



HIGH AND MIGHTY

WHEN IT COMES TO PERFORMANCE AND DURABILITY, HIGH PRESSURE LAMINATES HAVE BECOME A GO-TO SURFACE MATERIAL IN THE CONSTRUCTION INDUSTRY

BY CAROL FERRAO

1. High Pressure Laminate (HPL) solutions by companies like Stylam are resistant to weather changes, ensuring the exterior surfaces look their best for a long time.

Whether it's capturing the beauty of natural wood or providing realistic designs in stone finish, the High Pressure Laminate (HPL) industry's inventive streak has left architects and designers spoilt for choice. Often more economical than the natural materials, HPL solutions are easy to maintain with faster application process. Made of wood-based layers impregnated with resin, HPL has many layers of Kraft paper, with the final layer featuring high-quality printed design accents and decorative finishes.

"Categorising HPL as just another cladding material is a thing of the past," says Ashwani Khanna, AVP-Marketing, Fundermax India. Today, HPL is being recommended for a variety of applications in both the residential and commercial areas. Think countertops, cabinets, furniture, and more. Given its multiple features, mainly high-performance durability and strength, the material is perfect for high-traffic areas such as offices, lobbies, restaurants, hospitals, stores, hotels and educational institutions.

According to a report by Market Research Future (MRFR) titled 'Global Decorative High-Pressure Laminates Market', the HPL market is expected to strike 5.3% CAGR to achieve a valuation of USD 14,857 million by 2023. The growing demand for the material stems from its use not only in flooring and infrastructural development, but also in ready-to-assemble furniture, cabinets, countertops, tabletops, case goods, wood panels and much more. Thanks to the booming construction industry in Asia Pacific, the market is anticipated to grow exponentially.

Manufacturers and suppliers are motivated by the demand to improve their portfolio as well as provide the best solutions. "With our growing portfolio of products and an increasingly comprehensive range of laminates and allied products, our investment in research and technology is aimed at improving the environmental performance of our products for a more enduring client experience," states Alfa Ica, a known provider for HPL in the Indian market. Improving chemistry of laminates needs to be a primary focus for these companies – and they ensure it by investing in new technologies, often sourced from European countries.

Laminates have grown since their inception in terms of design innovations as well as technicalities, reinforces Manav Gupta, director, Stylam. Many textures that add to the design, overall look and feel of laminates have been introduced with some advance ranges, and the overall properties these advance ranges offer make spaces look different and appealing. "As a group, we have come up with many advancements and range of special surfaces which are specifically planned keeping in mind the problems an end consumer faces when it comes to normal laminates. These surfaces have extra advantages in terms of finishes, properties, look, safety, hygiene and maintenance," he adds.

HPL in India has come a long way indeed, according to companies like Durian who believe that, in the present time, it is difficult to add finesse to surfaces without this material. It's not just the material's high-quality finish, designer appeal and versatile applications that make it a popular solution for both interior and exterior application. Today, HPL surfaces are also designed to withstand abrasions, fire, chemicals and wear and tear that is commonly seen in high-traffic areas.

FEATURES AND BENEFITS

What makes HPL a versatile solution, especially for

façades, is the flexibility offered by the sheets. Based on the design, the sheets can be cut to match interesting and unique forms envisioned by the architect or designer. Being a weather and colour stable material, it is resistant to damage, needs low maintenance and is easy to clean. Even sustainability can be ensured by opting for solutions such as PEFC (Programme for the Endorsement of Forest Certification) certified products.

One of the significant advancements in the HPL industry has been the introduction of antibacterial and antifungal technology. These laminates come with a layer of antibacterial and fungicide protection. It ensures that the antimicrobial effect keeps the surface protected, irrespective of how many times it is cleaned. Perfect for kitchens, bathrooms, hospitals, gyms, daycare centres as well as high-traffic commercial areas, anti-bacterial variants in HPL do more than maintain the aesthetics of the space.

While the advantages of using HPL cannot be disputed, the challenge remains in identifying and picking the right solution in an evolving market like India. "There are no standards and guidelines for HPL products in India, and we are dependent on other international codes for qualifying the high-pressure laminates. Presence of mandatory guidelines within India will ensure more uniformity in product quality and eliminate substandard products from the market," expresses Khanna. That's precisely where solutions like Max Exterior, the original high pressure laminate from FunderMax, come into play. It adheres to EN 438/6 and norm conformity as per EN 438/7, and provides design freedom without compromising on sustainability.

Stylam's Gupta believes that there is scope of improve-



2&3. Wood-finish HPL panels by Stylam are popular for exterior applications as a more durable and relatively well-priced alternative to natural wood.

4. Manav Gupta, director, Stylam.





5. The canopy-style roof of Purva Palm Beach (marketing office) in Bengaluru, designed by DSP Designs, looks warm and striking owing to the textural warmth of CenturyExteria's Tyrol Pine in Suede.

