

# WOODNEWS

Furniture and  
Manufacturing  
Technologies

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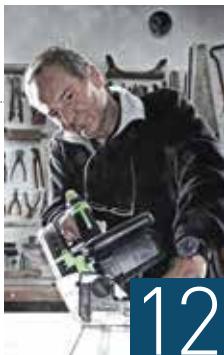
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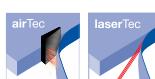
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Founding Publisher | Gouri Ramakrishnan

Founding Editor | Dr. Joseph George

Chief Editor | Dhananjay Sardeshpande  
dhananjay@pdatradingmedia.com

Copy Editor | Roy Thomas  
roy@pdatradingmedia.com

VP - Publications | Tony Doulton  
tony@pdatradingmedia.com

Assistant Manager - Advertisement | Sudha Mishra  
sudha@pdatradingmedia.com

General Manager - Design | Infant Vikas  
vikas@pdatradingmedia.com

Manager - Design | Ramesha K S  
rameshal@pdatradingfairs.com

Layout | Govindaraju S | govind@pdatradingfairs.com

Taiwan, China and Hong Kong:  
Robert Yu,  
Worldwide Services Co., Ltd., 11F-B, No. 540,  
Wen Hsin Road, Sect. 1, Taichung, 408, Taiwan.  
Tel.: +886-4-2325-1784 Fax.: +886-4-2325-2967  
Email: erin@acw.com.tw

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Chairman | Pradeep Deviah

Managing Director | Srinivasan S.



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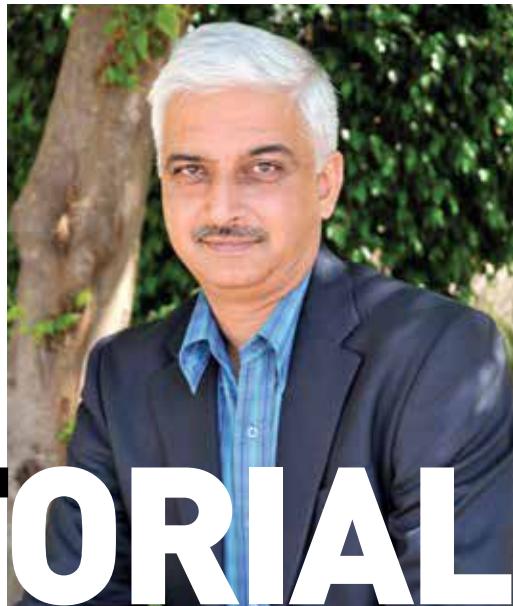
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# EDITORIAL

## Some scorching statistics this summer

**Dear Readers,**

As India awaits a bountiful monsoon – which has been playing truant for three consecutive years now, leading to slowdown of parts of the Indian economy – I came across a few scalding facts about the nation's furniture industry that caught my attention. First, the National Skill Development Council's state-of-the-industry report: although giving employment to more than 5,00,000 workers, India remains the largest furniture importer in the world with a 19% share. Although demand for furniture in India surges at an attractive 15% year on year, imports are growing at the rate of 60%. Realising this huge potential, multi-nationals are already tapping into it – and yet India lacks its own production base, its indigenous brands, its own manufacturing ethos and identity.

Second, my interaction with e-retail start-up, Mebelkart's CEO, Rahul Agrawal. He notes how disposable income in the hands of the young generation is driving the market, and how the modern day Indian customer is demanding clarity and transparency in material, design, finish, quality and cost. But he regrets that although e-commerce has opened vast opportunities for growth and diversification, not many traditional furniture manufacturers are rising up to the challenges.

On the other hand, he observes, non-traditional furniture manufacturers and first-time entrepreneurs have grabbed the challenges by their collars and shown remarkable results. Which leads me to think: Why is the industry so slow to change? Perhaps we have become mere manufacturers and suppliers, with little application of market analyses, business acumen and a visionary's foresight? The answer, dear readers, lies within us all!

There is good news too! 'Would Wood' is a new project, with headquarters in Stockholm (Sweden) that proposes to establish a consortium for developing integrated material and production concepts for large-scale additive manufacture of advanced wood-based 3-D structures. Its goal is furniture and structural elements and, in the long term, medium to large-scale construction projects for the sustainable cities of the future.

This time around, we have three articles on design and finishing. The common thread running through them is the sheer beauty and simplicity of each project: be it a hotel wardrobe, or transformation of an abandoned school building in the Netherlands, or even the proposed 53-metre-tall, 18-storey hostel building for the University of British Columbia in Canada. Although suited for vastly different structures and purposes, their design strategies are still firmly rooted in the organic. Until next time!

**Dhananjay Sardeshpande**



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# Fevicol Adhesive Solutions for Woodworking Applications



## Fevicol Hotmelt Products

Fevicol's range of edge banding adhesives has several options for manual as well as automatic machine applications. All the products provide good adhesion properties with excellent resistance against heat ,cold, moisture and oxidation.

Fevicol Hotmelt AMT Transparent (unfilled) & Fevicol Hotmelt AMT Clear (filled) are ethylene vinyl acetate (EVA) based thermoplastic adhesives recommended for throughfeed edge banders. They can be used with PVC, PP, ABS, veneer, polyester or melamine resin edge bands. Fevicol Hotmelt 382 (filled) Fevicol Hotmelt MNL Clear (filled) & Fevicol Hotmelt MNL Transparent (unfilled) are specially designed for manual edge banding machines. It can be used to apply PVC, HPL, ABS or solid wood onto MDF or particle board.



## Fevicol SWR Range

Specially designed for the handicraft industry, this Polyvinyl Acetate based white adhesive meets the DIN EN 204 Stress Group D3 Standard. It is suitable for all types of wood working applications and provides very high water resistance and excellent bonding in lamination with all grades of wood, even in high humidity areas. Fevicol SWR Plus is specially designed for application in cold weather conditions. SWR EQ has even better cold weather performance and can achieve D4 standard by adding 5% isocyanate. SWR LV has very low viscosity. All are non-flammable and non-toxic with REACH Compliance, Low VOC (Volatile Organic Compound) Certification and Free Formaldehyde Certification.

## Fevicol Probond

This water/synthetic resin based emulsion adhesive is suitable for lamination of primer coated PVC sheet to MDF. It is also used for manual edge banding of primer coated PVC Strip to MDF, particleboard, ply etc without using any edgebanding machine, making it highly economical. It has excellent bonding compared to solvent based adhesives, as well as high heat resistance, easy applicability and low VOC



## Fevicol SH

The classic PVC white glue for wood to wood bonding features unsurpassed bonding strength, good resistance to water and heat, higher coverage and good value for money. It is not only a leading brand in India, but also the most successful brand in the world in this segment, being exported to over 50 countries.



## Fevicol SP Range

This range of sprayable, synthetic rubber based solvent borne contact adhesives can permanently bond painted steel, plywood, chipboard, PU foam, muslin, foam rubber, felt, fabric, leather or many other materials. SP-4 is the basic version. SP-5 is specially designed for the automotive industry and is also used to make writing boards using honeycomb cardboard and white laminates. SP-6 also has high heat resistance.

## Membrane Press Range

Fevicol Membrane PU is a solvent based polyurethane contact adhesive used to bond PVC foil to MDF, plywood or other materials. It is ideal for door manufacturing, with low activation temperature, fast drying time and good bond strength.



Fevicol Membrane Press Star 2K is a two-component water based synthetic adhesive used to bond PVC film laminate to wood based panels in the modular furniture, modular kitchen and doors industries. It has excellent heat resistance, low activation temperature and high green tack. It is non toxic and non flammable.

## Fevicol Membrane Press Adhesive LC.

Fevicol Membrane Press Adhesive LC is a water based adhesive, specially designed for applications in PVC moulded doors. The unique formulation ensures high green tack resulting in strong bonds on difficult substrates. The product does not release any harmful emission and is safe for users with no adverse effect on the environment.



The product can be easily applied using an air compressed spray gun. Its distinctive features ensure effective deposition on the substrate resulting in higher coverage. Since the adhesive is water based the spray gun can be cleaned with tap water. When used with 5% Membrane Press Hardener the heat & water resistance properties improve vastly. This product bonds PVC to most of the wood substrates like MDF, particle board etc. The mixture with hardener has a pot life of 3 to 4 hours. Higher coverage of 6 to 7 doors compared to 4 or 5 doors in solvent based systems. No volatile losses in this water based system.



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# Improving work space

According to Festool, a good tool should have balanced power ratio, along with weight, compact design and intuitive operation

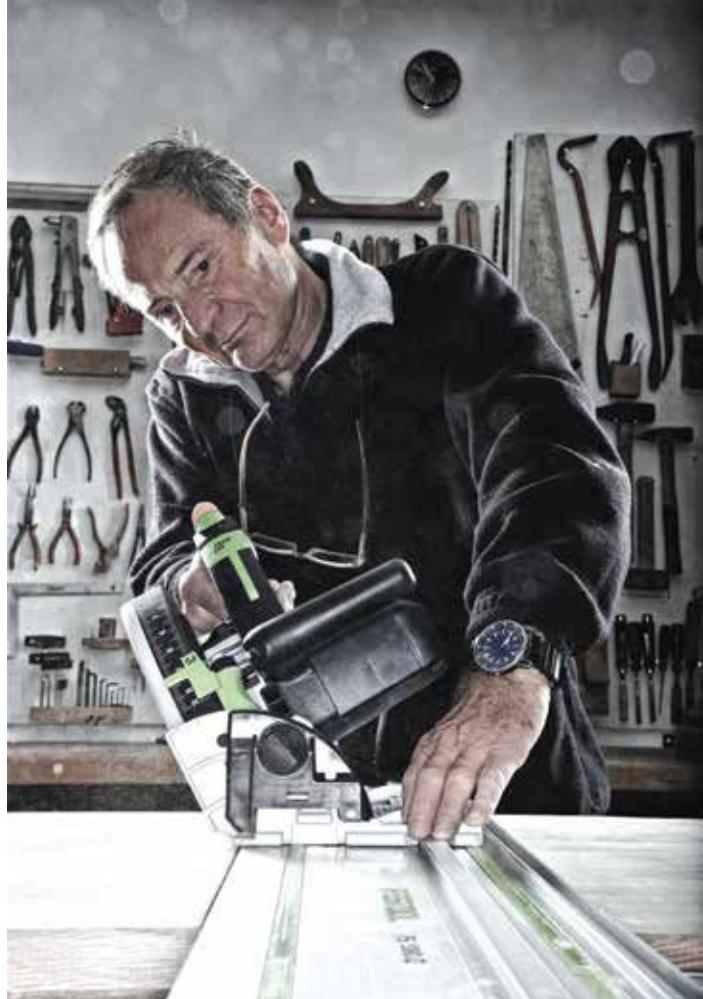
When a piece of wood becomes a deadly projectile: that was a headline that actually appeared as the title of an article in a specialist magazine for occupational health and safety! It is formulated in a particularly dramatic way to highlight the dangers that tradesmen can face during a normal working day.

Nothing new for Festool, and a good enough reason to focus even more intensively on the issue of health and safety. The aim is not to create a climate of fear, but rather promote awareness for well-designed, sophisticated detail solutions that make a significant contribution to improving health and safety of tradesmen.

In addition to accident prevention, the company also attaches great importance to aspects such as ergonomic working, a clean working environment and concepts for the effortless transportation of tools and working materials.

Festool makes reference to a study carried out in 2011 of injured body parts by the German Industrial Employers' Liability Insurance Association for wood and metal, which states that 48.9% of all industrial accidents occur in the handcraft sector, including breaks, sprains, contusions and lacerations.

It uses various examples such as the guide rail, which prevents the tool from tipping or slipping, and the safety brake, which stops the saw blade in seconds to show how such accidents can be avoided.



*The safety brake and slip-resistant adhesive cushion strips on the TS 55R plunge-cut saw guarantee safe working progress.*



*The Rotex RO 90-DX: designed perfectly to fit the hand.*



*No problem with the compact design and low weight of the OF 1010 router, even in one-handed operation.*

#### **Good ergonomics**

Festool placed the emphasis on safety when developing the new plunge-cut saw. Although a spacer wedge is no longer a statutory component and, therefore, considered superfluous by most manufacturers, it has decided to redefine the spacer wedge in the form of an intelligent guide wedge.

The guide wedge positioned in front of the saw blade was fitted to the new TS 55R plunge-cut saw and, like the kickback stop, prevents the saw blade from seizing.

Better ergonomics result in easier overhead work, relief of the skeletal muscles and a natural hand position and posture that are capable of protecting the health of the user and increasing working safety and working endurance.

According to a work absence report from the University of Bielefeld, back complaints are the most frequent cause of a long-term incapacity to work.

Festool also draws attention to a series of clever system solutions such as the SYS-Roll Systainer transporter with a maximum load capacity of 100 kg and



*The SYS-Roll Systainer transporter can take up to 100 kg on rollers, save energy and relieve strain on the back.*

large rollers or the Kapex base frame that make the working of the user much easier. Both are representative of quick, effortless transportation.

#### **Cleanliness first**

A clean working environment is becoming an increasingly important aspect of working life. According to independent calculations, a joinery with five employees can generate up to 44 wheelbarrow loads of different kinds of dust per year.

Classic sanding, sawing and routing work generates both dust and chips. Mobile dust extractors maintain a clean work space in workshops and on assembly sites, which gives customers an impression of organisation and professionalism.

It quickly becomes clear that an effective dust extraction system is a worthwhile sustainable investment that protects the health of employees and pays dividends in the long term.



*An automatic dust extraction system ensures a clean work space.*



# New single-pack coatings impart chemical resistance

The performance of water-borne single pack acrylic furniture finishes has continually improved. Modern finishes can provide fast drying and block resistance, but their solvent and stain resistance is limited.

A self-cross-linking, water-borne acrylic polymer gave good resistance properties in clear coats and was modified to

enhance performance in pigmented finishes. Water-borne one-component acrylic systems have grown in popularity with furniture paint applicators in recent years because of their ease of use and good cost profile.

One major area where further performance improvements are required is in chemical resistance, particularly in

respect of solvents and highly staining chemicals. For a long time this could only be achieved with two-component or UV cross-linkable systems.

A new generation of 1K resins in a well-designed formulation now makes it possible to obtain coatings with improved chemical resistance to alcohol and coffee, even in pigmented systems.



## ROVER SFT

# Nesting cell technology

Rover S FT is the new gantry type machining center from Biesse, designed for Nesting applications of wood and wood based materials, plastic based and non ferrous materials.

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- Machine customisation depending on different production requirements**



Rover S FT Video

Good hardness development and early block resistance, needed for industrial coating application line speeds, are also maintained.

The newly developed experimental materials, as well as the commercial reference systems, were formulated in the same general formulation structure using the same raw materials.

#### Chemical resistance

The chemical resistance properties were tested following an internal procedure derived from the EN 12720 standard using a 1-to-5 rating scale. Wood test panels were prepared by applying two successive layers of approximately 200 µm wet film thickness (70–80 µm total DFT) either by draw-down or air-assisted spray directly on spruce wood panels.

Panels were then dried for two weeks at 23 °C and 50% relative humidity before testing.

The stackability test is used to determine the tendency of coated surfaces to stick to each other (block) when stacked or placed in contact with each other under pressure. 150 µm wet film thickness coatings are drawn down on aluminium plates and dried for 30 seconds at room temperature before placing in an oven set at 40 °C for 6 minutes.

At the end of the drying period, the panels are taken out of the oven and, after 30 seconds at room temperature, the panels are placed in contact with each other (face to face laid flat) and a weight of 200 gram per square cm is applied overnight.

The panels are manually taken apart in order to assess their tendency to stick together and blocking tendency.

#### Novel mechanism

Traditionally the mechanical and chemical resistance properties of binders can be enhanced through various cross-linking mechanisms that can be of the inorganic or organic type.

Conventional cross-linking mechanisms have shown limited enhancement of the chemical resistance properties, often combined with limitations in long term emulsion polymer stability, VOC levels in the coating or aesthetic properties.

A new self-cross-linkable water-borne acrylic polymer (EXA1) incorporating a novel cross-linking mechanism was developed to further improve chemical resistance, particularly against solvents and highly staining chemicals.

It was benchmarked in clear topcoat formulations applied over a dark colour pigmented primer against typical one-component waterborne acrylic commercial market reference benchmarks recommended for this application.

Typical clear formulations were used to formulate the polymers that only the new experimental self-cross-linkable water-borne acrylic polymer with the novel cross-linking mechanism can bring the required balance of water, alcohol and early block resistance properties at low VOC levels.

It outperformed commercial reference binders particularly recommended for their excellent chemical resistance properties.

