

WOODNEWS

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Anuj Divanji

(MD, Ritikaawood)
on wood flooring

INSIDE

Wood Art:

Insight into natural and 3-D veneers

Going Vertical:

Wood engineering enables multi-storey construction

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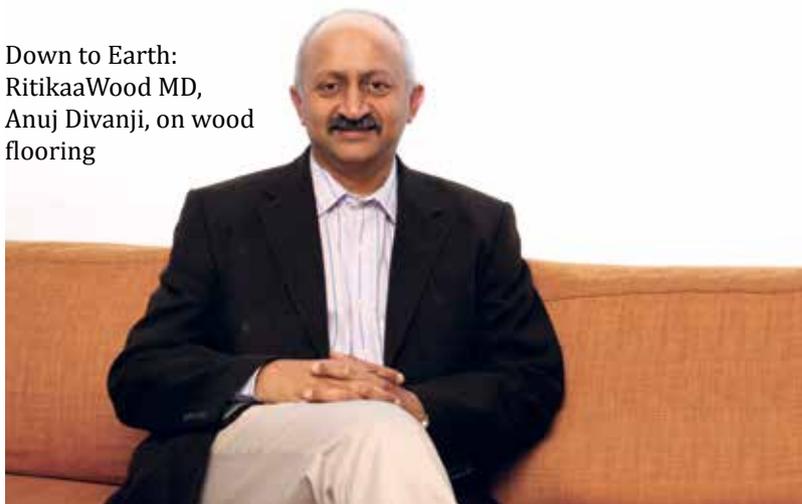
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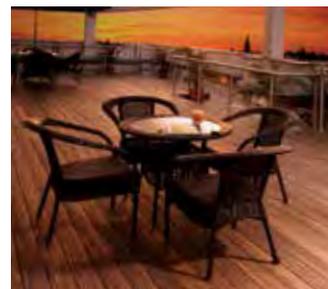
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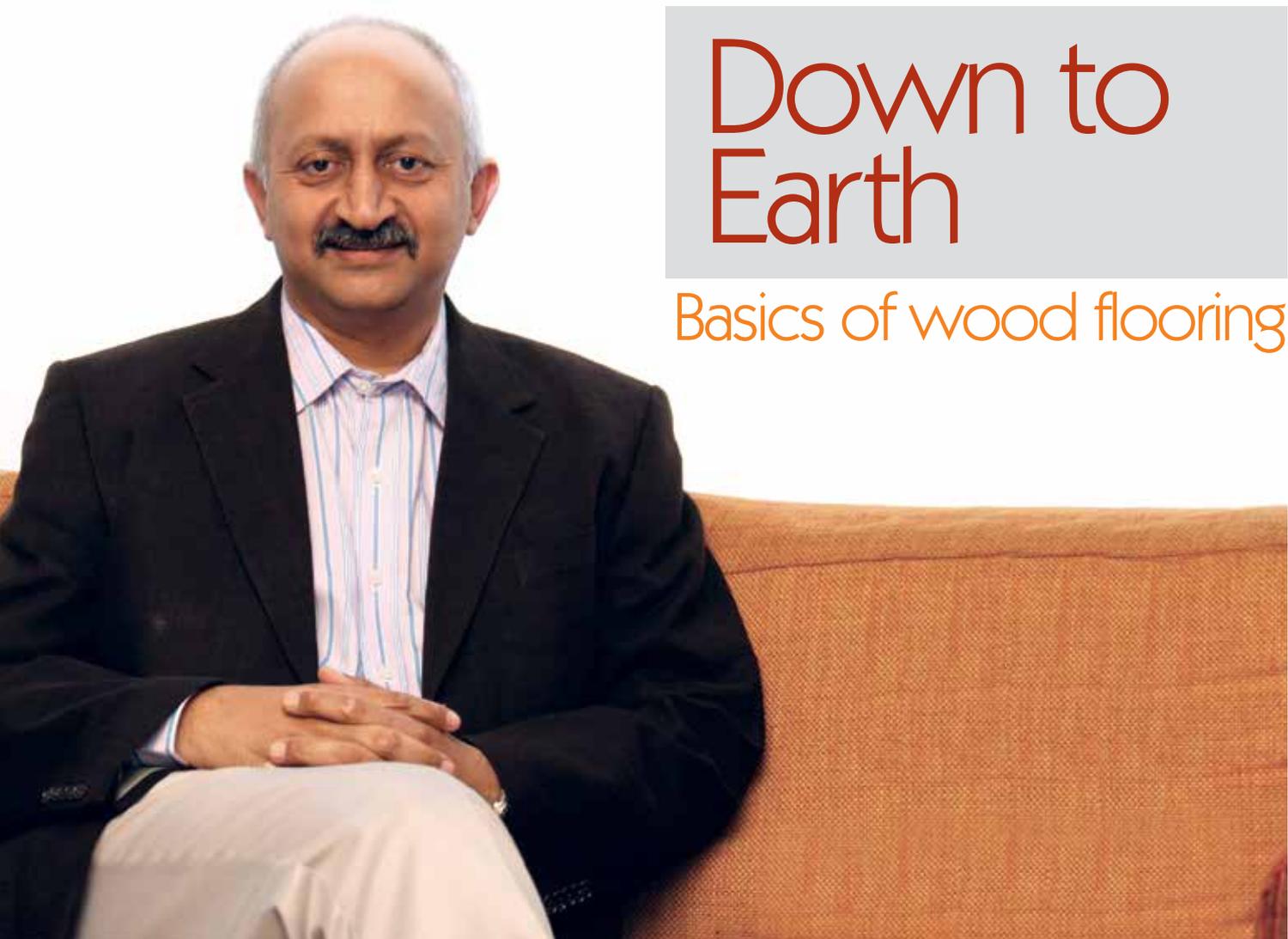