6. Parul Mittal, director, Greenlam Industries Ltd.

7. Pearlescent Collection from Greenlam - Meta Silver (front), Glitter (back) - combines the sheen of metal finish with durability of HPL.



ment in terms of explaining core features of the product rather than just look and feel. "Till date, the bigger size of market is towards unorganised market. Hence, it becomes a key responsibility to explain to the end consumer the overall properties, latest advancements, safety parameters, quality features. This will help them learn more about HPL before making the final decision – which will help in growing the market for organised players in the industry."

HPL SOLUTIONS IN THE MARKET

A versatile HPL product, the NT Surface HPL range from FunderMax, part of the Max Exterior panels, is a good choice that can be used in a wide variety of applications. One such solution from FunderMax, the Max Lato series can improve thermal comfort of occupants as well as provide impressive visual appeal. It is a shading system that is available in multiple sizes and angle configurations. Movable louver systems made of FunderMax high pressure laminates will soon get added to the suite of application possibilities with HPL, mentions Khanna. These systems, in addition to superior energy performance, will also give buildings a distinctive character.

It is crucial that HPL, especially when used in exterior set-

CASE STUDY: DSP DESIGNS

Purva Palm Beach (Marketing Office) in Bengaluru, designed by DSP Designs, is a contemporary multi-use structure within a residential development. The client Puravankara wanted the Experience Centre to stand out and become a focal part of their landscape. It served as a marketing office at the beginning, and was converted to a club later. In both functions, the architecture of the building needed to be attractive and inviting. "A building with long sloping cantilevered roof was designed, and the choice of a rich wooden material became important," explains Yatin Patel, director, DSP Designs. The almost-double-height glass structure was complemented by the roof, which is finished in CenturyExteria's Tyrol Pine in Suede. As a canopy application with riveted fixing mechanism, the panels lend a warm note to the glass structure.

tings, are resilient to the elements of nature. An alternative to traditional materials, Alfa Ica's exterior compacts is one such solution that is UV resistant, weatherproof and durable, offering high-quality assurances. Its excellent technical properties make it suitable specifically to the building and construction industry. Their HPL offering is resistant to climatic shock, artificial weathering (grey scale) and UV light.

As for design and aesthetics, HPL is being preferred as a substitute for wood. Now, surfaces can exude a natural warmth but cost significantly less and be more resilient towards wear and tear. CenturyPly's CenturyExteria Woodgrains collections features a range of shades and grain pattern that exceptionally mimic wood. Despite its double hardened attribute, it's a lightweight solution that offers moisture and thermal comfort. It can also be used in conjunction with the Rainscreen technology to provide better insulation to buildings. Some of its other features include: fire retardant (FR Rating Class 1), scratch and bending resistant, colour stable, self-supporting and resistant to weather conditions including hail.

Using uncertified products can pose a problem in the future, and fire safety is one of the key features to look for in HPL. Stylam offers Fascia Fire Retardant Exterior panels in response to this pressing need. The panels have extreme fire retardant qualities, which makes it difficult for the surface to ignite – ensuring a low spread of flame. The evacuating time in case of fire is, therefore, prolonged, explains the company spokesperson. Produced in lamination presses under great pressure and high temperature, the panels have excellent weather protection achieved with protective coating. Depending on the design, one can choose four different types: front-side décor, both-side décor, black core and brown core.

Durian's Exterior Compact Grade Laminate (ECGL), another self-supporting HPL, has excellent stability to withstand all shortfalls seen in other non-HPL application substrates. Its exterior grade film is a two-layer efficient weather- and UV-protection film. The presence of a PVDF layer on the upper surface of the film ensures optimal UV resistance and high chemical resistance. It is also easy to clean (including graffiti), and boasts of features such as anti-soiling and anti-fouling. The surface is resistant to moisture, hail, adverse weather, and even termite and borer. It meets international EN 438 EG standard of high resistance to abrasion and colour fading in extreme conditions. Since ECGL is delamination proof, splinter proof and anti-static, it is a suitable product for exterior applications.

With metal finish surfaces growing in popularity, Greenlam



HPL Pearlescent – with textures such as Graphite, Meta Silver, Shimmer, Glitter, Copperworks, Black Sea Pearl and more – addresses the need for durable, aesthetically appealing metal surfaces. The anti-bacterial solution is resistant to heat, abrasion, scratch, impact, chemical and moisture – attributes that would be a challenge with actual metal surfaces. In addition to being suitable for bonding to all types of substrates, the panels can be cold bent or postformed for curved surfaces, making them suitable for innovation designs and applications. “HPL laminates have become a beneficial and valuable substitute for surfacing solutions. They are unrivalled when it comes to both versatility and style,” points out Parul Mittal, director,

FIRE SAFETY AND HPL

After the tragic death of 72 people in the Grenfell Tower fire in West London, a public inquiry into the fire identified the highly combustible cladding material as the primary cause of the fire's spread. Cladding materials like HPL, along with aluminium composite materials, have come under the scanner in the region after the investigation. We enquired with Fundermax, one of the leading providers of certified, high-quality cladding material about the implications of such findings.

