

# ARCHITECT and INTERIORS INDIA

Ideas, inspiration and insight for architects and interior designers

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**SPOTLIGHT  
FACADES**

**CASE STUDY  
KNS ARCHITECTS**

**AT 84, FUMIHIKO  
MAKI IS STILL A  
KEY PLAYER IN  
THE WORLD OF  
ARCHITECTURE**

# URBAN LEGEND



# SKIN IS IN

Not only do facade systems protect interiors; they also give the surrounding area a unique complexion

BY CAROL FERRAO

In the exciting world of facade design, innovations and mind-boggling creativity have resulted in architectural masterpieces. French architect Jean Nouvel comes to mind with his iconic designs for Institut du Monde Arabe in Paris, 100 Elvornth Avenue in Manhattan, and the Doha Office tower, to name but a few. Facades no longer just shield the interiors from harsh weather conditions; they act as a status symbol too. Like most aspects of architecture, they went hand in hand with science – and result in the birth of inspiring concepts such as interactive-moving facades, media facades, double skin, living wall-facades, and so on. And it is such innovations that are bringing lay people and professionals together in appreciation of architectural skins.

Confirming this trend, a representative from Hydro Building systems points out, “Today, people who want to implement creative architectural concepts in facades not only have to take into consideration technical aspects, but must also look at the design aspects that give a superior aesthetic appeal and uniqueness in design for creating a landmark in the city in terms of its visual grandeur and iconic architectural masterpiece.”

The brilliance in these trends comes not merely from the visual appeal but also the clever use of technology to regulate daylight and ventilation as well as to provide privacy.

Closer home, significant improvements can be noted in the understanding of building envelope. With increasing knowledge, forums and exhibitions, architects and related professionals are putting in considerable thought in determining the architectural skin. Dr. Prashanth Reddy, MD & CEO, FunderMax India Private

Max India, acknowledges this positive change. “The Indian facade market is slowly coming out of the shell of ACP, which has been in excessive use over the last three decades, and is now looking into new-generation materials.”

Still consistent in the facades all over the country is the prominence of glass. Although lauded by many architects, glass appears to still be the favorite facade material. But the understanding that glass as a complete facade solution may not be ideal, has paved the way for other trends as well. Dew Chandram, associate director, Innovators Facade Systems, believes, “Now the trend is shifted from glass and metal facades to a combination of dry stone/natural material with glass, and vertical green walls with glass.”

### EXTERIOR CLADDING

“Trend of the new-generation materials are natural wood, veneer based – the most popular being Duromer HPL, Max Compact Exterior Grade Type EDF, as per EN 438-6 from FunderMaxIt has, till date, been used in over 1,500 projects in around 1,000 days of operation,” points out Dr. Reddy. FunderMax exterior panels are high-pressure laminates (laminates pressed under high pressure at high temperature) with weather-protective coating, consisting of double-laminated acrylic polyurethane resin. The panels, available in a wide portfolio of decors,

boasts many properties – primarily, as extremely weather resistant, scratch resistant, impact resistant, solvent resistant, graffiti resistant, frost and heat resistant, double laminated, easy to install and easy to maintain. Besides the different patterns

# exterior

Discover the innovative... beautiful... creative... personalised facades  
FunderMax panels are Duromer Compact HPL as per EN 438-6, Type EDF for external applications

for people who create



Project : Memorial place Nikola Tesla Smiljan  
Location : Croatia

Facade Claddings Balcony Claddings Partitions Railings Fences

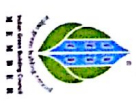
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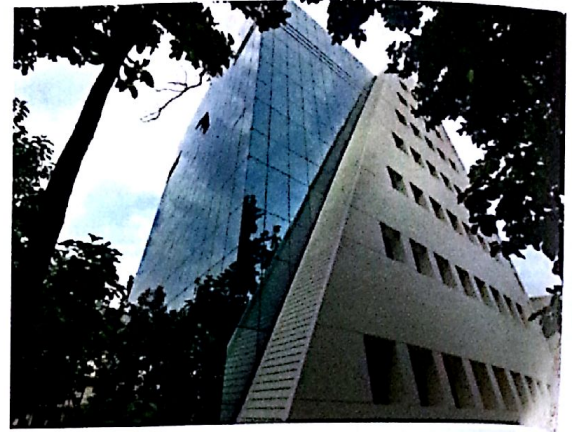
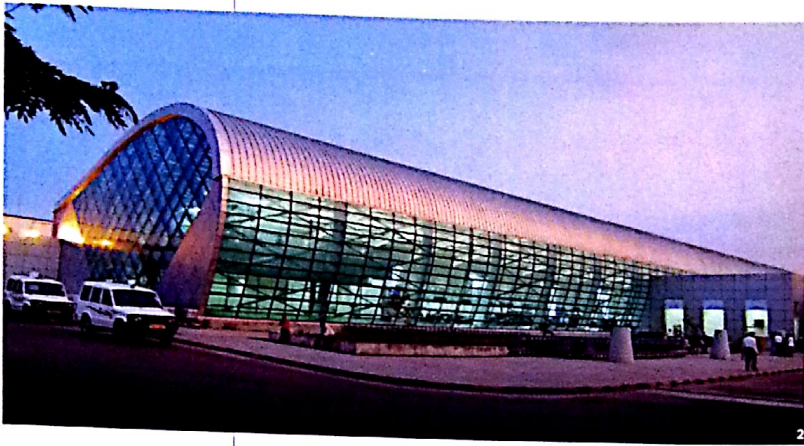
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\* Install on genuine FunderMax panels only.