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Down to Earth

Basics of wood flooring

While floors of all materials (stone, wood, ceramics, concrete or linoleum) and uses (domestic, industrial, indoors or outdoors) have their own pros and cons, the real challenge lies in harnessing natural, renewable and environment-friendly resources that come from wood species. *WoodNews* asked a leading veteran in the field, **Mr. Anuj Divanji**, Managing Director of Ritikaawood, to enlighten its readers.

Of wood, concrete, stone, ceramics (tiles) or laminates, what is best for flooring? Why?

Every material has its place, with its own unique properties, and therefore applications. When it comes to wood, it provides a very warm, natural feeling, particularly when walked upon barefoot. In addition, wood provides excellent thermal insulation, which saves heating costs in cold areas and air-conditioning costs in hot tropical regions by better retaining the effect of air-conditioning in a room.

For outdoor flooring though – particularly when exposed to sun and trod barefoot – any other material



(stone, ceramic, concrete, etc.) will get extremely hot and uncomfortable to walk barefoot. On the other hand, a wooden deck, even when exposed to direct sunlight, will gain minimum temperature, which makes it more comfortable.

What technical and aesthetic factors does one consider for safe and durable flooring?

There are various aspects for durability of wooden flooring: dimensional stability, water resistance, scratch resistance, termite resistance, etc. While all natural wood species expand and contract with changes in atmospheric humidity, this is less in certain hardwood species and more in other species.

This can lead to warping over time and the floor can become uneven. Engineered woods are more dimensionally stable and, therefore, should be preferred.

Most wood species (except Accoya, which is modified) are food for termites and, therefore, need additional anti-termite treatment for protection. Naturally, hardwoods are more termite-resistant as compared with other woods.

Sub-structure dampness and water leakage in the immediate vicinity of wooden floors can cause permanent dampness and, therefore, premature rotting of the wood. Site preparation is therefore most important.

There are some design factors that assist as well. Good quality timber coatings, sealing of end grains etc. further enhance durability of timber floorings.

Some species are inherently more scratch-resistant than others. If one prefers the aesthetics of a species that are not very scratch-resistant, then appropriate coatings must be used to protect the flooring from scratches. Having said that, wood being a resilient material, scratches on a solid wood floor (not on engineered or laminate floors) can be easily repaired.

What are the differences between flooring, decking and cladding?

Cladding: is mainly used on walls or as a false ceiling. It is usually used for aesthetic purposes and to protect the surfaces clad from exposure to weathering. Cladding can be indoor or outdoor. When used outdoors, it is often exposed to rain and sun, which affects the timber significantly.