The chemical resistance properties obtained with the novel binder in a glossy topcoat formulation were checked in low-gloss flattened clear formulations after developing an appropriate matting

agent package better suited to this new technology. These low-gloss finishes represent a major portion of furniture topcoats.

#### Encouraging results

Interactive chemistry improves pigmented finishes and following a similar approach the chemical (alcohol) and stain (coffee) resistance properties of experimental polymer EXA1 demonstrated good resistance and early block resistance properties.

This triggered the development of a second experimental acrylic binder (EXA2) more specifically addressing the need for improved stain (coffee) resistance properties in pigmented applications. This new acrylic incorporates an interactive binder/pigment chemistry based on the strong affinity of the polymeric network to the inorganic pigment via specific polymer backbone functionalities.

Extenders are widely used in this type of coating applications to reduce the formulation cost as well as improve some specific properties such as sandability and blocking resistance. It is also well known that stain resistance may be reduced by the use of extenders.

Thanks to its specific film formation properties, the new acrylic was more robust than market commercial benchmarks in delivering more consistent performance across various pigment / extender combinations.

This second binder showed improved performance, but care may be needed in selecting matting and other additives to allow the best resistance properties to be developed. (*Courtesy: www.european-coatings.com*)



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# Would Wood bear fruit?



*Gemini, a stunning wood cocoon chaise lounge made on a CNC routers and 3D printer, has been acquired by the San Francisco Museum of Modern Art. It was designed by Ms. Neri Oxman, a professor at the Massachusetts Institute of Technology.*



New project aims to establish a consortium for developing integrated material, production concepts for large-scale additive manufacture of advanced wood-based 3-D structures

A research project into 3-D printing of wood furniture and components is underway in Europe. Launched by Vinnova, a Swedish government agency charged with developing new, high value forest products, the 3-D wood printing project is being managed by Innventia, a research organisation located in Stockholm, under an initiative called 'Would Wood'.

The project proposes to establish a consortium for developing integrated material and production concepts for large-scale additive manufacture of advanced wood-based 3-D structures. The goal, says Innventia, is furniture and structural elements and, in the long term, medium to large-scale construction projects for the sustainable cities of the future.

'Would Wood' is one of 31 new projects being financed by the government, and originated in a proposal application from three young architects and is made up of an interdisciplinary group of businesses, colleges, students, designers and architects.

The White architectural practice, the KTH School of Architecture and the Mechatronics group at Machine Design, KTH, as well as Innventia, are some of the names behind the initiative.

The project is being prime moved and coordinated by Innventia, which has also developed wood-lignum based materials including carbon fibre and nano-cellulose materials and aims to develop sustainable materials of the future.

The primary goal is to start by developing new 3D printing technologies and wood-based materials capable of manufacturing furnishings and small-scale structural elements. However, they envision longer-term goals that will include scaling up their research to produce medium- and large-scale 3D printed wood structures and construction projects that can be used to make future cities more sustainable and eco-friendly.

### New materials

Another goal of the project is to develop ways that 3D printing materials can be produced locally rather than imported and would not require large stockpiles of materials to be stored. This will reduce waste by removing the need to produce materials at high rates, which could also reduce the impact on the environment.

It also allows local customers to be sure that the materials are high-quality and

will be manufactured in facilities with excellent working conditions.

New materials cannot be developed optimally if they have to be adapted to current manufacturing processes; which is why it is important that the production of the new innovative materials is organised in close cooperation with the development of new manufacturing processes.

### What's 3D printing?

3D printing, also known as additive manufacturing, refers to a process for making a physical object from a three-dimensional digital model, typically by laying down many successive thin layers of a material.

These layers of material are formed under computer control to create an object. The objects can be of almost any shape or geometry and are produced from a 3D model or other electronic data source. A 3D printer is a type of industrial robot.

Producing materials locally, to order, without large stocks, waste or middlemen and thus ensuring quality and good working conditions is also a key driver in the development of 3D-printing.

The project also involves an innovative wood-based material for 3D printing and its manufacturing technique. The challenge is in modernising the current production technique for wood products, enabling it to be adapted for 3D printing.

'Would Wood' covers the development of materials, robotics and additive manufacturing processes, as well as design tools for developing sustainable wood-based composites that are suitable for medium and large-scale 3D printing.

The ultimate aim is to radically change the way anything – right from furniture, accessories and structural elements to entire buildings – is produced. In this way, the idea is to lay the groundwork for a new chain of products and services based on 3D-printed wood.

### Elemental inks

Futurologists believe that 3D printing signals the beginning of a third industrial revolution, succeeding the production line assembly that dominated manufacturing from the late 19th century.

Using the power of the Internet, it may eventually be possible to send a blueprint of any product to any place in the world to be replicated by a 3D printer with "elemental inks" capable of being combined into any material substance of any desired form.

The industry is still in a nascent stage but, as many scientists agree, this "technology of the future" has endless scope for application in almost every area of human existence, including replication of human organs.

Scientists working on the project are convinced that this technology will eventually change the way we look at wallpapers of sustainability, including quality of life, environment, logistics, materials strategies, energy and transportation and see 3D printed wood as an innovative, sustainable and obvious material in the bio-based economy of the future.

By working across industry boundaries in design and architecture, robotics and mechatronics, and materials engineering, the psychology of perception and the forestry industry, this project will generate inter-disciplinary interaction and exchange of knowledge, experience and ideas.

'Would Wood' also looks to collaborate with other initiatives that are looking at additive manufacturing processes.

*-Courtesy: 3dprint.com & Confederation of Timber Industries*

# India's demographics favour growth



**This is the third in a series of opinion articles from thought and practice leaders from the woodworking industry in the country. For the earlier articles, look up the January–February and March–April 2016 issues of *WoodNews* (<http://woodnews.in/archive.php>).**

I am frequently asked the question – and sometimes even mildly confronted by many people, primarily the ones who are either operating in the furniture space or intend to enter the industry – as to why the Indian furniture industry, and in particular the modular furniture segment, is not growing at the desired pace.

Sometimes the question is asked differently: What is the real size of the industry? What percentage of it is modular furniture? What is the size of the kitchen industry?

The question could be raised in many forms, but each one is directed towards ascertaining the "attractiveness" of the furniture industry and reasons behind the missing large brands in this space.

Before answering the basic question, we need to understand the industry construct. The question has three important dimensions: development of

the industry and global perspective and trends; reasons for the not-so-impressive growth rate; and how do Indian factories scale up profitably.

Furniture making is a profession that has been practised by mankind since early civilisation and has undergone many stages of evolution. Initially it was perfected by a section of society who either produced and traded in an entrepreneurial set-up, or built furniture on daily wages for the person who hired them. Skill sets were transferred from one generation to the next.

#### India story

India was no different. But it virtually remained at the rudimentary stage till the late 1980s. Each city had small furniture shops to meet the requirements of the local population, partly by offering standard options and partly by custom-built pieces.

People preferred to hire carpenters to build and install furniture on a daily wage basis. Obviously this does not qualify to be called an industry by any measure.

This was diametrically opposite to the Western world, where furniture had become largely standardised and was being produced on modern machines in industrialised and automated environments.

Modern manufacturing practices, as applicable in any automobile or aircraft, are more or less equally followed in a furniture factory.

Small enterprises in India started serial production of furniture in early 1990s, but the production of modular furniture started only late in that decade, when Gautier, in a joint-venture with Style Spa, opened many showrooms to sell ready-to-assemble furniture for the home segment. Godrej, BP Ergo and a

few others also started serial production of office furniture.

More recently e-retailers have created even more buzz in this space, and the industry is finally coming of age. Furniture has evolved into a lifestyle product, rather than an instrument of utility. Many Indian e-commerce portals have been spectacularly successful in tapping into the pool of tech-savvy consumers to grow the market.

The Indian furniture market, worth US\$ 10 billion, is second only to Vietnam in percentile growth. It is also growing at around 5-6% per annum; but it is still predominantly made of conventional solid-wood, carpenter-made furniture.

Many large furniture manufactures from Europe and South-East Asia are exerting to tap the market in all three segments: kitchen and bath, living and bedrooms, office and commercial spaces. Many enterprising Indians are also importing furniture from China, Malaysia and even modular kitchens from Europe.

New players are entering the B2B market every day, be it machinery manufacturers or raw material, components and consumables suppliers. These entities are also investing a lot in popularising new type of furniture, as well as facilitating existing manufacturers to scale up by adopting modern materials and technology.

Last, but most important, the demographics in the country augur well for the continuous rise in furniture consumption. Young and double-income couples are well exposed to modern living conveniences abroad and want

similar house furniture. That makes the furniture manufacturing sector a very attractive business and investment proposition for many decades to come!

#### Tipping point

Despite all these factors, modular furniture does not make for even 6% of the total furniture output. Within the modular industry, barring Godrej, there is hardly any company with a turnover greater than US\$ 100 million. This is an unusual situation in an industry which is as big as US\$ 18 billion (Rs. 1,00,000 crore). This poses the question: why is the modular furniture industry not growing at a better speed?

The primary reason was a decision by Indian political leadership that kept such manufacturing restricted to the small scale sector. The industry was de-

reserved and declared open to large scale investment as recently as in April 2015.

It takes a while for large capital expenditure to come in, especially because the sector never caught the fancy of big industrial establishments. But it is now expected sooner than later. That will work as the "tipping point".

And although there is definite shift from conventional to modular furniture, the pace is slow. India has not witnessed any major

large-ticket investments in the last few years. Most manufacturing units have limited investments and moderate production volumes.

#### Get professional

The tendency to somehow complete a

job is making most players turnkey suppliers, but not specialists. There were a few specialists in the office segment but many of them have also branched out in the home segment due to limited per unit profitability and longer credit periods.

Dimensional differences can be understood by the simple fact that the largest kitchen company in the world (Nobilis) does about 2,500 kitchens in a single shift per day. There is hardly any Indian kitchen manufacturer doing that type of volume even in one year!

If attractive prices are offered to the end consumer, s/he will find higher perceived value, resulting in higher demand and higher profits for the manufacturer. But this is not the case in India.

High levels of customisation and non-standardisation of products limits efficiencies on the one hand and imposes higher production costs on the other. It also does not allow both the producer and the buyer to get full value for their money.

Short-sighted furniture manufacturers succumb to unwarranted pressure by customers to offer low prices. This makes the manufacturers compromise on quality, which in turn makes the customers to go through a not-so-good experience with delivery schedules, materials or specifications.

Sooner or later the customer realises the gap between promise and performance: s/he gets disenchanted as well as circumspect in all future dealings.

#### Trained workforce

Non-availability of trained professionals on the factory floor, as well as managerial level, always tops any manufacturer's wish-list. The root cause is hidden in the very strength of the industry: it is a negative working capital industry. One sells first and produces later!

Generally all retail customers pay in advance before taking delivery of goods, ▶

**“ Per capita furniture consumption tends to rise with growth of GDP. Developed countries consume up to US\$ 400 worth of furniture each year. In India, this consumption has been hovering around US\$ 20 per annum. But the demographics (yuppies with disposable incomes) are in favour of growth of the industry.**

while supplies come on credit. It makes the furniture business highly profitable. Low entry-level barriers are the reason why we have thousands of units in India with mid-size turnovers.

But it has its own fallout – limited availability of professionals who can make things happen and help the organisation to scale up profitably. Less attractive employment opportunities for well qualified persons makes them to join other industries.

It is nobody's guess that the furniture will be an attractive manufacturing and investment sectors for many years to come. We know the problems adversely impacting its growth. We only have to identify the right solutions. Among them are:

- **Set the goals right:** Recently I was talking to a person who had invested in a kitchen company with a turnover of less than Rs. 25 core. I asked him his long-term vision. He wanted to reach Rs. 600-core turnover in 5 years' time.

But he did not have an answer to how many kitchens he would need to sell in a year to reach that turnover! He also did not know what he would like to be known for. For example, Ikea is known for value pricing.

- **Right capacities:** Let us take the same example forward. To reach a Rs. 600-crore turnover one needs to sell around 2,500 kitchens every month at a price point of around Rs 2 lakh each. But the machines and processes required to produce 100 kitchens per day are totally different than those suited to manufacturing

10 kitchens a month.

- **Mass customisation:** No customer wants to be dictated. He might not be aware of all his options, but he knows his requirements. The job of the salesman is to help him understand his real present and future needs and support the customer to arrive at the right solution.

The best way to reach that objective without affecting the manufacturer's profitability is mass customisation. For example we can offer a wardrobe with minimum 2000 mm height, and thereafter rising in multiples of 400 mm, being the imaginary gap between two shelves.

This will help the customer to get his desired wardrobe height without bringing too much pressure on the manufacturer to invest time on each design. Likewise, internal shelving could be at definite pace with an option to adjust individual heights to personalize the same.

- **Delivering value:** 'Free' is the most important word in this world. Offer a little more than what the customer has bargained for. Call up one month after installing a kitchen to ascertain if everything is working fine: it will delight the customer and s/he will become your advocate. A strong orientation towards after-sales service also helps a lot.

- **Aesthetics Vs functionality:** Furniture has become a lifestyle product, and it is fast becoming a social space for family and friends, and a marker of

status. People care more about the aesthetics of their kitchen now, and do not view it as a purely functional space at home.

Therefore, to satisfy their aspirations, the furniture solutions have to provide both high quality design as well as functionality. Indian customers are ready to invest in reasonable premium brands when they get value for the money they spend. Ergonomics and a little emphasis on cooking/living habits can make wonders.

For example, adjust the height of the kitchen base platform to make it ergonomically efficient for the working lady. Likewise provide push-to-open mechanism in the lofts attached to the wardrobe to make the storage space easily accessible.

- **Constantly innovate:** There is no dearth of people in India who would happily spend extra bucks if they are given a modular kitchen comprising technically advanced components such as fittings, hardware, etc. So churning out innovative solutions will be a constant and integral need for this industry to acknowledge and implement.

The industry is offering a never-before opportunity to create conveniences for the customer and benefiting from that process. The risk-to-reward ratio is extremely favourable. We just have to concentrate on creating the value for our customers by resolving issues of missing economies of scale and using the concept of mass customization to satisfy price-conscious Indian consumers.

*– The columnist is Managing Director (South Asia and Middle East) of Hettich India Pvt. Ltd. The views expressed by him here are personal and do not necessarily represent those of his company.*

**“**A customer might not be aware of all his/her options, but s/he knows his requirements. Our job should be to help him/her understand the real present and future needs and arrive at the right solution. The best way to reach that objective without affecting the manufacturer's profitability is mass customisation.



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# Mebelkart seeks to change market paradigm



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Bangalore-based start-up Mebelkart, which is competing with e-commerce platforms such as Pepperfry, Fabfurnish and Urban Ladder for gross merchandise value, is gearing up to connect the entire home furniture and furnishing eco-system. Mebelkart's CEO, **Mr. Rahul Agrawal**, tells *WoodNews* how:

*Top guns: Mebelkart's head of operations, Nikhil Saraf (left), graduated from BITS-Pilani and is a first-generation furniture manufacturer in Delhi. Chief executive Rahul Agrawal (centre) is an IIT-Kanpur graduate, and the tech-guru, Ranjeet Vimal (right), earned his degree from IIT-Bombay.*



The story actually begins in 2011, when Rahul graduated in Electronics from IIT-Kanpur, (Mebelkart CTO) Ranjeet Vimal earned his degree from IIT-Bombay, and (Mebelkart COO) Nikhil Saraf passed out of BITS-Pilani.

Rahul met Ranjeet and Nikhil when working for Picsean Media in Bangalore, where they formed a research and development team. The key word for the trio at Picsean, a multi-national digital publisher with apps for tablets and smart phones, was "interactive".

Even as an under-graduate, Rahul founded the 'Young Engineers', a group that developed cell phone gaming and apps, held gaming development workshops for students in colleges across the country, "added value" to the campaigns of Pizza Hut and Domino's Pizza, and walked away with "cool pocket money"!

#### Why furniture

Among the three, only Nikhil's family is first-generation furniture manufacturers, based in Delhi. Neither Rahul nor Ranjeet had a brush with furniture or manufacturing until 2012, when they got together to launch Mebelkart.

Rahul notes that, by and large, the furniture industry in India has no prominent brand, no fixed cost for furniture verticals, no warranty, no knowledge of materials, no organised/elected agency to represent the manufacturing sector, and no sales and marketing infrastructure to speak of.

Instead of being daunted by these very flaws, the trio decided to take the challenge head on and make a successful business out of it. What Mebelkart offers, like its competitors, is its technology-driven online marketplace and facilitation of marketing strategies that convert into real sales.

"The Internet is a disruptive force, as we have already seen in so many fields of life and commerce. The furniture industry is the most affected by it, because it is still unorganised," Rahul notes, and adds, "But its potential is huge, and that is what this industry must understand. It must grab the opportunity, surmount challenges and exploit its capacities."