**FUNDERMAX**

www.fundermax.at





2. A project by Innovators Facade Systems combines glass with aluminium composite panels, the most prominent trend in facades.

3. Hydro's Technal line of products are an integrated facade solution.

4. Jalis add character to a FunderMax project.

available, these panels can also be digitally printed with specific prints as per the design concept. In addition, there is a broad selection of assorted formats and mounting variations, hidden or visible mounting, cladding, perforation, CNC milled, etc.

Aluminium continues to be a favourite in the architecture industry, and its sleek metal look is perfect for high-end designs. "Though one can use stone, plastic, ceramics, wood and aluminium for facades, aluminium stands out to be the best among all. In this perspective, system companies like Hydro Building Systems, Schueco, Kawneer are contributing significantly to improve the Indian facade industry," believes Keshav Babu, national sales manager, Fom Aluminium Machines.

In aluminium panels, Kawneer India offers two distinct variants viz. Reynobond and Reynolux. Reynobond is a composite panel consisting of two coil-coated aluminum sheets permanently bonded to an extruded thermoplastic fire-retardant core material. It is lightweight in comparison to steel and solid aluminium, and hence suitable for architectural applications due to its flatness. It can be used for multiple exterior applications including ventilated facades, cladding for balconies and tunnels, roof constructions and rims. The corrosion-proof panels directly connect to plastics, stainless steel, aluminium, and zinc without safety requirements (using stainless steel or aluminium screws).

Reynolux, on the other hand, is a coil-coated aluminium sheet produced by a continuous coating process that allows the application of one or several paint layers. The coil-coating process allows the application of one or more layers of coating, reducing colour deviation between different batches. It is

used for roofing, wall cladding, roof windows, accessories and sun protection. This durable lightweight material offers UV resistance and weather protection. It's also available in different colours and comes with a 10-year guarantee on trim, 20-year guarantee on facades and roofing.

For a seamless look, Dupont's Corian makes for a good exterior cladding. Its appearance can be maintained by easily sanding and cleaning the surface to restore its original glory. Even graffiti can be removed through standard pressure washing with mildly abrasive cleaning agents. Another benefit of Corian is its ability to adapt to any challenging shape in an unobtrusive manner. Striking illumination features too can be added to the facade using the translucent variety. Dupont also claims that it offers low moisture absorption and resistance to stains, environmental pollutants, detergents and humidity conditions. Additionally, with Corian solid surface, there is a possibility of engraving intricate designs to exact specifications using CNC machinery. Facades are also used as an effective means of advertisement and brand imaging. With this material, the facade can be customised with graphics, logos and imagery in unique ways.

#### CURTAIN WALLS

The popularity of aluminium and glass continues to thrive, and is one trend that doesn't show any sign of becoming redundant. Hydro representatives agree, "In the facade segment, aluminium and glass joinery system is the clear trend in the market, and is going to remain in India for many years to come. Aluminum being a 100 per cent recyclable material, it offers a great advantage in terms of green building facade norms for new-age constructions." In keeping with this trend is Hydro's Technal brand, which provides a host of solutions that include curtain walls, beaded glazing, sloped and faceted facades, structural glazing, roofs, concealed vents and more. The range is the result of Technal's ongoing product development programme, and has been tested to EN standards for wind resistance, water tightness and air permeability.