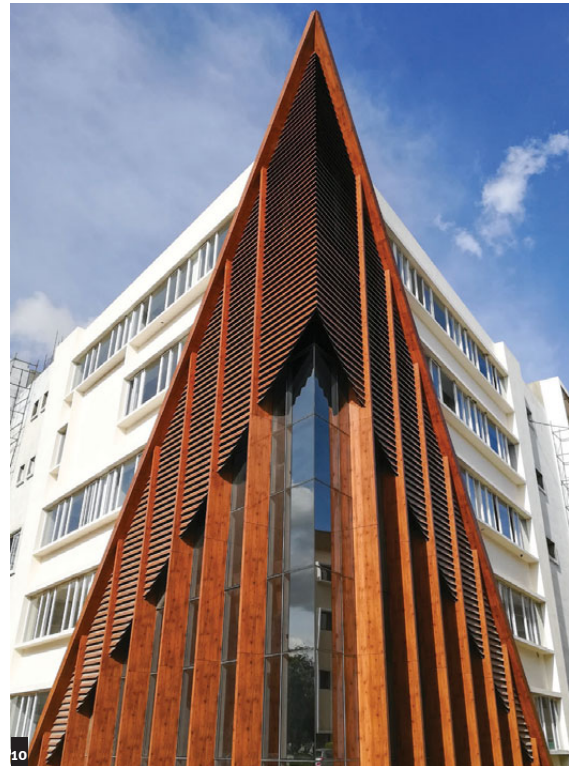
Ashwani Khanna responded by saying: “We, at FunderMax, are supportive of any measure taken to improve the safety of our buildings and people residing in them. Having said that, the recent developments in the UK point to the fact that class A and class B HPL in accordance with EN 13501 – 1, when used with non-combustible insulation, is safe to proceed. The Max Exterior series of FunderMax belong to class B category, and we recommend using the same with non-combustible insulation. In addition to this, we also have class A NT Surface HPL, mLook which ticks all the boxes when it comes to fire-safety. Above all, the material is only as good as the system; and efforts must be made to design the entire façade system fire-resistant rather than just making use of ‘fire-rated’ materials.”

Manav Gupta stated, “Safety is always a matter of concern as a whole to our Stylam Group. The tragedy at Grenfell Tower, which had Aluminium Composite Panels (ACP), has raised issues on overall cladding materials. At Stylam, we give high importance to the R&D and overall product quality. India is a country of extreme weather and our cladding has always fitted in with all external influences so far - but having said that, we are internally working for overall HPL quality enhancement and its fire safety features.”

8. KNA Plaza in Kochi makes the most of Fundermax Max Exterior Panels and its cutting flexibility and all-weather robustness to create a resilient, landmark-worthy façade.

9. Ashwani Khanna, AVP-Marketing, Fundermax India.

10. Nitte Meenakshi College of Engineering utilised Fundermax Max Exterior Panels for its angular, customised façade feature in a sustainable way by minimising waste.



CASE STUDY: FUNDERMAX MAX EXTERIOR

KNA Plaza in Kochi, designed by Silpi Architects, is a seven-floor commercial plaza located at the intersection of two major national highways - one connecting Kochi to Madurai and the other Salem to Kanyakumari. The semi-circular building design had to have the potential of being a landmark, which was achieved by creating an exterior inspired by the Indian jali. From among the material choices of aluminium, glass, etc, the architects chose glass for the first three floors to showcase the retail section of the plaza. For the office space above, Fundermax Max Exterior Panels offered cutting flexibility and all-weather robustness. The dynamic façade with its bold colours has made the plaza a visually striking landmark indeed.

Nitte Meenakshi College of Engineering in Bengaluru, designed by Ace Architects, is home to the architecture students of the institute and, hence, needed a façade that would be as inspiring as it would be a study in building material and design. The angular, vertical and custom façade feature was a challenge, and Fundermax's Max Exterior panels proved to be the answer. Special cleats were fabricated to wrap the panels around the steel sections, which were then supported by the louvers. The sizing and cutting were worked out to minimise wastage, and excess material was used to make louvers for the façade.

Greenlam Industries Ltd, who sees the booming construction industry further driving the growth of the Global Decorative HPL market in India.

Each product reflects how HPL blends functionality with aesthetics to provide the construction industry with the best surface solution. As Khanna pointed out, soon HPL won't be seen as an exclusive exterior cladding material. We are already witnessing this transition with interior wall surfaces and countertop solutions. The promise and potential of HPL could imply wider and more technologically advanced solutions entering the market in the coming years. **A&I**