



1. A façade by Span Floors.

2. Ozone Designs' façade work for the Noor Mahal Karnal.

3. The Rainforest project by Pentaspace Design Studio.

NEW VISTAS

FAÇADES ARE AN IMPORTANT ARCHITECTURAL CONCEPT THAT GIVES A BUILT SPACE ITS IDENTITY AND LOOK, WHICH MAKES THEM A VITAL DESIGN ELEMENT – ESPECIALLY THE LATEST ONES ON OFFER

BY BINDU GOPAL RAO

Façades are the most important building element from both users and architects' point of view. Designers are constantly researching and experimenting with new kinds of façades using different materials like rusted iron panels, copper, even high-pressure laminates, wood and wood finishes.

"The new age innovation in façades revolve around users' comfort, along with being energy efficient. The use of sustainable and eco-friendly material is finding a market in demand for itself in the façades industry," says Saurabh Sood, founder of Nature Homes.

Hafele offers a specially-engineered range of ultra-compact slabs from Dekton (Spain) that can be used for exterior applications like wall cladding. Vikas Pandita, product





4. Gaurav Sanghavi, co-founder, Pentaspace Design Studio.

5. Harsh Pote, co-founder, Pentaspace Design Studio.

6. Anu Prabhakar, principal architect/VP, Housejoy.

7. Deepak Kalra, principal partner, RMDK.

8. Imran Shaikh, architect and director, Cubix Architects Associates.

9. Dekton by Häfele.

manager, Surfaces and Water Solutions, Häfele India, avers, "The material is impervious and does not allow moisture to settle on the walls, resisting the development of agents like fungus. It also helps in conservation of energy as the external heat is not easily transferred to the insides of the building and vice versa."

In the past, the façade methodology remained complementary to the structural systems, along with other factors like climate and aesthetic preferences. "With the inception of framed structures, precast and prefabricated façades are going to define future façades, and we are sure that prefabrication and modularisation strategies are being adopted," says Anu Prabhakar, principal architect/VP, Housejoy.

DO THE NEW

Façades are the most difficult to design too, since the perception of iconic and technologically advanced façades is changing frequently. Architects and engineers are researching and experimenting with new and complex façade forms and patterns. "A good façade design turns

any building or structure into sculpture, which elevates the aesthetic senses of human beings. For that, a good design needs to be executed with utmost precision as well as good quality of material and workmanship," state Gaurav Sanghavi and Harsh Pote, co-founders, Pentaspace Design Studio.

Automated façade skins, geometric designs, self-shading screens and vegetation facades are pushing the limits of design perception; creating rich, innovative spatial experiences through both physical and digital interventions. Deepak Kalra, principal partner, RMDK, opines, "There has been a re-emergence of blending the form and function within the façade, instead of them being merely aesthetic skins. Depending on the scale of the project, the new façades also aim at bringing the inside in, through a usage of materials like wood and glass."

Piyush Srivastava, national façade manager, Schueco India, opines, "There have been numerous fast-paced developments in the façade industry, especially in the west, and they are gradually being adapted into the Indian scenario to



PHOTOGRAPH: FERNANDO ALDA

suit local needs. Energy conservation is an important subject owing to the climatic conditions which led to the design and integration of high-performance façades with credible wind resistance and water tightness certification."