Mebelkart's portfolio has expanded to more than 3.5 lakh products, meeting demands across more than 200 cities.

Considering that the Indian furniture industry is pegged at US\$ 25 billion, Rahul notes, "It is time to get organised, mechanised, market- and quality-conscious. And what better opportunity than that afforded by cost-effective e-commerce platforms?"

### The team

Starting from a dozen-odd employees just 4 years ago, the Mebelkart team has grown to more than 450 pair of hands. Apart from its base in Bangalore, it has opened sourcing offices in Nagpur and Mumbai, and has its own warehouse in Jodhpur.

Starting with chair and bean bag manufacturers in Bangalore, Mebelkart's furniture and furnishing portfolio has expanded to more than 3.5 lakh products, sourced from more than 1,500 manufacturers across the country, and meeting demands across more than 200 cities.

Its Bangalore call centre (sales and service) is manned by 10 people, while 40 furniture and interior designers constantly endeavour to give the customer experiential views of the products they intend to buy. Mebelkart

has gone a step ahead by engaging with potential and existing customers to help them design interiors and other spaces around homes.

There are more than 10 quality control specialists spread across the country: they are tasked with factory and material inspection, generating bills of material and quantities from manufacturers.

Another 25-odd people are similarly spread across metros, Tier-II and Tier-III cities and towns to help suppliers prepare attractive catalogues, product videos and 3D rendering for online display.

An analytics team in Bangalore is always at work to study social and market trends, to generate demand matrix over time, to avoid a demand-supply gap or mismatch.

A business development team has been put into place to tap others segments of the growing market – colleges, hospitals, restaurants, etc. – who also benefit from the interior design consultancy from Mebelkart.

Mebelkart has embarked on a host of interior design assignments, with some big construction companies approaching it for their projects. It aims to create a network of 30,000 interior designers to

meet the growing demand from the Indian market.

"When somebody shifts into a new home they don't know whom to hire as an interior designer. We solve that problem," says Rahul. "We want to make designing homes and furnishings affordable."

Ultimately, Rahul and his co-founder friends aim to integrate the ecosystem: manufacturers, home builders, architects and interior designers, material suppliers and financers.

### Market insights

Rahul has some interesting figures and observations. The new generation of Indians have disposable money and spend more on homes (as a percentage of their incomes) than on food and clothing, as compared to their counterparts in the Developed World, including the United States.

However, the modern day Indian customer needs clarity and transparency in terms of the material used in the product – even if it is cheap – its design, finish, quality and cost. If that is denied or is lacking, s/he will turn to another source for his/her needs.

Good design and costly high-end products are no more a luxury; it is a growing market demand.





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*IndiaWood and DelhiWood are great events, great opportunities for the entire furniture industry eco-system players because they all get to interact here: the enablers, suppliers, manufacturers, consumers and competitors, says Rahul Agrawal.*

The early adopters of the e-retail model went for low-ticket products, such as shoe racks and book shelves, costing around Rs. 2,500 apiece. But with trust in e-commerce portals growing, the average buy is now around Rs. 50,000 for sofas or dining sets. Mebelkart seeks to push this into the range of lakhs of rupees, by adding kitchens, flooring and tiling.

Around the year 2012, more than 80% of all furniture sold online in India used to be solid wood. About 4 years since it started, Mebelkart sees the share of solid wood (mainly shisham, mango and rubberwood) down to 30%, whereas panel-based furniture accounts for 60% of its total sales.

There are newer avenues opening up too! "Earlier people invested in furniture to last a lifetime; now most would want to replace it every 4 years or so," says Rahul. Then there is the relatively new

concept of renting good-quality furniture, rather than buying it.

People in Tier-II and Tier-III cities and towns are also looking to factory-made products, rather than leave it to the depleting armies of self-styled carpenters. Rahul stresses, "Good design and high-cost, high-end products are no more a luxury; it is a growing market demand."

#### E-retail model

"The e-commerce business is network-driven. If you don't know the enablers (machinery manufacturers) and suppliers, designers and manufacturers, you cannot even think of making it big," Rahul says.

But furniture as a product cannot be shipped over long distances because of its bulk, cost of logistics (20%) and storage, and chances of breakage (10%) or misalignment of its parts.

To reduce the damage, bring down shipping costs and reduce dependence on warehousing, Mebelkart farms out its orders to manufacturers closest to the end customer. The savings are passed on to the buyer, making e-retail more attractive in terms of cost.

Manufacturers are chosen after their factories and facilities are approved by the quality control inspectors. They are also judged on the basis of their quality (of test products), delivery schedules, responsiveness to problem resolution and warranties.

"The attitude of a manufacturer is also very important," says Rahul. E-retail platforms bring in large orders, open up more avenues and we even offer finance schemes for manufacturers to upgrade. However, he finds many factories not taking up the challenge to upgrade, or to upscale production, or maintain quality.

On the other hand, he says, non-traditional furniture manufacturers have done well for themselves, with help from Mebelkart's finance options. In particular young, first-time entrepreneurs have shown remarkable results for Mebelkart.

As for the capabilities of Indian furniture manufacturers, Rahul is categorical in stating that they can match – even do

better than – those from furniture exporting nations such as Malaysia and China. "Indians even have the price advantage, because their logistics costs are low, and they do not have to pay import duties," he notes.

#### Boosting efficiency

So what is in it for furniture factories? Rahul makes it clear that Mebelkart is an advocate of its customers. "We are not just a selling platform; we are very customer-focussed; we negotiate on their behalf; we ensure quality for their satisfaction," he says.

Physical retail spaces are to nobody's advantage: neither the buyer nor the supplier. This is because a showroom management would have to mark up prices of their products, to pay for rentals, warehousing, logistics and establishment overheads. Moreover, there is the limitation of space: only a certain number of products can be displayed at a time.

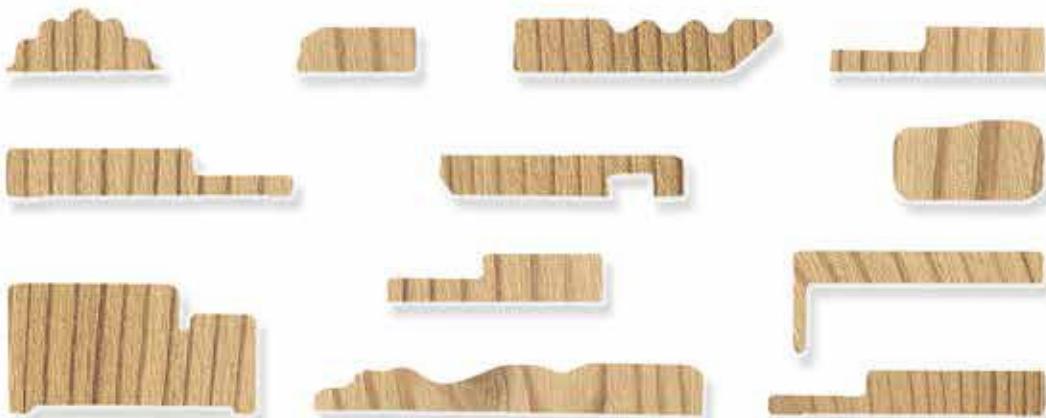
Giving an example of 100 people turning up at a furniture retail store on a given day, he says 20% would turn out to be window shoppers, 60% would be too price-sensitive, another 15% would bargain very hard, a small percentage of that would be successful, and only 5% would be ready buyers, if they found what they were looking for.

"As an e-platform Mebelkart is not limited by physical space, warehousing costs or dealing with dead stock. We also don't block the cash flow of the supplier; in fact the invoicing is done by the manufacturer. We have done away with redundancies by adopting the made-to-order model. We have also drastically reduced inefficiencies in design, finance and logistics. And we offer value for our customer's money," he explains.

But what about branding? "Of course, we are open to helping our suppliers with establishing their own brand name on Mebelkart," Rahul beams. "But there has to be consistency in design, quality and finishing, timelines and responsiveness to customer's concerns."

*– as told to Dhananjay Sardeshpande*

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# O2O marketing model here to stay



Messrs Mahesh (L) and Rahul Shah.

From showroom spaces to online e-commerce portals, to a “hybrid” model of online-cum-offline: that seems to be the trajectory of future furniture marketing and sales business in the country.

Recently Godrej Interio tied up with Flipkart to include its furniture range on the large e-commerce portal. The country's largest offline retailer, Future Retail, snapped up the loss-making FabFurnish, which will continue to get

business from Future Retail-owned HomeTown.

Now, Bangalore-based entrepreneurs and long-time furniture industry veterans, Messrs. Mahesh and Rahul Shah (of Elenza Kitchens fame), are launching their own modular home furniture, under the brand name Welfurn, through the “online-to-offline” channel in June this year.

Their offerings will include counter-tops, cabinets, shutters, accessories and

Industry veterans Mahesh and Rahul Shah of Bangalore are launching Welfurn, their new modular home furniture brand, with seed funding of US\$ 500,000, using the “online-to-offline” marketing model

appliances for kitchens; beds, closets, dressers and wardrobes for bedrooms; book shelves, entertainment units, shoe racks and cabinets (storage, study and utility) for living spaces.

It promises 21-day delivery, transparent pricing, top-of-the-line production technology and a 5-year warranty to its clients. The June launch will involve five “experience studios” in Bangalore. But the model will be scaled up in phases across India, to make Welfurn a multi-

city, multi-store, multi-factory furniture business venture, says Mahesh.

#### **Domain expertise**

The US\$ 500,000 Welfurn project is fully funded by Mahesh and Rahul. They have also acquired the software team and brought the on board a technology partners.

Mahesh and Rahul – who have more than three decades' experience in the furniture industry between them – feel that if the industry has to grow, manufacturers cannot wait for e-commerce players to set the terms and conditions.

"We have already demonstrated to the industry and the market, time and again, our proof of concept and have succeeded in going beyond prototyping. It is time for people with domain expertise to step in and employ digital technology to set up marketing spaces in the virtual world," Mahesh says.

It is exactly this opportunity that the duo has grabbed, after investing years in developing technology, sharing from learning experiences and pooling their own financial resources to embark on this venture.

The heart of Welfurn's assets-lean operations will be aggregation of designing, costing, material management and marketing technologies. It is a plug-in called WishBoard: an ultra-vast library of designs that connects with an easy-to-operate autoCAD software that helps the design partners generate 2D and 3D renderings for their clients, as well as providing on-the-spot reports on material and costing.

It took Mahesh and his core team more than 8 years to come up with the plug-in. "Every time we thought we had developed a sophisticated software, the paradigms in either the furniture

production or marketing or software designing fields changed," recollects Mahesh. "But this time we are ready with tomorrow's technology!"

While individual pieces of furniture will also sell, Welfurn intends engaging potential buyers with designing their entire interiors, with assistance from its design partners and stores.

#### **Win-win proposal**

What is it about design and experience "partners"? Welfurn intends engaging thousands of selected interior designers across the country on a project basis: they will draft, design and render advice to the leads forwarded to them from Welfurn's call centre.

Leads generated in Chennai, Mumbai or Kolkata will be dealt with in a similar manner: the empanelled designers in that locality/ region will take it forward to conclude interior design furniture sales! "The designer will be able to earn much more per project than if s/he were to work individually," Mahesh notes.

Welfurn will be an asset-free business, with only a call centre and in-house design, technology and analytics experts. While the designers will act as its sales force, the experience stores can also cross-sell other products: accessories or appliances.

"More than 80% of furniture showrooms across the country are in dire straits," says Mahesh. There are limited (often outdated) products on display, limited space for display, and limited footfalls.

"But when they partner with us, we provide them the leads, which they can convert into sales," Mahesh adds. "If I offer them some advice and initial training, I don't see a reason why stores will not benefit from my proposal."

As for production, Welfurn has on board a host of proven manufacturers and certified factories. "Between Rahul and me, we have enough brand pull and industry goodwill to rope in the best production factories," Mahesh notes.

#### **What's Welfurn looking for?**

- Design partners pan-India with experience, thirst for enterprise
- Furniture makers with successful operations, growth plans
- Furniture showrooms to successfully grow the O2O model
- Investors to scale up brand and operations across the country

#### *Interested?*

Email: [mahesh@welfurn.com](mailto:mahesh@welfurn.com).

#### **'Hybrid' model**

Gauging by the twists and turns that the market is going through, the entrepreneurs understood that discerning buyers of modern furniture also need a touch-and-feel experience to make up their minds.

Therefore, while the Welfurn website will attract interest and generate leads, it will be the "design partners" that will track buyers' exact needs and budgets. The "experience studios" will help buyers get a real-life experience of the products they intend to buy. And finally, Welfurn will deliver custom-made furniture to their homes.

"The online-to-offline switch" as Mahesh calls it, is a "hybrid" model between e-commerce marketplaces and real-life furniture showrooms. The venture's website ([welfurn.com](http://welfurn.com)) will also go live in June, displaying a vast array of furniture products.

# Furniture industry at cross-roads



*Although demand for local artisan furniture still exists, the growth is in imports because Indians seek contemporary designs in a modern world.*

**NSDC maps human resource and skill requirements for the furniture industry till year 2022**

India has a long and rich tradition of carpentry and furniture making going back many centuries. This, together with a large and diverse supply of timber, should have made the country one of the premier global suppliers of furniture and placed it in the forefront of the woodworking industry.

However, this is not the case, and smaller countries like Malaysia have leapfrogged ahead of India over the last

two decades. According to a recent study by Assocham, India has 1,420 registered furniture factories. Of these only 1,157 factories (20%) were in operation and this was primarily because of labour problems and lack of modernisation.

Forestry in India is a significant rural industry and a major environmental resource. India is one of the 10 most forest-rich countries of the world along with the Russian Federation, Brazil,



*Education in building and construction is part of the syllabus at the Melbourne Polytechnic in Australia.*

Canada, the United States and China. The Food and Agriculture Organisation (FAO) estimates India's forest cover to be about 68 million hectares, or 24% of the country's area.

The variety and distribution of forest vegetation is large – there are 600 species of hardwoods. The Indian market is accustomed to teak and other hardwoods that are perceived to be more resistant to termites, decay and are able to withstand the tropical climate. Teak wood is typically seen as a benchmark with respect to grade and prices of other wood species.

#### Furniture industry

As of 2015, the Indian furniture market was estimated to be worth US\$ 17,922 million (Rs. 65,000 crore) and employs around 5,00,000 workers. Wooden furniture accounts for US\$ 5,358 million, of which US\$ 852 million is imported.

India was the largest furniture importer in the world, with a 19% share in the furniture imports worldwide. Demand for furniture in India surged at 12% annual rate over 2007-2012, and subsequently increased at a rate of approximately 15% per annum. Imports are growing at the rate of 60% every year.

Approximately 85% of the furniture industry is in the unorganised sector,

while the remaining 15% comprises large manufacturers. However, this trend is perceptibly changing with the market moving more towards the organised segment.

This is marked by increasing customer preference for ready-made high-end, low-maintenance, quickly installable products, with customisation options. Home furniture is the largest segment in the Indian furniture market, accounting for about 65% of sales.

*Not only carpentry, India will need highly skilled labour in processing wood-based panels and manufacturing panel-based furniture.*



Realising the huge potential of the Indian market, large companies such as Sauder and Herman Miller (US), Lista (Switzerland), and Gautier (France) have entered the India market, while Indian corporates like Godrej are also gearing up to meet this growing demand.

India has also passed regulations that allow single-brand companies, such as Ikea, to open outlets without local partners. It has also allowed foreign multi-brand retailers, such as Wal-Mart stores and Carrefour SA, to own as much as 51% of retail outlets.

#### Labour market

But is Indian labour geared up for this emerging market? Furniture as a business in India is largely carried forward as a family venture. The tradition of fathers passing on skills to their progeny is slowly dying out as the younger generation is not inclined to enter this sector because of several employment options in other sectors, characterised by relative ease of work and better pay scales.

According to employment data with the National Sample Survey Organisation, 50% of the total employment in furniture manufacturing is concentrated in the five states of West Bengal, Uttar Pradesh, Maharashtra, Bihar and Gujarat. ▶

People in these states have no alternative employment opportunity and as they are minimally skilled, they find furniture and furnishing sector attractive. About 97% of the workforce involved in the furniture sector comprise of school drop-outs.

The furniture manufacturing sector currently employs over 4.11 million employees and is slated to employ more than 11.29 million by 2022. This implies additional creation of 7.2 million jobs in 2017-22.

An analysis of the breakup of work force across organised and unorganised segments indicates that the share of organised employment would increase from 5% in 2013 to 13% by 2022.