Technal's facade solutions are suitable for all building structures, including 3D creations such as pyramids, polygons, barrel vaults and cupolas. It can be teamed with Technal window, door and sliding systems for an integrated facade system. A Hydro spokesperson elaborates, "With Technal facade systems, all conceivable variants are possible. Design diversity, combined with technical variability, is what we do best. Sight lines of varied dimensions give rise to new creative freedoms. The possibilities for combining the different elements, as well as the compatibility of the systems, enable customised solutions.

We have been known for these highly customised projects for many decades across 100 geographies."



# EXPERT SPEAK

Dr. Prashanth Reddy of FunderMax India, Dev Chandwani of Innovators Facade Systems and Keshav Babu of FOM on the recent trends in facade systems



**What are the prominent trends in façade design?**

**Dr. Prashanth Reddy, MD & CEO, FunderMax India:** Single skin façade is commonly adopted in India. However, FunderMax uses Rear Ventilated Façade for all its projects, and is doing its part in educating the market about its advantages. Through Rear Ventilated Façade, high-level energy efficiency can be obtained, as it is characterised by a mechanically ventilated air cavity that is created by allowing the air to pass behind the façade.

**Hydro spokesperson:** The climate challenge is enormous with approx. 40 per cent of the total energy still being spent on buildings; whereas an intelligent façade can reduce it drastically. So, it is no more a choice or a trend; but a necessity. We see buildings of tomorrow with multifunctional façades for energy saving, energy gaining through building integrated photovoltaic, large recyclable contents, interactive and user oriented for comfort. The building envelope is critical for the performance of the building – a vital organ.

**Keshav Babu, national sales manager, Fom Aluminium Machines:** Ventilated Tile Facades is a growing green trend, as we have observed the success of ventilated façades booming in the international market, which gives us an indication of change. As Ventilated Tile Façades create an air chamber between the surface of the building and the tile cladding, in the long run it helps to protect the building against rain and wind, and keeps the building in a dry condition. It also gives a phenomenal aesthetic look, acts as a very good thermal insulator and helps in maintaining low running cost incurred for air conditioning.

**Dev Chandwani, associate director, Innovators Facade Systems:** The older style 'stick systems', where the curtain wall is composed of individual elements (glass, mullions, gaskets, spandrel panels, metal caps) assembled on-site, have now given way to prefabricated 'unitised systems' that arrive at the construction site virtually preassembled, ready to be lifted into place and fastened on to the building's structure. While unitised systems presently dominate curtain wall technology, stick style systems continue to be used in some parts of the world.

**What are the factors to be considered while designing a façade?**

**Reddy:** The core functional idea of façades is to work with nature than try to resist its influences. Ventilated façades and wall coverings are developed to protect buildings against the combined action of rain and wind by counterbalancing the effects of water beating on walls and keeping the building dry, with high level aesthetic characteristics and undisputed advantages of heat insulation and sound proofing. The protective features of covering materials should meet the requirements of increased mechanical strength, increased resistance to thermal shocks, reduced water absorption, non-flammability, resistance of colours to sunlight, resistance



to chemicals and air pollution, lightweight, ductility and importantly limited maintenance requirements.

**Hydro spokesperson:** Today, architectural concepts in facades not only have to take into consideration technical aspects, but must also look at the design aspects which give a superior aesthetic appeal and uniqueness in design to create a landmark in the city in terms of its visual grandeur. The design factors include energy-saving, openness, daylight interference, safety aspects, technology used, greater quality of life inside and, of course, cost with a desired quality level for development of an intelligent façade.

**Babu:** The major factors considered are performance of the facade in all seasons as well as creativity while designing facades, as this will give the occupants and environment a 'feel good' factor.

**What significant improvements have been made in facade materials?**

**Reddy:** Many players in the industry have adapted to these norms of green products by improvising on their existing range to be among the top in the industry. The Indian architecture and building fraternity, with growing international exposure, has been able to bring world-class building materials into India. However, this has not been easy due to the price sensitivity of Indian customers. But having said that, considering the value-added advantages, things are getting better and the market is quite receptive to time-tested and proven façade materials from world-class companies

**Chandwani:** One significant improvement is the invention of high-performance glasses with high visible light transmission and lower U value to reduce external heat and promote effective use of natural light. Besides, there are fire-retardant aluminium composite panels (ACP), use of aluminium solid sheet as an option for external cladding and non-staining silicone paints as per LEED rating requirements. ■

1. Dr. Prashanth Reddy, MD & CEO, FunderMax India.

2. Dev Chandwani, associate director, Innovators Facade Systems.

3. Keshav Babu, National Sales Manager, Fom Aluminium Machines.

4. A Hydro project - the Diplomatic Area Twin Tower in Bahrain.