TECH TALK

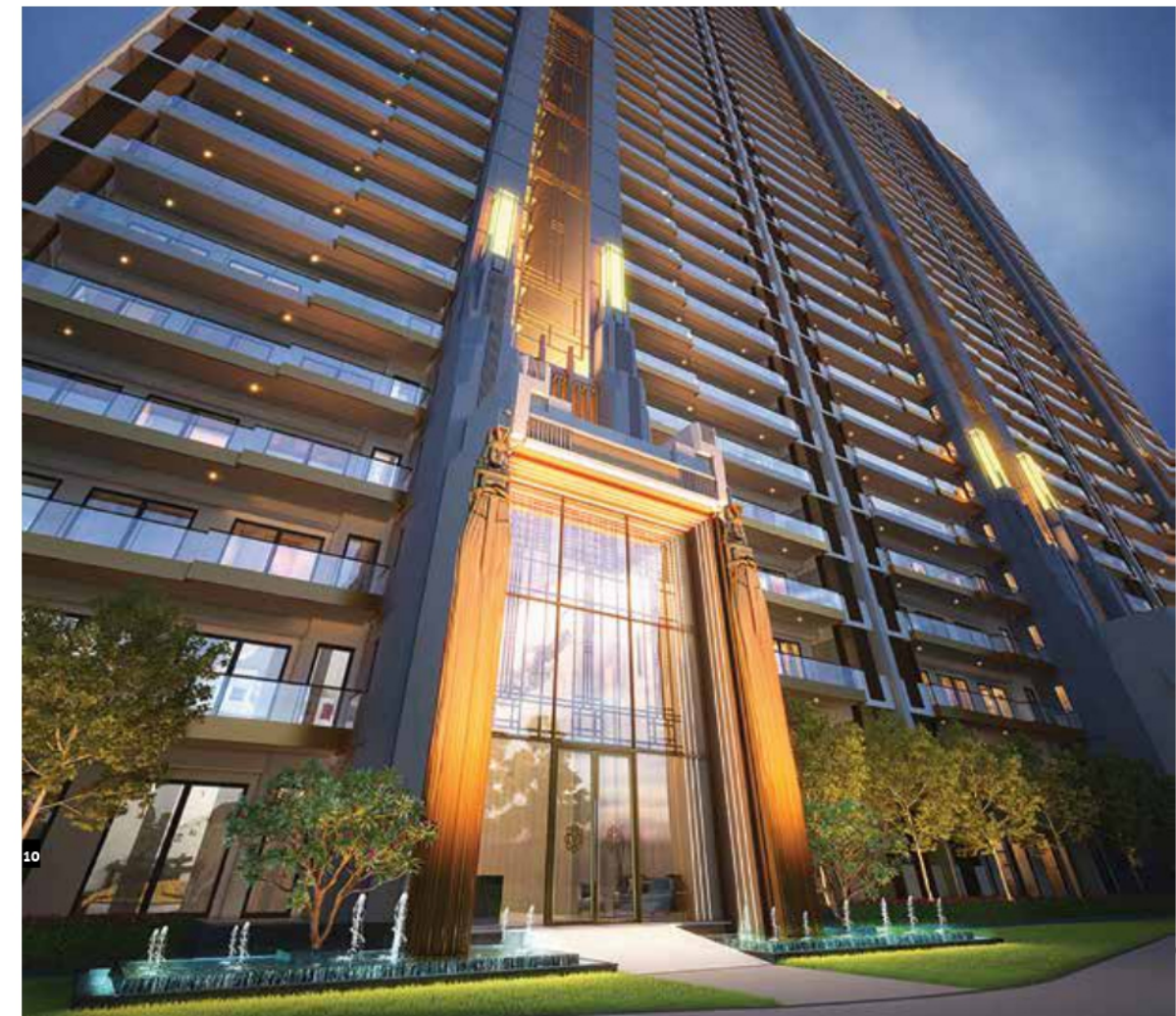
Technology has helped the façades industry develop and work on innovative ideas, making façades that cool, heat and neutralise the building. The technology in play also allows the building to become energy-efficient and have a positive impact on the CO2 balance.

Ashwani Khanna, AVP - Marketing, FunderMax, explains, "Rear Ventilated Façade Systems by FunderMax are contemporary and technologically-advanced cladding systems. These smart systems are mainly used for optimising temperature levels inside a building, thereby increasing occupant comfort. During monsoons, this sustainable façade system drains the rain water away from the walls." Tools like Virtual Reality, 3D modelling and printing, prefabrication and parametrics are enabling architects to achieve new levels of attention to detail and offering better execution opportunities and methodologies.

Shankho Chowdhury, president, Decoratives Division, CenturyPly, says, "New research on nano materials and smart composites imitating natural structures and processes are trialed almost every day within the technologies. In the architectural field, especially in building cladding, only a trivial amount of such advanced technologies has settled."

TREND CHECK

Dynamic tinting electrochromic glass is a game changer in the industry. It gives the end-user the benefit of using a glazed façade without using blinds that obstruct the exterior and daylight. Tushar Joshi, principal interior designer, Ozone Designs, says, "Dynamic (Kinetic) façades which



10. Residential façade for Gulshan Dynasty.

11. Greenlam's exterior grade laminates.

13. Parul Mittal, director, Greenlam Industries.

14. Subhendu Ganguly, MD, AluK India.



14. Shankho Chowdhury, executive business head, Decoratives, CenturyPly.

15. Edwin R Saldanha, MD, Doors & Doors System.

16. Rakhee Bedi Kumar, founding principal, RSDA.

17. Naveen Thomas, vertical head, Corporate Architecture, Edifice Consultants.

18. Anika Mittal Dhawan of Mold Design Studio.

19. A project by CenturyPly.

20. Mansionly's unusual façade.



change, rather than being static, are in. Elements can be programmed to respond to climatic factors, to improve energy efficiency or reduce solar heat, or for aesthetic reasons such as an art installation. These façades will be with functions which are computer controlled and are made of umbrella-like panels, which open and close in response to the sun's movement through the day, to achieve optimal shading and light entering the building."

Another innovation is the use of BIPV (Building Integrated Photo Volitics) which is solar cells integrated in the amorphous form (semi-transparent) for spandrel, vision glass and the opaque faces of a building in its crystalline form. Rajat Bansal, co-founder and CFO, Mansionly, opines, "Using smarter materials in response to the environment like woven wire mesh, sustainable biophilic walls and perforated metal panels are the latest in façade fashion." There are new machines and mechanisms which make the product more fool proof and assured.