However, on the whole, the attractiveness of the sector as an employer is low. Being a largely unorganised sector, job role delineation is very narrow. For example, a carpenter will be involved in all aspects of manufacturing. Most players provide training to their workforce in-house at the time of induction into the organisation.

The training, in most cases, is provided only for a maximum period of a week and that too based on needs. Training needs again are more on machine operation, safety and retail skills.

Automation is leading to de-skilling and employers are not worried about the skills of floor employees. In their opinion, no pre-requisites are needed for anyone to become a floor employee. The real concern, according to them, is the skill set of technical people like production managers, designers, etc.

#### **Industry challenges**

Collaborative training needs to be encouraged in the sector. Due to increased automation, machine operation is driving production in the organised sector. Machines are mostly imported and thus operating them needs specialised guidance.

Investment on such machines for training purposes could be unviable, given the rapidly evolving technologies. Thus, having foreign partners to run

training programmes can result in effective and efficient knowledge sharing.

There are very few courses in our Industrial Training Institutes focusing on furniture and furnishings. As a result, deciding on course structure and the needed infrastructure like machines and tools are difficult to estimate.

There is no standard course or certification that is offered by any institute. Primarily, training for entry level resources (trainees) are undertaken in-house by employers.

There is no dedicated course offered for the furniture industry.

Some institutes are run in collaboration with multilateral organisations, an example is the Bangalore-based Karnataka German Multi-Skill Development Centre.

#### **Skill mills**

As part of the Union government's 'Skill India' mission and 'Make in India' initiative, a dedicated Ministry of Skill Development and Entrepreneurship was set up in November 2014. The National Skill Development Corporation (NSDC), a public-private partnership initiative of the government, seeks to skill a minimum 500 million people by the year 2022.

The Furniture and Fittings Skill Council (FFSC) is one such council of the NSDC, working in the domain of furniture and fittings. (**For details, read 'Skilling India in Mission Mode' in the Jan-Feb 216 issue of WoodNews**).

FFSC is mandated to act as a bridge between industry and trainees for the skilling. It aims to enable candidates to acquire desired competence levels, transit to the job market at an opportune time, even return for acquiring additional skills to further upgrade their competence.

FFSC has already set up corporate skilling centres with the help of industry members and tied up with state skill missions to implement industry driven training with the help of state governments.

*- Excerpted from a skill gap report prepared for the National Skill Development Council, under the Union Ministry of Skill Development and Entrepreneurship. Report prepared by KPMG Advisory Services Pvt. Ltd.*

*Sharana, a social development organisation in Puducherry, imparts modern and relevant vocational training to school drop-outs.*



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# Best for forests, best for business



Kayu Lapis' Marketing Director,  
Mr. Buniadi Makmur.

**By Mike Jeffree**

Kayu Lapis Indonesia's (KLI) uncompromising mission statement is all about completing the sustainability circle. The Indonesian plywood, flooring and timber garden products manufacturer sets out its corporate 'vision' as "excelling in sustainable growth through quality processing of raw material from professionally managed sustainable forest into eco-friendly wood products".

What KLI regards, in turn, as the bedrock for achieving forestry and timber sustainability, is the legality of its operations and wider supply chain. Consequently it has unequivocally backed Indonesia's SVLK timber legality assurance system, which, it maintains, has significantly helped curb illegal logging.

## Indonesian manufacturer walks the talk on timber legality legislation

Leading from this, KLI is also urging full implementation of the country's EU Forest Law Enforcement, Governance and Trade Voluntary Partnership Agreement (FLEGT VPA). Under the VPA, Indonesia and the EU are implementing a timber legality assurance action plan, utilising the SVLK system as part of the framework, with the aim of 'FLEGT licensing' of verified legal timber products.

KLI's Marketing Director, Mr. Buniadi Makmur, says the subsequent licensed products will then be exempt further due diligence risk assessment in Europe under the anti-illegal wood EU Timber Regulation (EUTR).

KLI is enthusiastically committed to the initiative and agrees with both EU and Indonesian authorities, which say that, after trial shipments exposed some weaknesses in the licensing system, it is now progressing rapidly. At the same time, it also urges the EU trade to re-emphasise its support for the FLEGT programme and to help step up the pace driving it forward.

That said, KLI makes it clear it is not just pursuing its green goals regardless. Its approach is also shaped increasingly by bottom line and business development considerations. It is, after all, selling to some of the most eco-sensitive markets there are – the USA, Australia and Japan

## LEED credit boosts sustainable forestry

The green building movement – from architects and builders to specifiers and planners – can now benefit from an expanded range of responsibly sourced timber and forest products eligible for Leadership in Energy and Environmental Design (LEED).

The US Green Building Council (USGBC) has just issued an Alternative Compliance Path (ACP), which rewards building projects that use "wood products from certified sources as defined by ASTM D7612-10", which includes internationally recognized voluntary forest certification standards such as PEFC (including its North America-based members ATFS, CSA and SFI) and FSC.

The ACP will apply to all LEED rating systems, including homes, and to all LEED 2009 rating systems. With LEED now including PEFC, construction projects can in the future obtain both LEED and PEFC project chain of custody certification.

PEFC, the world's leading forest certification system, is recognized by green building councils globally and has received top scores in independent evaluations.

([www.pefc.org](http://www.pefc.org))

– countries that have some form of regulation to bar illegal timber and wood products.

## Working model

It's certainly a model that's worked for KLI. Starting in the 1970s as a log trader,



*The company took its own land on lease, now covering 5,00,000 hectares, and introduced its first sustainable forest management programme.*

it is now one of the leading players in the Indonesian industry. It operates two major milling and manufacturing sites (with its plywood CARB-certified ultra-low-formaldehyde). It employs 13,000 people and exports 70% of its output to over 80 countries.

The company took on its own concessions, now covering 5,00,000 hectares, in the late 1970s. Subsequently it introduced its first sustainable forest management programme with a triple focus on 'productivity, ecology and social benefit'. Today, it maintains, a healthy, sustainable forest has been one of the keys to its success.

KLI says its forest policies comply firstly with Indonesian official standards, plus 60% of its concessions are also FSC-certified. Its product range also means sourcing timber from other suppliers in Indonesia and abroad, with species including Meranti, Bangkirai, Keruing, Samama and Sengon.

Clearly, KLI also sees the further development of the SVLK system and FLEGT initiative among the routes for

simplifying and clarifying this picture, another reason it has got energetically behind both.

The company sees FLEGT as making an even clearer statement that Indonesia is "serious about putting continuous efforts into combating illegal timber".

KLI's certification team has undertaken a FLEGT information and education programme company-wide. Implementation of the initiative has not always been straightforward, but it believes that in the long term it will be worth the effort.

KLI would also like to see the FLEGT information drive go further afield in the hope that others follow Australia's example and accept FLEGT licensing as a risk mitigating factor under their own anti-illegal timber regulations.

But, without compromising the rigour of the process, the real key to advancing the FLEGT initiative now is getting that first FLEGT licensed timber to market as quickly as possible. And the clear hope is that Indonesia will deliver it.

It's a crucial step for FLEGT to be taken seriously for at least one country to be issuing licenses; when that happens, and other countries see the benefit, they will automatically step up efforts to follow suit.

*- The writer is Communications Consultant with the Global Timber Forum. He can be contacted at mjeffree1@gmail.com.*



*The Indonesian plywood, flooring and timber products manufacturer has backed the SVLK timber legality assurance system to help curb illegal logging.*

# Woodworking in Europe well on its way to Industry 4.0



The first Ligna conference was held at the Hannover Exhibition Centre, Germany, from 3-4 May, an event that attracted over 140 participants. Thirteen speakers from diverse sectors of the woodworking industry spoke on their vision and experience in relation to digitalisation, its practical deployment in manufacturing processes and its impact on development, production and distribution.

Day One of the conference began with an interactive presentation by Mr. Timothy

Kaufmann, Business Development (Internet of Things) at SAP Deutschland, who examined the opportunities opened up by Industry 4.0. During the course of the day the participants found out more about the positive impact of Industry 4.0 on their everyday lives.

Mr. Per Berggren, Manager (Industrial Strategies) at Ikea, demonstrated that integrated manufacturing techniques can be tailored to mass production applications – as evidenced in Ikea's Pax wardrobe range.

The second day of the conference was devoted to examples of best practice. Mr. Olaf Katzer, Head of International Job Family Development at Volkswagen AG, talked about the qualification of professionals in an Industry 4.0 environment. He said that it is essential to bear the human factor in mind, despite all the euphoria about efficiency gains, cost-cutting and sustainability.

He also stated that the customer remains the focus of attention and is an essential factor in the overall production picture. Katzer felt that it goes without saying that Industry 4.0 will impact the production in terms of its means, data flows and the workforce involved, and emphasised the importance of taking the necessary preparatory steps.

## Evolution or revolution

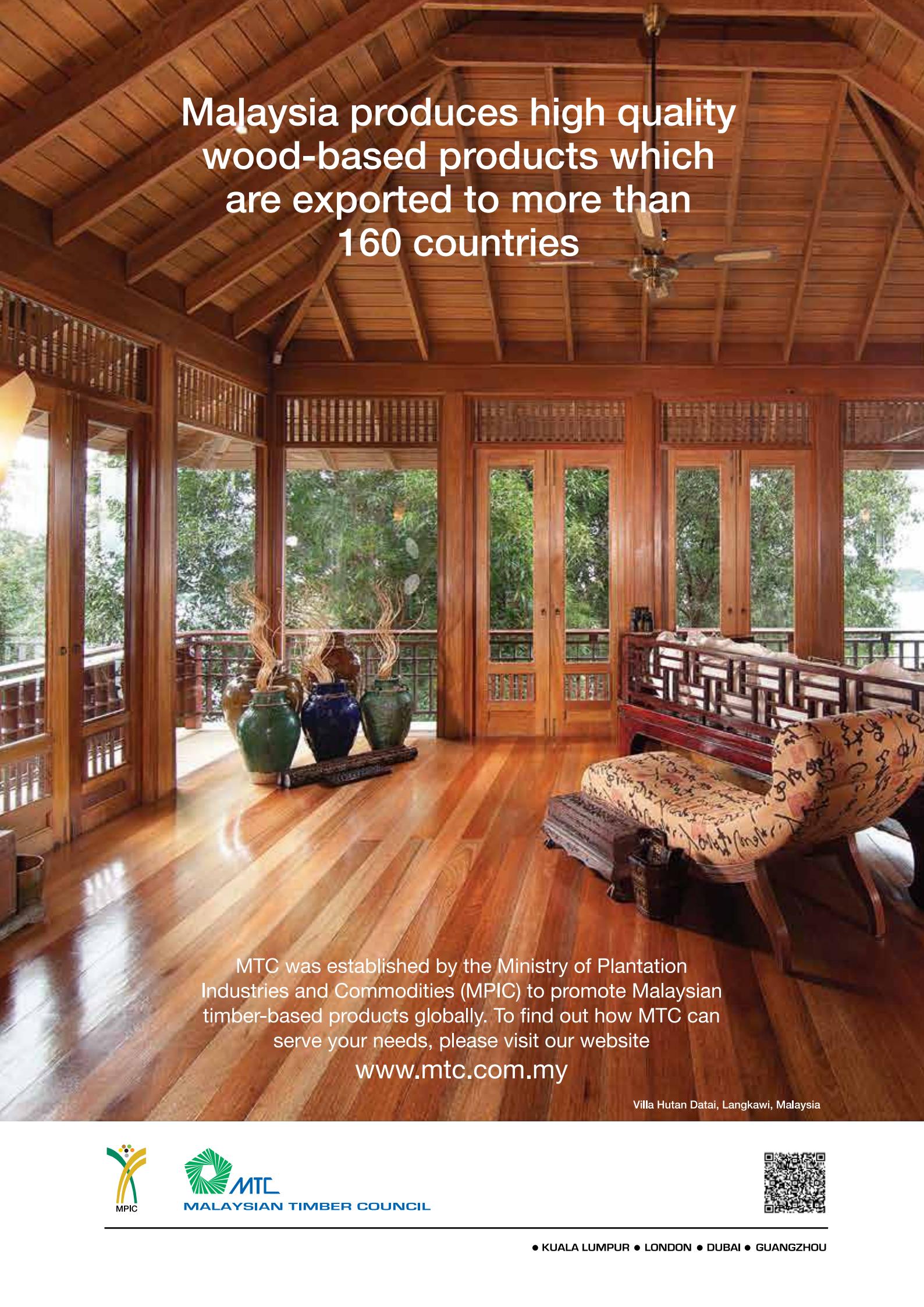
The conference arrived at the clear conclusion that Industry 4.0 is also directly relevant to small and medium-sized enterprises. However, it was essential that SMEs create areas of specialisation and build new networks as a prerequisite for efficient and profitable production.

A major highlight at the conference was the panel discussion on the implications of Industry 4.0 for the woodworking sector, keeping in mind that significant progress has already been made with the implementation of Industry 4.0.

At the beginning of the discussion the audience was confronted with controversial assertions such as "Industry 4.0 is the logical continuation of what we've been doing for the past 20 years".

The wide-ranging discussion finally came to a consensus that "Industry 4.0 is not a revolution – it is an evolution which has already begun in the furniture industry."

The conference was supported by VDMA, the German woodworking machinery association, Lignum Consulting GmbH and Ostwestfalen-Lippe University of Applied Sciences.



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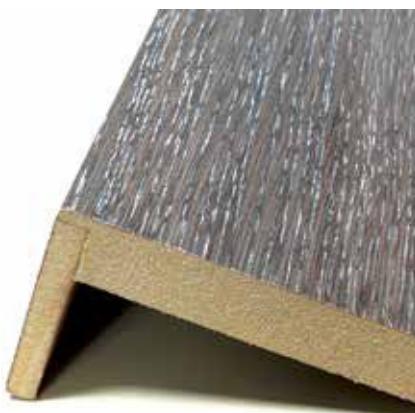
# Barberan's new gluing system for door frames



The new L-shaped profile forming system from Barberan places the joint in the internal side of the door jamb, thus making the joint in the front bar of the extensible door frame invisible, even with CPL.

The new L-shaped profile former model CA-P uses hot-melt adhesive of any type, as well as PUR glue, with high speed and great precision by point and line application.

It also ensures low product consumption and a maximum speed of 50 metres per minute.



This new gluing method for the L-shaped profiles can make several line applications with automatic weight control and features a constant pressure controlling system without excessive product at the beginning and the end.

It is a clean and effective tool that only needs maintenance in case of prolonged production shutdowns.  
[www.barberan.com](http://www.barberan.com)



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# Euro spreads its range of veneers



Mumbai-based Euro Decorative Veneers and Euro Laminates has a very vast range of decorative laminates (popularly known as Mica in India), decorative veneers, marine-grade and commercial plywood, flush doors and block boards, border patties and inlay marquetry.

Euro products are manufactured at a high-tech plant situated in Silvassa (Union Territory), in operation since 1998. The plant has a capacity of manufacturing 1 million square metres of pre-laminated boards per year, and 1 million square metres of decorative veneer per year.

Euro veneers come in natural, burl, dyed or smoked varieties. Mostly natural veneers are imported and some are sliced, dyed and smoked at its sister unit

in Silvassa. This is to ensure that the dyed veneers retain their original tone, texture and moisture, rather than importing dyed veneer where chances of variation on tone and moisture content may vary due to long-distance transportation.

With the increasing demand for these products, the Euro Group has started dyeing of natural veneers and manufacturing reconstituted veneers, in technical collaboration with European companies.

Besides regular book match of vertical and/or horizontal materials, Euro also produces innovative and unique veneers with help from its skilled work force in India, to give different look or highlighter to suit a particular architect's or designer's choice.

In respect of Euro Mica, Kraft paper from virgin pulp is used along with imported design paper for versatile look and finish. The Euro Veneer and Euro Mica brands have an all-India sales network. ([www.eurodecor.co.in](http://www.eurodecor.co.in))



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# Extendable table fittings from Hafele



Intuitive furniture is the need of the hour. In times like these, where every extra square metre is considered as good as gold, installing versatile home interiors becomes crucial. Your clients will be surprised at the amount of functionality that can be brought in by some intelligent furniture fittings.

Hafele brings to you its spontaneous range of Extendable Table Fittings that grants you the liberty to design your

client's dream abode as envisaged and, in fact, helps create more space.

These fittings simply blend into the interiors when closed; but once released they end up making quite a statement! Hafele's range of extendable table fittings consists of:

**Lunch:** A space-saving system that consists of a pull-out tabletop fitting stored in a space normally used for a drawer. The table fitting pulls out



instantly by simply opening the hinged front of the drawer space.

Created to cater to the needs of functionality in small spaces, this runner is ideal for small kitchens and kitchenettes needing a tabletop for breakfast, or simply as an extension of the worktop for preparing meals.

