featured in a selection of previous Indian articles published in Glass Worldwide and Kanch. Future copies of Glass Worldwide can be ordered at www.glassworldwide.co.uk and Kanch can be subscribed to at www.aigmf.com/kanch.php

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