"We are doing pyramids, 3D façades, tapering towers and twisted towers with the new technologies available; all this is possible and is taking shape in India now," says Vinay B Khanna, director, UrbanARCH Sysfab.



Prabhleen Singh Saggi, head - Architect Division, Gulshan, adds, "Perforated metal work on façades is trending, which is made of aluminum as well as other metals matching the colour scheme of building façades."

DESIGN AESTHETICS

The way of approaching building façade design is changing. In addition to their waterproofing, insulation and aesthetics, façade design now encompasses energy efficiency, which adds another layer of complexity to the process. "Façades now, owing to ever-changing and growing technology, have

become interactive, energy-efficient, and sustainable. With the uber advanced BIM technology and pre-cast building techniques, the present-day façades are cast in organic shapes, adding to the building aesthetics," says Rakhee Bedi Kumar, founding principal, RSDA.

Amit Shah, MD, Classic Marble Company (CMC), adds, "Metallic tones in matt finish are trending in façade designs. More and more buildings are having skins that appear singular and seamless, which means that the façade panels need to be in the largest dimensions to minimise the breaks in installation."

Façades and glass are becoming more and more technical as they need to answer to an increasing number of requirements like sun protection, security, architectural design, regulations, climate and loads. "AluK is a global leader in the design, engineering and distribution of aluminium façade systems with an experienced team on-hand to help advise you and make the best product recommendations to meet the needs of your project, from the design concept stage all the way through to project completion," says Subhendu Ganguly, MD, AluK India.

MATERIAL MATTERS

Wood, rusted iron and wrought iron finishes on exterior body structures are ruling the roost. Shiv D Gadekar, founder, SuGanta.com, adds, "High-pressure laminates, acrylic, zinc, copper, steel and stainless steel, are also used as a building material. The decision of picking the right material needs to be made after keeping some points in mind, like whether the material is water-resistant or not, or energy-efficient, eco-friendly, durable, reliable and cost-effective."

A new state-of-the-art wood coating technology, which is silicon-based, is a major performance jump over the existing wood coating systems available. "The transparent oils which are traditionally used to coat façade timber have a life span of 2-4 years generally in fully-exposed applications. However, this new technology takes it to almost double with an expected life span of seven years plus. This coating gives a unique weathered silver-grey aesthetic that architects and designers love," says Satinder Chawla, MD, Span Floors.

"Exterior wall cladding has reached new heights over the past decade, and can be made from all kinds of materials like ACP, glass, real wood, metal, ceramic, concrete, paint, tiles, stone, steel, etc. However, the cladding industry has moved forward, where we have smart products that guarantee protection for your walls and simultaneously give you bold and beautiful exteriors," adds Parul Mittal, director, Greenlam Industries.

New Ventilation systems from companies like RENSON are used in façades which enable the façade to breathe. "This external blind helps to reduce the temperature of the living space by 10 to 12 degrees without turning the AC on, and also helps in cutting off the glare in sunny conditions," says Edwin R Saldanha, MD, Doors & Doors System.

SUSTAINABILITY CUES

There is growing awareness in choosing environment-friendly material over the conventional ones, which have been in use for a long time. "Advanced embedded photovoltaic cells, micro wind mills and heat filter membranes in façades will take care of more than 50 percent of the energy needs of buildings. Energy harvesting is the process of collecting ambient energy from sources such as heat and wind, which are typically wasted, and converting them into electric energy. This process is also known as



power scavenging or energy scavenging," avers Imran Shaikh, architect and director, Cubix Architects Associates.

Anika Mittal Dhawan of Mold Design Studio adds, "High-performance building façades can improve thermal conditions, and therefore reduce heating/ cooling loads, reduce artificial lighting, enhance air quality, thereby reducing energy load." Material wastage should be a prime concern and planning your cladding panels or finishes in a proportionate and clean grid can really help in minimal/ zero wastage.

"Apart from this, one of the major concerns that all clients usually put forward is achieving an algae-free surface as monsoon rains are harsh in almost all parts of India. Overcoming this is solely dependent on your planning of rain water drain pipes, irrespective of however strong or algae-resistant your cladding panels are," says Navath Rahin, chief conceptualiser, Ahanas Design 4 Space.

The next time you look at a façade, you know there is more to it than what meets the eye. ■



21. Liberating fins — NITTE School of Architecture, Bengaluru, by FunderMax.

22. Natural Stone Series - Grey by CMC's Kalesinterflex.

23. Navath Rahin, chief conceptualiser, Ahanas Design 4 Space.

24. Ashwani Khanna, AVP - Marketing, FunderMax.

25. Amit Shah, MD, Classic Marble Company (CMC).