**Mensola:** This is a comparatively larger sized, four-leaf, table-top fitting which is designed and engineered down to the smallest detail. It can be mounted in a standard drawer compartment without the need for special fittings, guaranteeing a large-sized (up to approx. 1,600 mm) and high capacity (100 kg equally distributed) table fitting with an integrated telescopic leg.



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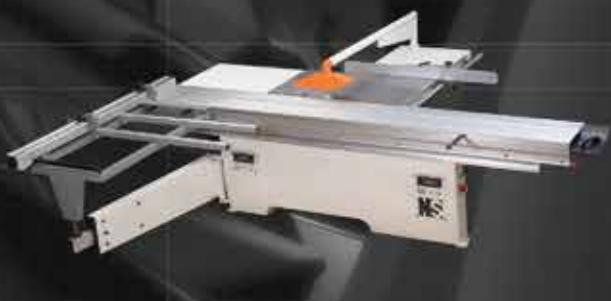
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# More than 'just' a CAD-CAM solution

*Homag eSolution is a software solutions partner for the furniture and interior fittings sector.*



The latest version of Homag's eSolution (version 11.0) sees the software become much more efficient and user-friendly. Functions have been enhanced and displays optimised.

Among its key functions, the wood CAD-CAM software enables a parameter-based approach to furniture

design, while also offering a direct connection to the machine technology. Production drawings and parts lists are available at the click of a mouse immediately after design, and design data is converted into NC programs and made available to Homag Group machines in a fully automated process.

The machines are perfectly integrated in the process chain. woodCAD-CAM enables users to secure a real competitive edge by investing in machinery, and can also be harmonised with the options offered by Homag machines in terms of its scope and functionality.



*Integrated data flow from planning to production in industry and trade with Homag Group machines.*

Useful add-ons for additional, customised solutions round off each product variant perfectly. The additional "Order Manager" module, for example, allows orders to be recorded or processed without any previous planning for the very first time, making order processing a quicker and more flexible process.

While woodCAD-CAM creates the data for production, woodFactory organises and sorts the data based on the specific machines installed, the level of capacity available and the production methods and sequences used.

This planning and control tool is appreciated by industrial production businesses in particular. These businesses group multiple customer orders or individual components into different production orders with the aim of making production as a whole more efficient.

The key task here is to plan production batches according to different criteria, such as material, delivery date, processing groups, or technical specifications. As such, woodFactory is also used to supply data for batch size 1 systems.

woodNet is an online 3-D presentation and sales system for furniture and interior fittings and is suitable for use in the B2B and B2C sectors. With this system, customers can select furniture

from a catalogue at the click of a mouse and configure its properties, such as dimensions, colour and front.

Furniture can also be assembled from individual components using drag-and-drop function, processed, and projected into real rooms graphically using augmented reality technology. The browser-based solution can be integrated into websites and used on popular mobile end devices.

The Homag eSolution software solutions optimize business processes in trade enterprises in the furniture and furniture supply industry – from the initial sketch to the end product.

The software solutions are ideally configured for use with Homag Group machines and create efficiency and reliability for order processing and production processes. Integrated B2B and B2C eBusiness solutions for online furniture sales with a direct connection to order processing and production processes round off the software package.

*woodNet can be used to configure and sell furniture online.*



# Indigenous glass coating technology



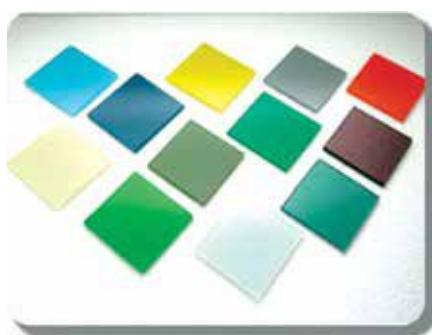
Indian Finishing Technologies (IFT) has introduced the latest glass coating technology, exclusively designed and developed in India. With the introduction of this technology a new revolution is being seen in flat and curved glass finishing.

The company has focused its research on new glass finishing systems and has developed automatic reciprocating spray machine for coating on glass. Spray technology for glass comes with a reciprocating spray machine (Rainspray-G) with a paper belt continuous system, and is easy and economical to use.

The machine has the advantage of a paper belt and a pot kit for quick colour changes. The technology for quick colour changes, where disposable polythene bags are used, is from Binks, UK. This reduces the time for cleaning the pot every time the colour is changed.

This is useful for small batch production with different colours and also reduces lacquer consumption. Rainspray-G ensures good coverage and quality of coating on the glass surface.

The Rainspray is a PLC-controlled machine for painting raised panel, panels with profiles and carvings. It comes with a paper-covered belt conveying system in a working width of 1,300 mm.



The machine has four circuits for different applications, reducing the consumption of solvent involved in the cleaning process. Each circuit is dedicated for top coat, sealer, pigmented and stain application.

Rainspray has a single-arm base plate which can be detached from the machine easily and quickly for cleaning and maintenance. The conveyor belt with holes comes with a vacuum-operated system which holds the paper in its position, preventing the paint from entering the panel below.

# Revolutionary hinges from Salice



*The profiles that make up the door are cut to length and the ends mitred at 45°, and already milled with the slot for the insertion of the hinge. The profiles, which make up the door, are cut to length and the ends mitred at 45°, and already milled with the slot for the insertion of the hinge.*

Air is an innovative and revolutionary hinge which, despite its compactness and small size, delivers full functionality to furniture manufacturers. The hinge is fully adjustable in three directions and also incorporates an integrated soft close mechanism for decelerated closing or the Push self-opening system for handle-less doors.

Air is inserted into the top and bottom of the cabinet and the door and is a perfect combination of efficiency and elegance, a

wonderful blend of technology and aesthetics that makes this hinge revolutionary.

What makes it unique is its ability to integrate perfectly with any applications and becoming practically invisible.

Air hinges, with integrated soft close mechanism or Push self-opening system, are small and compact. They are best suited for 18-mm-thick (minimum) wooden doors and for aluminium-

framed doors: Max. dimensions of the door: height 2100 mm, width 600 mm.

They have a maximum door weight bearing capacity of 20 kg, and are suitable for numerous applications in kitchens, bathrooms, living and bedroom furniture or display cabinets.

It can be used both with wooden and aluminium-framed doors. Compact, stylish and elegant, Air marks a new era in the development of opening systems.

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# Blum makes it Easy Assembly

Anyone who manufactures or assembles furniture on a daily basis will always be happy to receive a little extra support. This time, the helping hand comes from Blum's handy, up-to-date App, Easy Assembly.

This is a digital tool that helps you to assemble your furniture efficiently and with minimum hassle.

With this exceptionally practical tool, all the relevant assembly information is always at hand and immediately available on your mobile device – online and offline!

It saves time and ensures that your premium furniture is assembled to the highest of standards.

Easy Assembly helps furniture manufacturers and fitters with any

questions they have when assembling and adjusting Blum's fittings – for example, regarding safety during installation and finding the exact position and precise adjustment of Blum fittings.

The new assembly App is designed to be intuitive, so is easy to use, both online and offline. The interactive application shows in very clear terms how to precisely adjust Blum fittings.

Handy assembly videos demonstrate each individual work step and clearly show the adjustment options in detail. The App also contains an overview of all installation instructions, clearly arranged by product group.

To use this additional function, simply scan, for example, the Aventos HF lift mechanism. The drilling positions will be displayed, along with the exact

measurements or a suitable setting for the fittings.

This assembly App is free to download from the usual stores for iOS and Android devices (smart phones and tablet PCs).

Having proven to be the very best aids when it comes to day-to-day assembly, templates from Blum are a huge help when used to assemble any of its products. When combined with the Easy Assembly App, the universal marking template takes practical to a new level.

It can be used to mark the fixing positions for all Aventos models, cabinet profiles, hinges and mounting plates. It was launched in India at IndiaWood 2016, which concluded in Bangalore in February this year.





New Delhi-based Marsun has introduced a state-of-the-art sliding fitting for island kitchen worktops. It is ideal for rolling out during snack time.

What is more, it can also accommodate a concealed induction hob and hood with extractor system.

The "snack table" is an elegant solution to providing more counter space for innovative applications.

The load-bearing capacity of this sliding fitting is about 200 kg and, in its full extension, the table can be used to serve a quick meal.

With its noiseless movement, this Italian product serves as an interesting theme in an open kitchen concept.

Marsun was established in 1996, with a vision to provide best quality modern hardware and accessories to modular kitchens

## Snack-time roll-out for island kitchens

and wardrobes at value-for-money prices.

Marsun is a reputed manufacturer, importer and supplier of a comprehensive range of Indian and imported modular kitchens hardware and accessories, such as roller shutters, corner solutions, drawer runners, pull-down Units, cutlery trays and dish-racks.

It also retails wall-hanging holders, cabinet jointers, soft-close ball bearing slides, aluminum profiles and pantry units. ([www.marsun.in](http://www.marsun.in))



# High-tech edge banders from Jai

Jai Industries produce high-tech, heavy-duty machines specifically designed to suit Indian working conditions. These edge banders, mainly required for producing straight panels, give precise application of linear or straight edge banding and round cornering for materials like veneer, melamine, PVC or ABS.



## J-4300R.in (auto) edge bander (radius trim)

The operating units of this model include a feeding belt, gluing, banding, edge cutting, end cutting, fine trimming, buffing and manual radius trim.

### Salient features:

- Technologically easy edge banding solution for entry level work
- Work piece in-feed by special belt for smooth feeding
- Belt made of special material, which guarantees long-lasting sturdiness and stability
- A synchronous tooth of belt-and-pinion gives high traction and vibration-free movement, with optimal panel holding
- Automatic edge loading system for rolled edges with pneumatic shear for the coil cut
- Pneumatically operated end cutting unit has solid cutter to guarantee a clean, precision cut on the front and rear edges of the panel

- Compact and powerful high-frequency motors guarantee best finish on top and bottom edges
- Copiers on bearing mounted to ensure smooth panel feed
- Very easy precision adjustment of trimming cutters by position indicators
- Easy accessible control panel positioned at machine in-feed, for easy and quick operations
- Front telescopic support with roller conveyor for bigger work piece
- Easy adjustment of trimming and buffering units
- Manual radius trim for chamfering of the panel corner
- Low maintenance machine, easily available
- Cost-effective spares and best service support.

feeding speed 14 metres per minute that gives more production

- No setting required to change thin to thick PVC edge band
- High frequency compact motors sliding on prismatic guide ways for perfect finishing with trouble-free performance
- Easy accessible, user-friendly control panel positioned at machine in-feed for quick operations
- All electronic and pneumatic parts are from well-known international brands
- Very easy to operate and nominal setting required during operation
- Low maintenance, easily available
- Cost-effective spares, best service support.

### Gluing, banding & edge cutting:

The machine is fitted with an innovative, pre-melting sensor-operated glue tank having a glue drop system to automatically maintain the required glue level in the tank. This ensures the glue spreading roller provides precise and consistent glue application, without glue overheating to avoid wastage of glue.



## J-4500.in (auto) edge bander

The operating units include the auto conveyor, gluing, banding, edge cutting, end cutting, fine trimming, anti-adhesion liquid, and buffering.

### Salient features:

- Sturdy built heavy-duty machine for entry-level, mass production work
- Robust feed chain and conveyor system with German gearbox for effective pressure on panels
- High performance machine with

This result in less than 50% consumption of glue compared to other edge banders. Two pressure rollers actuated by pneumatic cylinders and gas spring ensures perfect adhesion to the applied edge. Heavy-duty knife with pneumatic pressure cuts the edge banding materials up to 50mm height and 3mm thickness.

### End cutting & edge fine trimming:

The two compact and powerful high-frequency independent motors, sliding on two prismatic guide ways with re-circulation ball bearings, guarantee best finish on edge. Trimmer 2R cutter for PVC/ABS gives perfect rounding on the edges of the straight panel.

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### J-4700.in (auto) edge bander

The operating units include auto conveyor, pre-milling, gluing, banding, edge cutting, end cutting, fine trimming, edge scrapping, anti-adhesion liquid and buffering.

Optimal units for panel edge pre-milling with two high-frequency compact motors.

Individual pneumatic cylinder prepares the panel for perfect gluing and smoothes the panel for achieving a perfect joint line of the edge.

The feed track consists of a robust feed chain and conveyor system with German gearbox, which gives straight movement and effective pressure on small and big panels.

The edge scraping and anti-adhesion liquid gives the best finishing touch to the PVC/ABS edges, leaving no trimming marks on the panel. Unit complete with rotating copiers. To prevent glue to adhering on to the panel, this liquid is sprayed to lower and upper edge surface of the panel.

#### Salient features:

- Sturdy built, heavy-duty machine to suit Indian working condition for precise application of edge banding material
- Innovative pre-melting sensor operated glue tank having glue drop system which consumes less than 50% glue, compared to other edge banders, which results to increase in profits
- Three edge banding pressure rollers actuated by pneumatic cylinders and

gas spring give adequate pressure on edge for effective banding

- All electronic and pneumatic parts are from well-known international brands Schneider and Janatics
- Easy accessible, user friendly control panel positioned at machine in-feed for quick operations.



### J-5100PRc.in (auto) edge bander

Operating units include an auto conveyor, smart touch PLC, pre-milling, gluing, banding, edge cutting, end cutting, fine trimming and round cornering, edge scrapping, anti-adhesion liquid and buffering.

The pre-milling unit features two high-frequency compact motors. Individual pneumatic cylinder for perfect prepares the panel for gluing. It also smoothes the panel for achieving perfect joint line of the edge.

An innovative pre-melting, sensor-operated glue tank with a glue drop system automatically maintains required glue levels in the tank. The glue spreading roller provides precise and consistent glue application without glue overheating to avoid wastage of glue

Three pressure rollers actuated by pneumatic cylinders and gas spring ensure perfect adhesion to the applied edge. A heavy-duty knife with pneumatic pressure cuts the edge banding materials up to 50mm height and 3mm thickness.

Two compact and powerful high-frequency motors, sliding on two prismatic guide ways with re-circulation ball bearings guarantee best finish of the edge.

#### Salient features:

- Trimmer 2R cutter for PVC/ABS gives perfect rounding on edge of straight, chamfered and regular post formed panel
- Independently adjustable buffering wheels, for cleaning and polishing of the panel edges
- Easy accessible user friendly Smart Touch PLC control panel positioned at machine in-feed for easy and quick operations.



### J-5500PRc.in (auto) edge bander

Operating units include an auto conveyor, smart touch PLC, pre-heating, pre-milling, gluing, banding, edge cutting, end cutting, rough trimming, fine trimming and round cornering, edge scrapping, anti-adhesion liquid, grooving and buffering.

#### Salient features:

- Sturdy built heavy-duty machine to suit Indian working conditions, for precise application of edge banding material
- Edging wooden strip up to 12mm
- Robust feed chain and conveyor system with German gearbox for effective pressure on panels
- Pre-heating at in-feed fence, to remove moisture from panel
- Pre-milling unit smooth the panel for achieving perfect joint line of the edge
- High performance machine with feeding speed of 14 metres per minute gives more production
- Innovative pre-melting sensor operated glue tank having glue drop

system that consumes less than 50% glue compared to other edge banders

- No setting required to change thin to thick PVC edge band
- Very easy to change over from PVC to wooden
- Grooving unit to make groove on lower panel surface
- All electronic and pneumatic parts are from well known international brands
- Very easy to operate and nominal setting required during operation
- Low maintenance machine, easy available
- Cost-effective spares, best service support.



**J-4230 four-side moulder**

This is a sturdy built heavy-duty machine to suit Indian working condition for precise application of four side operation in one pass.

### Salient features:

- Used for mass production of door and window frames, wooden floors, etc.
- Separate motors for each spindle to ensure efficient power transmission
- All spindles are adjustable and their key devices are positioned on the front of the machine for convenience
- Powerful drives for the cutter blocks delivers high torque for heavy duty cutting requirements
- Top feed rollers for easy feeding of work piece with vibration in thickness
- Bed lubrication to reduce friction and improve feeding of timber
- Sealed safety to reduce noise levels, improve extraction and operator safety
- Easy accessible, user friendly control panel positioned near the machine in-feed.



**J-1540 (Auto) raised panel copy shaper**

### Salient Features:

- Sturdy built heavy-duty machine to suit Indian working conditions for precise application to manufacture raised panel door
- An arched panel or matching sides of door frame can be produced by easy raising or lowering the roller to the required template level
- All five components of a raised panel door can be produced in less time as compared to other moulders
- Eliminates the setting time due to easy spindle location setting.



**J-1824 drum sander**

There are two sanding drums for coarse and fine sanding in one pass. It has a user-friendly control panel with variable feed speed. For best results, use a dust collector with the sander machine.