With any other timber cladding (except RitikaaWood cladding) one can expect to carry out maintenance works more often: typically once a year. As with any timber application, a good design and implementation can significantly enhance the life of cladding. Particular attention must be given to ensure that any water incident on the cladding drains off quickly and does not stagnate on the wood.

Decking: is the most demanding application for any material as it is horizontally laid and therefore exposed to direct rain, intense sunlight and heavy loads. It is particularly prone to termites, since it is in close proximity with the ground, and can often be damp.

Again, a good design and implementation can significantly enhance the life of a decking product. Another important aspect of decking, which is often neglected, is the type of fixing. If fixed using visible screws, these are points from which the decking can start to crack and become an entry point for water to get in and further deteriorate the wood.

A hidden fixing system requires a more stable wood species, but can offer a significantly higher life. All of the above-mentioned design and implementation precautions, combined with an extremely stable wood species, allow RitikaaWood decking to offer a lifetime timber warranty of 50 years!

Flooring: also needs to be designed and implemented within certain guidelines. While most floors are designed for dry interior areas, our

floorings can also be used in wet areas such as bathrooms, sauna rooms, verandas, etc.

How do wood species and technical specifications differ for domestic and commercial flooring?

The primary difference in terms of application for a domestic flooring versus commercial flooring is the extent of traffic and therefore wear and tear. Also, in a commercial application, the chances of impact damage, water spillage and scratches are much higher.

Wood being a resilient material, impact and scratch damages can easily be repaired only in the case of solid wood flooring. Engineered wood and laminated floors cannot be repaired – they have to be replaced.

We normally advise using slightly thicker sections in commercial areas to permit more extensive repairs and, therefore, ensure a longer service life when compared with floors in domestic applications. Similarly, one would prefer high performance coatings which can sustain much higher wear and tear in case of commercial applications.

What are the special demands when it comes to industrial and sports flooring?

The most critical factor in industrial flooring is the risk of damage from impacts and scratches, which must be protected by high performance coatings and higher density wood which is dimensionally stable. Also to be considered – especially in hospitals – would be friction or smoothness of the floor to prevent slippage, and a coating that will prevent any fungal growth.

For sports flooring, besides higher resilience and dimensional stability, good fixing methodology is very important. Also, different sports require different levels of friction/smoothness, which needs to be customized using appropriate coatings.

What are the other important attributes of wooden flooring?

Health and safety: One needs to ensure use of non-toxic timber treatment and coatings with low VOC (volatile organic content), which can be carcinogenic.

Fire resistance: Any wood stands the risk of catching fire, but this can be reduced by fire retardant coatings. It must be noted that wood burns slowly, therefore any fire-fighting system can easily overcome the risk of fire being fuelled due to a wooden flooring.

Moisture and insect resistance: Moisture is the most critical risk for any real wood product. This must be reduced by best practices in design, manufacturing, installation and coating, as explained in my answers to other questions. Sustained dampness can not only cause premature rotting of wood, it also significantly increases the chances of attacks by termites and other insects.

Acoustics, anti-static and thermal properties: These are useful functional attributes of wooden flooring.

Thermal properties are an inherent characteristic of wooden flooring. For acoustic insulation, glued-down installation must be carried out.

Modern technology enables ease of installation and maintenance of wooden floors. Could you elaborate?

Earlier, the preferred method of installation of indoor wooden flooring was gluing to the base floor. This is a permanent, very reliable method of installation and provides excellent acoustic insulation. However, it is a very labour-intensive and therefore expensive method which requires a long time.

Modern manufacturing systems have made it possible to provide interlocking flooring boards that can be installed in a free-floating manner. This is a very quick method of installation, but requires some precautions – dryness of sub-structure before installation and use of foam sheets to protect from moisture must be used.

Even though India has a long tradition of wood flooring (Kerala to Kashmir), why is it not so popular in contemporary construction?

The primary reason for this would be cost. Good quality, aged and seasoned timber is expensive and its supply is limited when compared with the huge demand.

To overcome these issues, wood modification techniques like acetylation (the process used to make Accoya timber, the raw material for RitikaaWood products) have been invented, which use faster growing softwood species and stabilize them using chemical processes. This provides reliable, durable and high performance timber in a sustainable manner without causing any loss to the global forest cover.

What is it that the Indian woodworking sector is not doing right?

