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The 'Cover' Story

Architects are pushing the boundaries on roofing and cladding despite financial and availability constraints.

Panels of various composite materials, glass, polycarbonate and metal sheets remain the most popular roofing and cladding options in India. A big positive is that architects are innovating in these areas to come up with attractive and high-performance roofs and facades. Here, we showcase a handful of concepts, some underway and some fully executed.

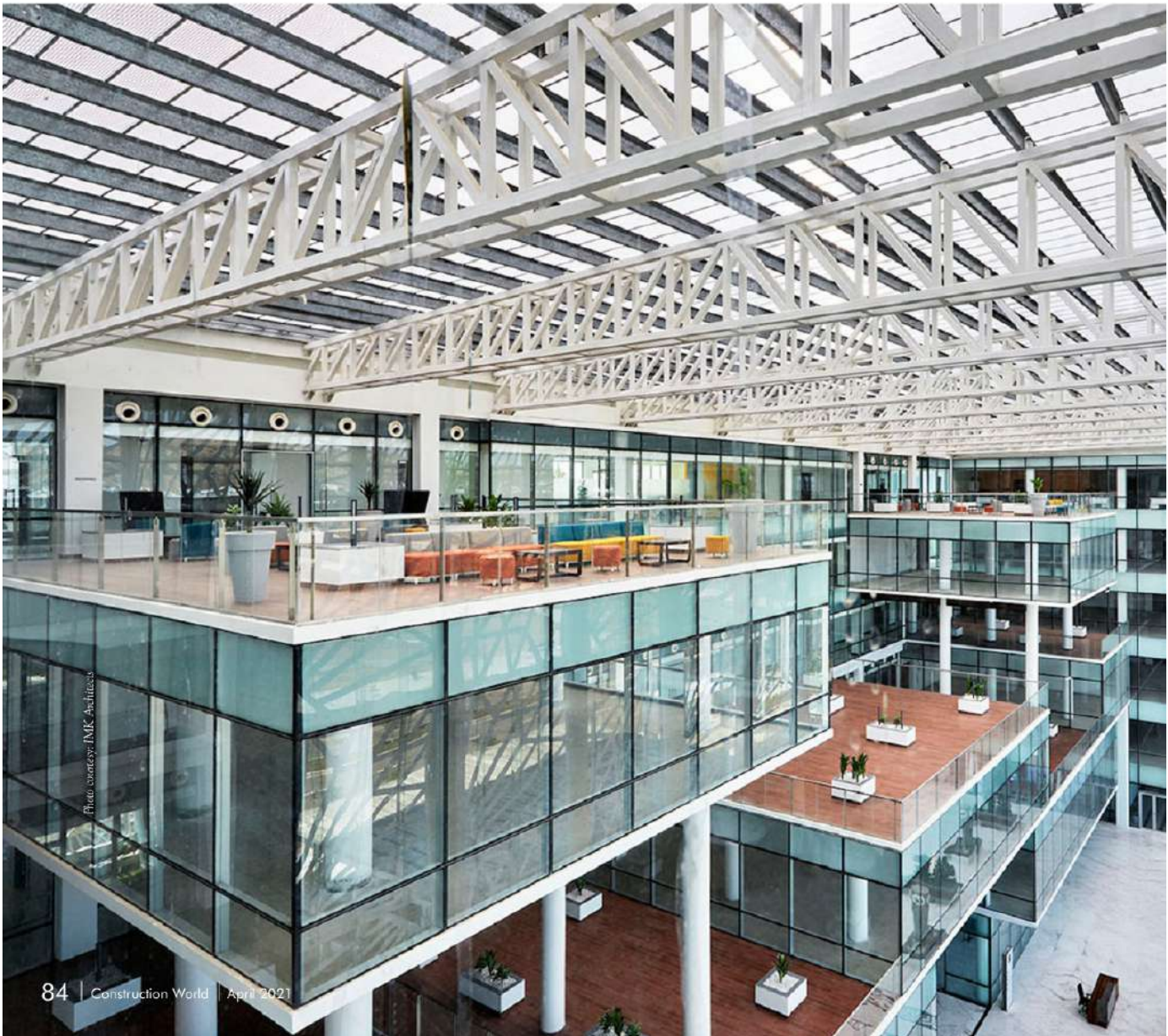


Photo courtesy: IMK Architects

Designer cladding + roofing for an office

COST:

MS roof truss: ₹150-220/sq ft

Danpalon 3D Lite polycarbonate sheet: ₹120-300/sq ft

High reflective tiles: ₹25-100/sq ft, depending on the material and thickness of the tile

In Aurangabad Industrial City (AURIC), India's first greenfield, smart industrial city, a 16,660 sq m building housing administration and commercial office features a highly aesthetic double façade composed of perforated aluminium screen and glass. The design is inspired by Aurangabad's historic structure Bibi-ka-Maqbara, explains **Rahul Kadri, Partner & Principal Architect, IMK Architects.**

In the atrium, a mild steel roof truss supports multiwall polycarbonate sheet roofing.

"Multiwall polycarbonate sheet roofing is lightweight and hence requires a lighter truss, but does not compromise on blocking the glare and minimising heat gain and air-conditioning cost for the large atrium volume," adds Kadri. "We chose mild steel for being durable, structurally flexible, having higher load-carrying capacity and being amenable to fast construction as it can be fabricated offsite and assembled onsite."

Highly reflective tiles cover 3,000 sq m of the 4,920 sq m roof, alongside 15 kWp solar PV cells generating 21,874 kWh, or 6.17 per cent of the 354,318 kWh annual lighting consumption.

The use of high-performance materials helped this building achieve IGBC Gold Performance.



- **Rahul Kadri, Partner & Principal Architect, IMK Architects**

"Multiwall polycarbonate sheet roofing is lightweight and hence requires a lighter truss."



A factory with a colourful twist

Veeline Media needed a cladding solution that was pattern-based, both vertically and horizontally.

Tata BlueScope Steel proposed the use of Lysaght Custom Orb® and Lysaght Trimdek® (combination of cool Cottage Green and Surfemist) for the horizontal wall cladding, and Lysaght Trimdek® (in Surfemist) for the roof. The interplay of colours with the profile's sinusoidal shape lent the structure a harmonious look.

Implementing this solution was tricky. "Geometric designs made it complex to optimise the material. To get the desired finish, we cut the inclined colour bands and panels at site with non-standard flashings to cover the edges,"



- **Piyush Nahar, General Manager, Marketing, Tata Bluescope Steel**

"Geometric designs [can make] it complex to optimise the material."

explains **Piyush Nahar, General Manager, Marketing, Tata Bluescope Steel.** "Hat-end lap flashings helped divert rainwater through the inclined parts. We adjusted the RCC wall at the base height for minimum wastage while lapping the horizontal sheets."

The outcome was a customer-centric roofing solution combining superior aesthetics with greater functionality and long-lasting performance.