## WOODNEWS

*WoodNews* thanks the various companies that have submitted information. For any editorial submissions, please contact Mr. Dhananjay Sardeshpande, Chief Editor, at dhananjay@pdatrademedia.com. The information published in this, *Notes and News, Indiawood Products* section is as per the details furnished by the respective manufacturer / distributor. It does not reflect the views of *WoodNews* or of the management of PDA Trade Media.

# Nan Hua Wen consolidates its hold on India market

Nan Hua Wen, from Xiamen in China, is the supplier of spindle-less cutting machines and also superior quality plywood to Indian manufacturers and suppliers.

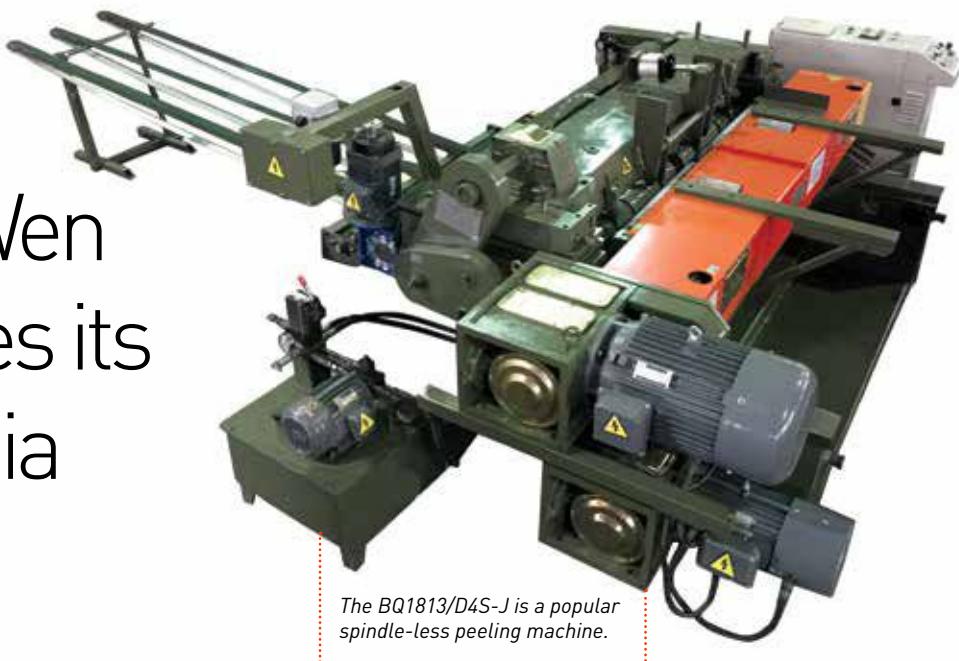
Since it entered the India market in 2011 it has supplied more than 200 full-fledged lines to reputed Indian manufacturers such as Greenply, Century Plyboards, Archidply Industries and AK Veneers.

Its Ice Cool peeling machine incorporates the latest technology, and the resultant smooth veneer and the faster speed of peeling has rapidly gained customer appreciation and satisfaction.

The Chinese company exhibited its latest model peeling machine, the BQ1813/D4S-J, and a new model debarking machine, the BQ1813/5YC, at IndiaWood 2016 in Bangalore.



*The BQ1813/5YC is its new model debarking machine.*



*The BQ1813/D4S-J is a popular spindle-less peeling machine.*



*The classic BQ1813/4S-J is specially designed for the Indian market.*

The live demos attracted over 1,500 people to the stall and generated considerable interest in the machines and many spot orders were received, according to a press note issued by the company.

Currently, the classic model BQ1813/4S-J and latest model BQ813/D4S-J, which have been specially designed for the Indian market, are extremely popular.

Nan Hua Wen aims to consolidate its hold on the Indian market, through its office in Gurgaon, with good service and quality products.

[www.nanhauwen.com](http://www.nanhauwen.com)

*The Nan Hua Wen team at its IndiaWood stall in Bangalore in 2016.*



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# LX100: Economic sawmill for heavy use

The LX100 is the first in a new line of Wood-Mizer sawmills, completely redesigned from the ground up, based on the feedback and needs of sawyers from all over the world.

The LX100 sawmill is built for heavy and continuous sawmilling use and features many innovations in strength, efficiency, ease of use, and operator visibility.

A new innovation is the rigid xFrame that holds the control panel, the motor, and the sawmill head. The xFrame travels on side-by-side tandem steel bars of the bed. It allows the operator to stand in a position with better visibility during the cutting process.

The sawmill controls are centrally located on the operator control panel. A wide, easy-grip handle functions as a push bar for the sawmill if purchased without the optional power feed. For faster production, power feed control can be added to precisely control the sawmill speed as it cuts through the log.

The power feed system is driven on a heavy-duty chain, faster and more durable than other methods. No manual cranking is needed to raise or lower the blade position.

The up/down switch moves the powered sawmill head into place for the next cut. With the optional Setworks, just set a board size and with one button, the sawmill repositions automatically for each cut.

Keeping sap and sawdust from building up on the blade is easier with automatic blade lubrication that activates when the blade is engaged, and turns off when the blade stops.



*The new xFrame of the LX100 gives the operator better visibility during the cutting process.*

## LX100 specifications

### Power

- 7.5 kW standard (16 Amps normal usage)
- 11 kW optional (25 Amps normal usage)

### Cutting specs

- 70cm log diameter
- 64 cm max width of cut
- 5.4 metre – 8.1 metre log length (depending on the bed segment size)

### Standard features

- Electric up/down
- Electric blade guide
- Automatic blade lubrication

### Optional features

- Power feed
- Debarker
- Setworks

The LX100 bed is an entirely new design that is engineered to withstand continuous and heavy use, with thicker steel in the tubes and cross sections. The bed rails are higher than the side tubes, so that it is easy to load logs onto the bed with a forklift, without dropping the logs onto the sawmill.



*This attachment allows more precise clamping of cants and thinner planks.*



*The sawmill controls and optional Setworks are centrally located on the operator control panel.*

The LX100 cuts logs up to 70 cm in diameter and of any length by adding additional modular bed sections. The LX series, like all Wood-Mizer sawmills, are produced both in the USA and Europe, and meet all safety requirements for the respective markets.



*The new xFrame travels on side-by-side tandem steel bars of the bed.*

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# New functions in Sensys fast assembly hinge

The Sensys generation of hinges from Hettich combine front-to-back design with a feel of luxury that appeals to the emotions. Adding attractive new functions to its Sensys range, Hettich now addresses previously neglected needs and provides cost-effective options for making marks of distinction.

In particular, the Sensys hinge scores from automatic Silent System furniture door closure from the unusually wide angle of 35 degrees. Furniture doors that reliably close in response to a turn of the hand, as well as even gentle closing action, is guaranteed in the temperature range from +5°C to +40°C and found nowhere else on the market.

Providing an opening angle of 165 degrees, the Sensys wide angle hinge gives furniture doors a wide opening angle and closes them evenly and gently. Zero-protrusion hinges make it possible to fit internal drawers without spacer profiles, preventing trapped fingers, no matter what position the door is in!

The Sensys wide angle hinge has received the iF Product Design Award 2014 and the Red Dot Award for Product Design, also in 2014.

The Sensys thin door hinge with extremely shallow cup gives furniture makers maximum design flexibility for further options in making a mark of distinction.



*The award-winning Sensys wide angle hinge provides an opening angle of 165 degrees to furniture doors.*

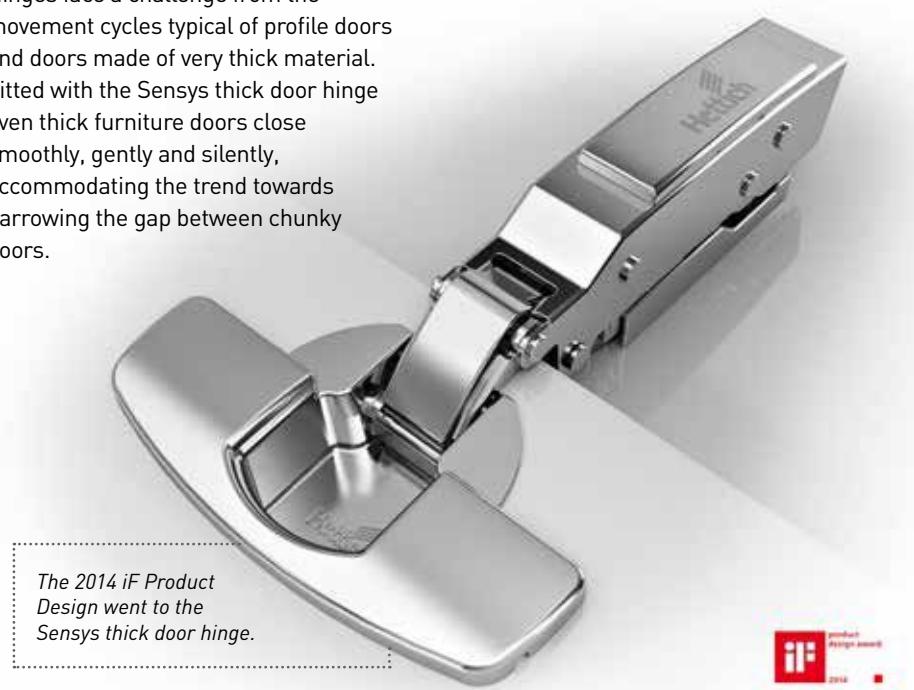
It permits the use of thin core board panels in a thickness from just 8 mm with a design defining surface application layer, such as glass or concrete. Thin solid front panels made, for example, of solid surface materials are also an option.

The look and feel of exclusive materials can now be combined with the purist style of slender lines and narrow reveals.

Hinges face a challenge from the movement cycles typical of profile doors and doors made of very thick material. Fitted with the Sensys thick door hinge even thick furniture doors close smoothly, gently and silently, accommodating the trend towards narrowing the gap between chunky doors.

The Sensys hinge is available without self-closing feature for the push-to-open function on handle-less fronts.

Sensys never fails to impress with its elegant design: the hinge and mounting plate unite to give a look of harmony. A stylish cover cap hides the fixing screws on the hinge cup and the release button for removing the hinge is invisible from the front.



*The 2014 iF Product Design went to the Sensys thick door hinge.*



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# D

Due to urban developments in the city of Leiden, in the Netherlands, the Mare College had to move to a new location. At the Sumatrastraat, an abandoned school building was transformed into a new school building to suit Mare College, a secondary Waldorf school with 450 students.

24H was commissioned to make a design for the 3,800-square-metre facility, partially within the existing straightforward building from the '60s and partially in new extensions.

The design strategy developed was to use the newly built structures to give the existing building a new and expressive identity in the exterior as well as interior. A 'lemniscate' shape was added to the building, forming a new entrance guided by the organic shape, a new central hall where all the dynamism is concentrated.

A 'lemniscate' shape was added to the building, forming a new entrance guided by the organic shape.

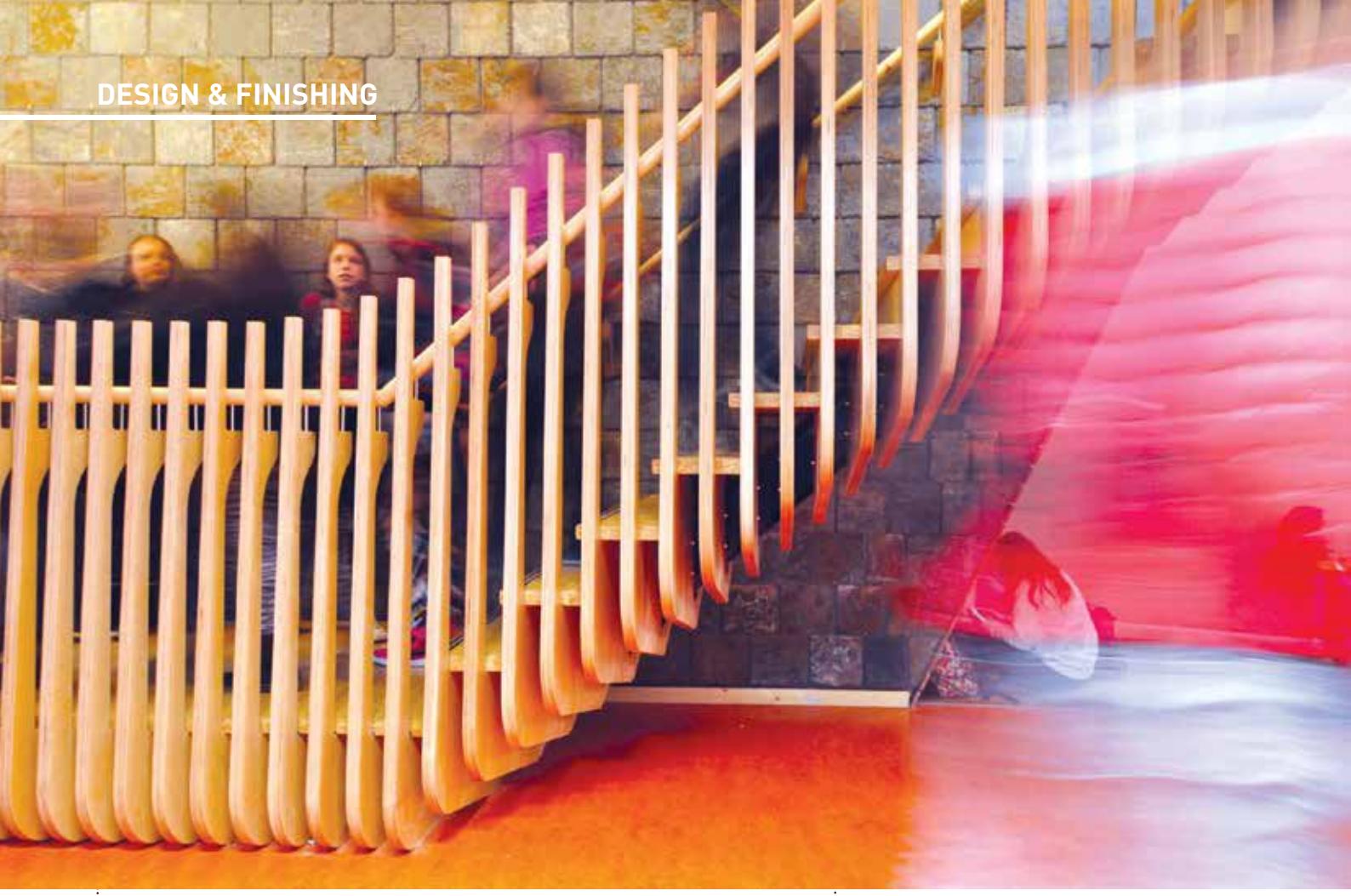
The shape makes a new sign as a representative space for the school towards the public space. On the inside the special spaces like the auditorium and dance room, as well as the typical Waldorf school classes, such as organic cooking, drawing, painting and textile work, were placed.

The exterior cladding of the 'lemniscate' is made of a natural slate that runs from the outside to the inside, guiding the movement of the students. The U-shaped main building has a brickwork facade with wooden details and, in the near future, the flowering ivy Araliaceae will cover the outside.

In the inner courtyard, where the central playground is located, the facade cladding is made of profiled hardwood strips that create leaf patterns with their shadows.

*The U-shaped main building has a brickwork facade with wooden details.*





*All designs are inspired by Nature that embeds the programme into the surrounding environment.*

### Nature's inspiration

All the 32 different classrooms have specially designed wooden ceilings and a new 'fresh schooling' ventilation system, providing the students with necessary fresh air to facilitate maximum concentration.

The architects, Natrufied Architecture, is an offshoot of 24H-architecture that split after 15 years, with Mr. Boris Zeisser starting the new firm in July 2015.

Continuing the core values of 24H-architecture, the firm focuses on making designs inspired by Nature. Natrufied reflects this ambition by connecting nature and the petrification of nature into architecture. Working with such ingredients, the theme of Art Deco has been developed as one of the main design philosophies of the office.

With this, the aim is to support the environment as well as to create beauty and to make the improvement of ecology into an art. All the designs are inspired by Nature that embeds the programme into the surrounding environment.

Bio-mimicry design, use of natural materials, natural shapes or more abstract representation of natural patterns; parametric structures and use of biotic material are some of the approaches used by them in this effort.

Integrating high and low tech sustainability into the designs is a natural part of its design work. (<http://www.natrufied.nl/>)

*All classrooms have specially designed wooden ceilings and a newly-designed ventilation system.*



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# Canada opts for wooden high-rise building

One of the tallest wood buildings in the world will soon be constructed at the University of British Columbia (UBC) in Canada, providing housing for hundreds of students. When completed, the \$51.5-million residence building will stand 53 metres (about 174 feet) tall.