The timber industry in India as a whole is relatively unorganized and has not kept pace with global advancements in timber technology and best practices in timber sourcing, grading, product design, manufacturing and workmanship to develop beautiful, reliable and durable timber products that can last a lifetime.

We at RitikaaWood strive to not only adopt, but also exceed global standards in woodworking. If we apply ourselves sincerely, we in India can surely combine our local traditional skills and global best practices to achieve amazing results.

What is your estimate of the current and potential market in the country for wooden/laminated flooring?

That's difficult to guess; but probably in the range of about Rs. 500 crore.

What have been the most popular wood species for flooring in India?

While teak has traditionally been the species of choice for all applications in India, limited supply (and therefore cost) of quality timber has forced us to move to various imported hardwoods

for solid wood flooring, or even look-alikes such as laminate floors.

How does Accoya wood compare with them?

As mentioned earlier, Accoya is a real solid timber sourced from sustainable forests and modified using a non-toxic process called acetylation. This stabilizes the timber completely – to its core and not just on the surface – so that it is completely resistant to water and termites and does not bend, warp, swell or rot.

Accoya comes with a warranty of 50 years, even when used on the outdoors and exposed to sun and rain. When permanently submerged in fresh water or soil, the warranty is 25 years. As a result, this timber can safely be used for demanding applications like outdoor or bathroom cladding and decking, extra-large windows (without the risk of the windows jamming during monsoons).

Also, since the timber is very stable, the coatings also last much longer. In fact, RitikaaWood is able to provide a warranty of 5 years on its lacquer coatings even for outdoor applications, which is otherwise unheard of with any other timber.

Having used this wood for hundreds of projects across India, and for all types of product applications, we can now justify our claims practically. Accoya can therefore be considered to be the only timber that, on its own, requires absolutely no maintenance or care, can be used freely for any application and remains unaffected by environmental factors. 

Established in 2002, Mumbai-based RitikaaWood is a fully integrated value-added manufacturer of all products made only from Accoya wood. It offers factory made, quality solid wood products such as glazed windows and doors, solid wood doors, flooring, cladding, decking and timber structures. It provides end-to-end solutions with wood: design, manufacturing, installation and after-sales services.



All hands on Accoya decking this summer

Accoya, the world's leading modified wood, proves it has what it takes to be the decking product of choice for installers, contractors, builders and do-it-yourself enthusiasts.

Manufactured by Accsys Technologies, the patented Accoya production process takes sustainably sourced, fast-growing woods and enhances them to create a modified and environment-friendly wood that matches or exceeds the durability, stability and beauty of the very best tropical hardwoods.

Thermography tests show that the premium Accoya decking product is 'bare-foot-friendly', remaining cool to walk on despite being in direct sunlight in days of 32 degrees Celsius. It also remains smooth and splinter-resistant, even in high temperatures.

Accoya is, therefore, one of the best quality products on the market when it comes to decking, with examples from

around the world demonstrating its key features and benefits.

In India, a shipping company wanted to create a decking area on the top floor of a 16-storey building in Mumbai which would provide guests with spectacular views over the Arabian Sea. India receives more than 2,000 cm of rainfall during monsoon; and summer temperatures can often rise to over 40 degrees Celsius in some areas.

Here, Accoya demonstrated that it was one of the most stable and durable of decking options in challenging climates, and the client was pleasantly surprised by both the performance and look of Accoya.

Mr. Kiran Kamath, Managing Director of Link Shipping Pvt. Ltd. said, "I have been pleasantly surprised by the performance and look of Accoya's decking solution."

Mr. Bryan Crennell, Director of Sales

and Marketing at Accsys Technologies said: "The patented acetylation process that Accoya goes through ensures that it is the most advanced wood on the market, and positions it in a league of its own when it comes to outdoor and decking projects across the globe in 2014."

Accoya has successfully demonstrated its hard-wearing credentials on projects in a diverse range of countries across the world. "From Europe to India, research shows that Accoya wood is Class-1 leading durable, exceptionally stable, indigestible to a wide range of insects, and lasts a minimum of 50 years above ground and 25 years in ground or freshwater contact," Mr. Crennell added.

Accoya is available from RitikaaWood (www.ritikaawood.com) from sites across India.