Construction of the 18-storey student residence will begin later this year, and the building is set to open in September 2017. It will house 404 students in 272 studios and 33 four-bedroom units, and feature study and social gathering spaces. There will also be a ground-floor lounge and study space for commuter students.

The tall wood building will consist of a mass timber superstructure atop a concrete base. Wood is a sustainable and versatile building material that stores, rather than emits, carbon dioxide. UBC aims for the building to achieve a minimum LEED Gold certification, a rating system that evaluates how environmentally friendly a structure is in its design and energy use.

UBC, the Bi-national Softwood Lumber Council, Forestry Innovation Investment, Natural Resources Canada and B.C.'s Ministry of Forests, Lands and Natural Resource Operations, are contributing to the funding of the building.

## Push to innovation

The project's architect, Vancouver-based Acton Ostry Architects, is working in collaboration with tall wood advisor and architect, Mr. Hermann Kaufmann from

Austria. Fast+Epp, another local firm, is the structural engineer.

Other wood structure buildings on UBC's Vancouver campus include the new AMS Student Nest and Engineering Student Centre, the Centre for Interactive Research on Sustainability, the Bio-Energy Research and Demonstration Facility, and the Earth Sciences building.

Earlier this year, the B.C. government passed the provincial Building Act, which enables innovation in building construction. The legislation enabled the Province to develop a regulation to allow construction of UBC's new tall wood student residence, with rigorous health and safety standards.

Mr. Michael Giroux, President of the Canadian Wood Council, felt that it was an exciting time for the Canadian and North American wood industry as the building, which is the tallest in wood in Canada, would serve as a "great example of the research and technology that is involved in taking wood construction to new heights – resulting in innovative solutions that are safe, sustainable and viable, and meet or exceed the requirements of the building code".

## Safety measures

Wood is suitable as a beautiful finishing material and a structural material that meets safety and performance requirements. Wood structures, as with any building material, must meet building code requirements.

Safety measures, such as sprinkler systems and fire resistance-rated wall and floor/ceiling assemblies, ensure tall wood buildings are built to meet and exceed fire safety and structure performance requirements.

FP Innovations, a forest sector research centre, conducted tests on the UBC building's wood structural components. The building's safety measures include enhanced fire protections and back-up systems, a building-monitoring system and an upgraded building core, the first in B.C. to be specified to the new 2015 National Building Code of Canada for seismic design.

A number of tall wood projects have been completed around the world in recent years. Today, the concept is gaining traction in North America as a safe, sustainable and cost-effective construction option.

The world's current tallest wood building is a 32-metre (105-foot), 10-storey apartment building in Melbourne, Australia. Prince George's Wood Innovation and Design Centre, completed in October 2014, is the tallest wood building in North America, standing 29.5 metres (97 feet) tall.

A 51-metre (167-foot) tall, 14-storey apartment building is now under construction in Norway. Two other tall wood projects have been announced for New York and Portland.



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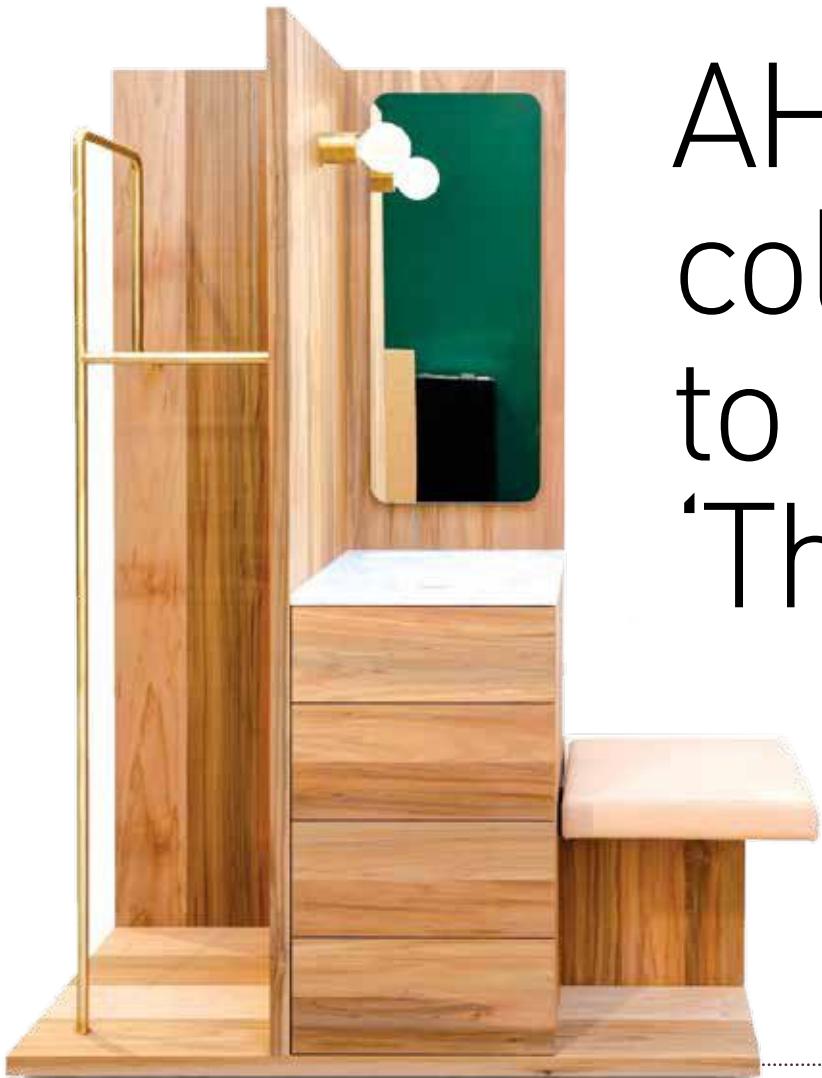
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*The interplay of pure materials creates an intriguing contrast with the reduced, architectural design of 'The Butler'.*

### Made out of solid American Willow, this designer piece is a contemporary take on the valet stand crossed with a sideboard

The American Hardwood Export Council (AHEC), the leading international trade association for the American hardwood industry, has partnered with David Chipperfield Architects and e15 to re-invent and design the hotel wardrobe/suitcase stand and create a bespoke piece of furniture that allows travelers to unpack their belongings easily and ensure they won't leave anything behind.

On display at Salone del Mobile in Milan, Italy, 'The Butler' marked the fifth

collaboration between AHEC and *Wallpaper* magazine's innovative handmade exhibition, which has proven to be a brilliant platform for designers to experiment with American hardwoods.

Keeping in mind that most hotels have badly designed wardrobes and cupboards that are not well organized, the idea of 'The Butler' was to design a dressing table that makes unpacking in a hotel room a pleasant experience. It was the first time the designers at e15 used American Willow, a wood that is much softer than European Oak.

American Willow has light creamy brown sapwood and has a fine, even texture and is generally straight-grained. It is used for furniture, joinery and interior mouldings and in some markets it is stained to reproduce the lighter tones of walnut.

# AHEC collaborates to create 'The Butler'

With a focus on premium craftsmanship, the furniture features a number of constructive details such as a gap at the back of the piece that allows the wood to expand and shrink over time. American Willow as the main material was combined with brushed brass, vegetal leather and Bianco Carrara marble to create a rich mix of materials.

This interplay of pure materials creates an intriguing contrast with the reduced, architectural design of 'The Butler'.



*American Willow has light creamy brown sapwood and has a fine, even texture and is generally straight-grained.*



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# Myanmar moots harvesting ban



The Director General of the Forestry Department has submitted a proposal to the new government in Myanmar advising a halt to log harvesting. While there is no official announcement as yet, a senior official of the Myanmar Timber Enterprise (MTE) has been quoted as saying that his organisation intends to end its logging operations from the end of this fiscal year.

The plan submitted by the Forestry Department proposes the ban in 68 districts. Prior to 2014 the annual log harvest was over 1 million tonnes, but in 2014 this was reduced to around 60,000 tonnes of teak and 6,70,000 tonnes of other hardwoods.

The proposal has been welcomed by the chairman of the NGO, Forest Resource Environment Development and Conservation Association (Freda), who was quoted in the local press as urging a halt to both teak and hardwood harvesting.

The private sector in Myanmar was shocked by this proposal. Domestic log stocks have been estimated at around 2,00,000 tonnes of teak logs and 5,00,000 tonnes of other hardwoods.

These stocks are in the hands of just a few millers and analysts estimate this volume could meet domestic demand for about 2 years. Analysts say most entities in the private sector are not opposed to the halt to logging to allow for conservation measures to be implemented, but would prefer a phased approach, allowing time to adjust production and the workforce.

A harvesting ban will have a severe impact on employment in the sector. It is becoming apparent that the Forestry Department is taking control of decisions on harvests, once the prerogative of the MTE. A harvest moratorium would severely affect the income of the MTE and could result in a restructuring of the organisation.

Meanwhile, the Center for People and Forests (RECOFTC) and The Nature Conservancy has released details of their assessment of the reasons for the massive loss of forest cover in the country.

The report cites Myanmar's political and economic isolation as a factor which it said led to weak natural resource management. A focus on revenue

generation without taking account of productive capacity was cited as another reason for the extent of deforestation.

Three other organisations, Alarm of Myanmar, the Smithsonian Institute and the American Museum of National History jointly issued findings on deforestation in Myanmar, saying Myanmar lost about 1.5 million hectares of forests over the past 12 years.

The report also points out that due to species-based harvesting, overall forest values have also declined. Harvesting in Myanmar focuses on teak, Pyinkado, Padauk, Tamalan and Inn-Kanyin because of the strong international demand. – ITTO.

## Pidilite forms JV with ICA

Pidilite Industries Ltd., best known for its adhesive brand, Fevicol, is forming a 50:50 joint venture with the leading Italian wood finish manufacturer, ICA, by mid-May this year.

Named Wood Coat Pvt. Ltd., it will involve 50% stake from Fevicol and an equal share from ICA and its partner, Italcoats Pvt. Ltd., distributor of ICA wood finishes in India.

According to [www.dealcurry.com](http://www.dealcurry.com), Pidilite's board of directors has agreed to an equity investment of Rs. 63.75 crore, along with another investment of up to Rs. 62.5 crore in the JV. The wholly owned subsidiary of ICA, Wood Coat was incorporated in November 2015.

Active since 1993 in India, Italcoats has around 14 showrooms, 45-odd distributors and about 1,800 dealers spread throughout the country.



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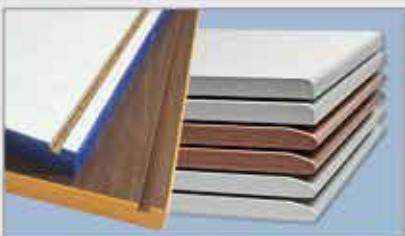


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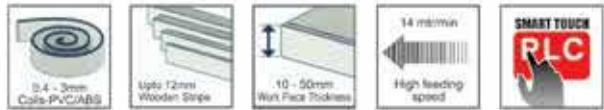
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Regardless of their size, woodworking companies from small to major league are increasingly using the same machinery. This international market trend has direct implications for Ligna as the world's leading trade fair for machinery, plant and tools for the woodworking and timber processing industry.

A new distribution of themes will address this market shift and make Ligna (22-16 May, 2017) even easier for visitors to navigate. It will feature a brand-new site layout jointly conceptualised by Deutsche Messe, the woodworking branch of the German Woodworking Machinery Manufacturers' Association (VDMA) and Ligna exhibitors.

There will be a total of seven display categories at the biannual show in Hannover, Germany. The display categories have also been rearranged for more logical transitions between related topics on site:

- Tools, machinery and plants for custom and mass production

## New site layout unveiled for Ligna 2017

- Surface finishing technology
- Wood-based panel production
- Sawmill technology
- Energy from wood
- Machine components and automation technology
- Forestry technology

The market leaders will be spread across several halls. Surface treatment technology gets its own dedicated display. The modified spread of displays on the open-air site is largely shaped around the main stages in the production chain.

Ligna 2015 attracted 1,552 exhibitors, 56% of whom were from outside Germany. The displays occupied a total area of 1,21,195 square metres. A total of 93,100 visitors, 40% of whom came from abroad, were on hand to see the latest new products, investing heavily in new technologies.

## Century Ply to enter MDF market with new plants

Century Plyboards (India) Ltd. is setting up medium density fibreboard (MDF) manufacturing unit in Hoshiarpur, Punjab, at a cost of Rs. 440-crore. Hindu Business Line quoted a company official as stating that the commissioning of the new factory by mid-2017 will mark the company's entry in the MDF space.

MDF is an alternative to ply boards in furniture making, and building of partitions or ceiling panels.

The project will have a capacity to produce 1.98 lakh cubic metres of MDF per year, along with a plywood and block board unit with an initial annual capacity of 17,000 cubic metres. The company will enhance the plywood manufacturing capacity to 51,000 cubic metres by end-2017.

Sourcing of raw material and its cost are crucial issues for plywood manufacturing. MDF, which is made of easily available wood chips and bound by resins, can avoid the key raw material linkage.

Century Ply recently commissioned a Rs 60-crore green field particleboard unit in Chennai, Tamil Nadu. Particleboard, made of timber waste or saw mill dust, does not require timber as primary raw material.

A ban on logging and prohibition of unprocessed timber exports have prompted Century Ply to import processed raw material from South-East Asia. The company has set up five timber processing units in Laos and one in Myanmar through step-down subsidiaries.

Century Ply is also planning to establish two units in Indonesia, as well as one in Vietnam.

# The Madras Industries



## Brands

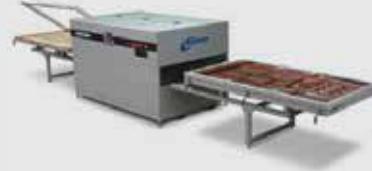
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# Ports to help furniture market grow



In a major developmental initiative to pave the way for port-led industrialisation, the Union Shipping Ministry's ambitious Sagarmala project – aimed at accelerating economic activities by harnessing the potential of India's coastline and river network – will focus on developing furniture clusters near major ports.

Port-led industrialisation throughout the world in the past 20 years has helped the furniture manufacturing sector grow,

and this can be pursued in India to enable the country garner a significant share in the global furniture market.

The development of port-based furniture clusters will help reduce the overall cost of exports from India and counter the Chinese dominance in the world furniture market, a draft report on the national perspective plan of Sagarmala project stated.

The reduction of logistics cost, among others, will lower the overall value chain

cost of finished products and reduce raw materials import cost. Therefore, setting up of port-based clusters will help reduce the overall export cost.

India, according to the report, has a maximum share in furniture exports to the US and UK, besides being a self sufficient domestic market, due to the rising consumer interest in home décor products of premium brands.

## PEFC to brainstorm in Bali

'Sustainable Landscapes for Sustainable Livelihoods' is the theme of this year's Programme for the Endorsement of Forest Certification (PEFC) annual meeting to be held in November 2016, at Bali. PEFC is the world's leading forest certification system.

Some of the questions that will be discussed include: How can trees best contribute to lifting people out of

poverty? What is the role of forests in meeting the needs of the world's growing population without jeopardizing our planet's natural capital? How we can enhance and safeguard the benefits of the numerous products and services forests provide?

The two-day stakeholder dialogue will provoke exchange amongst participants to advance how sustainable forestry and

forest certification can contribute beyond traditional boundaries to deliver on ambitious global commitments.

The event will explore how forest certification can expand in various dimensions to further its impact in promoting sustainable landscapes where trees deliver maximum positive impacts to people and the environment.

# Flipkart ties up with Godrej Interio

In a move that will help increase its play in furniture space, Flipkart recently announced an exclusive partnership with Godrej Interio to enable customers to access an exclusive and unique range of furniture.

Flipkart will offer the complete collection of furniture, which includes designs for

living room, dining room and bedroom. Godrej Interio is looking at a long-term partnership with Flipkart to make its offerings available to a larger online customer base across the country.

The online furniture market is valued at US\$ 130 million and is expected to grow at a compounded annual rate of 75% to

reach over US\$ 700 million by 2020, according to industry experts.

This growth is to be attributed to the fact that furniture and the home-decor category is evolving beyond its utilitarian value to become part of one's lifestyle choice.

## Henkel's solar power CSR initiative



Henkel India, a fully owned subsidiary of Henkel AG & Co., the leading solutions provider for adhesives, sealants and functional coatings, has taken a big step towards sustainability with its CSR project, 'Lighting Lives'. It aims to provide electricity to villages in Maharashtra by installing solar panels.

The Indian government has set a deadline of May 1, 2018 for "100 per cent village electrification" and has allocated a fund of Rs 8,500 crore to achieve this key target of rural electrification. Henkel, through the 'Lighting Lives' project, intends to contribute to this development story of India while continuing to shape the business responsibly and increase economic success.

By 2020, the company also intends to reduce carbon-dioxide emissions, water use and waste volume at production sites by 30% per tonne of product, compared to 2010. Occupational safety is to be improved by 40% and sales by 22% per tonne of product.

## Malaysian mission at IndiaWood exceeds target

Four Malaysian timber companies, who set a modest target of RM 2,50,000 in sales at IndiaWood, one of the world's largest trade shows for furniture production technologies, woodworking machineries, tools, fittings, accessories and raw materials, have recorded RM 4.3 million in confirmed and potential sales.

The four companies comprising of two first-time exhibitors, showcased their timber products under the Malaysian Timber Council's (MTC) pavilion at the Bangalore International Exhibition Centre from 25-29 February, 2016.

Besgrade Products Sdn Bhd and Stanford-Dor Marketing Sdn Bhd chalked up sales of RM 8,30,000, while repeat participants Desa KL Enterprise Sdn Bhd and Sri Ledang Sdn Bhd recorded potential sales of RM3.5 million.

Participation at IndiaWood 2016 was critical as India is an important market for Malaysia as it is the third-largest trading partner after Japan and the US. In 2015, the value of major timber and timber products exported to India was RM 1.9 billion, an increase of 6.4% compared with 2014.

# Greenply walks the talk: Customer is king!

Taking the hurdles in sales and marketing by the horn, Greenply Industries Ltd. (GIL) has developed and implemented a mobile customer relations management (CRM) App for its field force to procure and monitor real time data.

GIL is India's largest interior infrastructure company with a turnover of Rs. 1,560 crore, and is a leader in the plywood and medium density fibreboard (MDF) market, with a 30% share of the organised plywood market in the country.

The field force of the company was not able to provide real time data to the back office in terms of how many leads they were able to convert into opportunities. Mr. Vineet Bansal, Head of IT at GIL, was quoted by [www.cio.in](http://www.cio.in) as saying: "Opportunities are actual numbers which the field force has enabled. The issue was that the field force was not able to meet the actual numbers."

On opening the application, it shows a dashboard from which the field force can choose options such as leads, opportunities, accounts, etc. A user can see a list of records, can create new records, or edit existing ones.

'Project Disha' and the application, MS CRM, is unique in that it is easily customizable as per GIL's need, and new requirements can be addressed with easily configurable forms that do not require programming.

Equipping the field force with laptops and CRM software was not an option as Internet connectivity in semi-urban and rural areas was a concern. Considering that most members of the field force had smart phones, the IT department rolled out the App, which also works offline.

A user can feed in data in the absence of Internet connectivity, which can be synchronised automatically with GIL's server, when connectivity is available. This was necessary as rural and semi-urban areas are not fully equipped with 3G or 4G connections.

Phase-I of the project, which was rolled out in Delhi, Kolkata and Bangalore on 16 March this year, has already paid rich dividends: productivity of the field force has increased 20%.

GIL is now planning to roll out a business intelligence application on the mobile phone platform, so that the field force can download sales reports on a daily basis.



## SCM reports 17% net profit

The SCM Group, a leading producer of advanced technology solutions for the woodworking industry, presented its 2015 results recently at the press conference at the Holz-Handwerk Trade Fair in Nuremberg, Germany.

The Group, headquartered in Rimini, Italy, closed the year with more than Euro 500 million in sales, a 10% growth compared to 2014, and with Euro 56 million of gross operating margin, a net profit of Euro 17 million and debt down to zero.

It also recorded significant achievements in overseas markets, which account for 90% of its business. It opened three new branches in Dubai, Kuala Lumpur and the US West Coast, expanding the already widespread international network.

The group's network spans 20 overseas branches, three main production centres in Italy, and more than 350 distributors and agents operating in 120 countries, according to its CEO, Mr. Andrea Aureli.

The woodworking machinery division reached a turnover exceeding Euro 380 million, which places it as the second-biggest player in the sector. The turnover has increased 23% compared to 2014, with over 17,000 machines sold.

# Richwood wins 'Udyogshree' award

Mr. Raghavendra Badamikar, MD of Richwood, manufacturers of Richfill wood putty, was presented with Maharashtra's prestigious "Udyogshree" award by the Finance Minister, Mr. Sudhir Mungantiwar, at a function held at the Maharashtra Chamber of Commerce Hall in Mumbai, on April 18, 2016.



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# Decora named 'Mega Brand' by magazine



Decora Group, which has carved a niche in the market with its cost-effective solutions, products that are reliable in use and eye-catching in appearance, has been named 'Mega Brand 2016' by *Architecture+Design* magazine.

*Architecture +Design* is a 26-year-old national monthly magazine of architecture for architects, designers, students, construction industry, building promoters and planners. It is also instrumental in constituting the only national awards '*Architecture +Design* and Spectrum Foundation Architecture Awards'.

Decora Group has been producing finest quality cabinet wooden and MDF panels, especially kitchen shutters, living room cabinet panels, bedroom wardrobe panels and bathroom panels since 2005. Backed with more than a decade's experience in this industry, the Decora team constantly innovates, upgrades and launches new products from time to time.

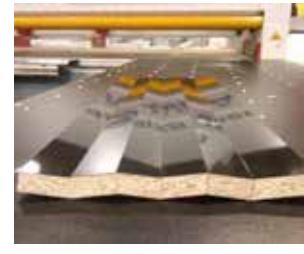
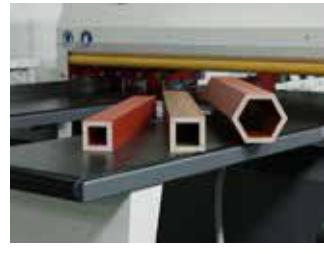
The company offers an exquisite range of kitchen panels with world-class membrane and high-gloss finishes, laminated PVC edge-banded, aluminium profiles, PVC wrapped MDF profiles and decorative wall panels.

In 2013, Decora started manufacturing India's very own premium acrylic high-gloss panels under the brand 'Ornare', establishing the latest PUR flat-lamination line in India from Germany. Ornare was recently awarded the prestigious 'Innovative Kitchen Product Award-2016' by the India Kitchen Congress.

Last year the company introduced a new collection, 'Polimero', of ultra-high-gloss panels that are stylish, durable, environment-friendly, high scratch-resistant and UV-resistant. For details visit [www.decora.in](http://www.decora.in) or [www.ornare.in](http://www.ornare.in).

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### LATEST NEWS

#### Woodnews' 'Smart' venue mode is ideal

Woodnews Magazine, the German specialist in pre-treatment, planning and training, has developed a new feature for its website. It's called 'Smart' and it's designed to make life easier for visitors to the website.

Woodnews Latin America 'Smart' mode is ideal

The Latin American version of Woodnews magazine has launched a 'Smart' mode on its website.

#### Global wood conference in Germany

The Institute of Wood Science and Technology (IWST), Darmstadt, is organising an international conference on wood science and technology and design.

#### Woodnews' 'Smart' mode is ideal

The Indian conference, organised by the Indian Forest Research Institute (IFRI), Dehradoon, will be held on 11-12 June 2015. The theme of the conference is 'Wood: Sustainable Resource and Product Development for Industrialisation'.

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# Clariant doubles capacity for pigments in India



Clariant has announced the inauguration of an extension to its production facility in Roha, near Mumbai, India. The expansion doubles its capacity at the facility for pigments and pigment preparations.

This higher output will enable the company to increase its market coverage in India and the neighbouring countries of Bangladesh and Sri Lanka, and to provide products better tailored to customer needs.

The increase in capacity has been made possible with the introduction of the

latest equipment for pigment preparation. The improved plant, in which Clariant has invested Euro 2.65 million (Rs. 20 crore), forms part of a strategic programme that the company has been carrying out in recent years to support customers in emerging markets with pigments and pigment preparations that comply with local and international eco-labelling schemes.

Pigments and pigment preparations produced at the Roha plant are for a wide range of applications: from including interior and exterior coatings,

packaging, automobile paints to dispersions for printing.

Clariant also provides a wide range of pigment preparations for solvent- or water-based wood coating systems, allowing customers to achieve the desired light fastness and opacity.

It offers a large range of pigment products and solutions to fulfil the specific and diverse challenges – including processability and colourfastness – encountered by its customers in manufacturing decorative coatings.

## Lorna Christie named NHLA Executive Director

The board of managers of the National Hardwood Lumber Association (NHLA) in Memphis, Tennessee (USA) has announced the appointment of Ms. Lorna D. Christie as the organisation's new Executive Director. She will be the first woman to serve in that role in NHLA's 118-year history.

The world's largest and oldest hardwood industry association, NHLA represents more than 700 companies and individuals that produce, use and sell North American hardwood lumber, or provide equipment, supplies or services to the hardwood industry.

Lorna's diverse career experience includes senior management roles in corporate, non-profit, and government organisations. Her key areas of expertise include strategic planning and change management, marketing communications, public and government affairs, crisis mitigation and management, and branding.

She also served under the administration of Mr. George Bush Sr. in the office of the special adviser to the President, Office of Consumer Affairs.

Ms. Pam Jenkins, President of NHLA's

board of managers, said, "Our ongoing work on the NHLA strategic plan has helped us recognise that change is inevitable. We are excited to have found Ms. Christie, an accomplished association executive with a proven record of successfully leading complex organizations."

Lorna said, "I am honoured to be chosen as the Executive Director for such a prestigious organisation. NHLA has played an important role in the hardwood lumber industry for over 100 years." ([www.nyla.com](http://www.nyla.com))

# Homag tops €-1-billion sales milestone

The world's largest woodworking machinery manufacturer, Homag Group AG, has broken the Euro 1-billion sales revenue mark for the first time in its history. The company reported a growth in annual sales last year to Euro 1.039 billion, while order intake grew by 16% to Euro 1.058 billion.

"In the past fiscal year, we were very successful in North America, but we were also able to grow in Western Europe," said Homag CEO, Mr. Pekka Paasivaara. "We have thus continued our growth path, and we have exceeded the billion Euro sales threshold one year earlier than planned."

The company said it expected order intake and sales revenue to grow slightly in 2016. The number of employees has grown to 5,906, with more staff recruited in India, Poland and the US.

Homag said last year's Ligna exhibition in Hannover and the company's own in-house shows had showcased numerous innovations which had been received well by customers (see WoodNews: July-August 2015).

## LETTERS TO THE EDITOR



### Mr. Satyan Thukral

*CEO, Caple Traders, Mumbai, Maharashtra*

In an age where furniture is being sold online and with international manufacturers at our door step, things are changing for the woodworking industry in India. On the one hand there are Chinese furniture manufacturers threatening the indigenous carpenter community; and on the other hand the community itself is shrinking due to the new generation's reluctance to join the industry.

However, there is still scope for individuals who do their own furniture. There are a few training centres in India, with Caple Traders itself playing host to them in Delhi, Mumbai and Bangalore. These centres have the best brands in their portfolio and teach solid woodworking, panel processing, surface finishing, drywall construction, solid surfaces, laminate cladding and more.

We train our customers as well as trainers: education is our core and selling the concept is more important than selling the machines. Caple Traders also believe in "zero defect, zero effect". 'Zero defect' means the best quality, while 'zero effect' means safety of workers, machines and optimization of time, labour, space, energy and resources.

Till recently carpentry was a man's job, but with the latest tools and equipment there is large scope for women to join and contribute to this industry. Although India can never become China in terms of volume, or like Europe in terms of education and innovation, we possess a power that none of these markets have: the power of customisation at affordable price.



### Mr. Avinash Phanse

*Senior Engineer (Retd.), Western Railway,  
Mumbai, Maharashtra*

WoodNews is very important and useful for the construction business, especially as wood constitutes up to 22% of the current construction material and cost. Hence, keeping abreast with the latest developments, such as flexible wood for new shapes in construction, is essential.



### Mr. Satish B.S.

*Vinyas Wood Works, Bangalore, Karnataka*

WoodNews is very useful for me in my profession and, whenever possible, I have made it a point to attend all your exhibitions and programmes throughout India. I have also been able to source machinery after reading about them in your magazine.

# J-4700.in (Auto) Edge Bander



## Instructions for cleaning, checking and lubrication of the machine

Before performing cleaning, maintenance, adjustments, fittings or removing any machine part, set the main ON/OFF switch to the OFF position, disconnect the compressed air tube at the filter unit in feed.

### Rules for correct machine cleaning

By using a power dust aspirator clean:

Tables and all cavities where there are dust and shavings residues.

Extractor hood, checking that there are no blockages.

The inside of the machine, checking for

dust or shavings.

The end cutting, trimming, edge scrapping & buffing unit.

The feed track conveyor unit.

Remove any glue residues along the panel feed path, using a suitable non-hazardous detergent. Clean all moving parts specially the ones exposed to the resin and dust.

Scheduled maintenance is of the utmost importance to obtain the best performance as well as a safe operation of the machine.

Hourly cleaning around end cutting, trimming and corner rounding unit for better performance in trimming is important.

Daily clean any excess glue at the bottom side of glue tank for better performance for gluing the edge band.

Accurate lubrication ensures long life as well as the best performance of the machine. Grease the glue spreader roller unit after every 8 hours of operation. Do not use grease to lubricate the guides and instead use spray lubricant.

The machine is equipped with safety devices. Every 2 weeks check the controls for emergency stops with a test. Periodically check that the guards are efficient and in a good state.

Over time the glue deteriorates and loses its adhesive properties; proceed to completely empty the glue tank and change the glue. Do not clean the glue tank with metal tools, to avoid any damage. Use a wooden scraper.

#### Cleaning and checking schedule

Scheduled maintenance is of the utmost importance to obtain the best performance as well as safe operation of the machine. Recommendations are given below:

- For general Machine cleaning a Daily Visual inspection is recommended using a vacuum cleaner to remove dust or shavings
- For Dust collector hoods a daily visual inspection should be done. Use a vacuum cleaner to remove dust or shavings
- For tables and all cavities where there may be dust or shavings residues, in particular in the motor cooling zone, a daily visual inspection should be done. Use a vacuum cleaner to remove dust or shavings
- For cleaning inside the electric panel a visual inspection approx every 1000 hours is recommended. Use a vacuum cleaner to remove dust or shavings
- For the sliding surface a daily Visual inspection should be done. Clean off any glue residues
- For the edging feed and presser rollers
- For the horizontal and vertical edging guide carry out a daily visual inspection. Clean off any glue residues
- For the glue tank carry out a daily visual inspection and internal cleaning. Open the glue tank lid and clean with a wooden scrapper and dry cloth. Close again
- For the Glue roller a visual inspection and operating test daily is suggested.

Check that the glue roller shaft rotates in an even and regular way. If you find any fault, contact to the local dealer or to the company.

- For the compressed air regulator filter, check of the tank and filter a weekly drain off any condensation present in the tank has to be carried out
- For the edge cutting, end cutting & trimming cutters visual inspection and operating test weekly is recommended. If there are edging cutting defects, contact to the local dealer or to the company.
- For the emergency and safety devices a visual inspection and operating test every two weeks is suggested and if required carry out a stop test
- For the feed conveyor unit carry out a visual inspection weekly and clean with suitable detergents which do not harm the surface of the conveyor pad.
- For the glue tank carry out a visual inspection daily and clean the glue spreading roller unit

#### End cutting & trimming unit

- For cleaning the unit a visual inspection weekly is suggested. Use a vacuum cleaner with suitable shaped opening to remove dust or shavings. Remove glue residues from tools using suitable, non-hazardous detergents.
- For cleaning of aligning devices a visual inspection daily is suggested. Remove glue residues from tools using suitable, non-hazardous detergents.
- For slide ways guides a weekly visual inspection is recommended. Clean with a soft cloth and lubricate them.
- For cleaning the unit, extractor hoods and motor cooling zone a visual inspection hourly or daily or when obviously necessary is suggested. Use an air gun or a vacuum cleaner with suitable shaped opening to remove dust or shavings.

#### Edge scraping unit

- For the edge scraping unit a visual inspection daily or when necessary is

suggested. Use a vacuum cleaner with suitable shaped opening to remove dust or shavings. Then use a dry cloth to clean

#### Buffing Unit

- For the buffing unit a visual inspection daily is recommended. Use a vacuum cleaner with suitable shaped opening to remove dust or shavings. Then use a dry cloth

#### Lubrication

The accurate lubrication ensures the long life as well as the best performance of the machine.

Recommended grease: Klüber uniflex nbu 15

Weekly grease:

1) Slide ways of the units

2) Support of the spreader roller

Recommended oil Agip gr mu 2: (or equivalent products)

Every 160 working hours lubricate slide ways (As shown in Fig) of the end cutting, fine so glue spreading roller provides precise & consistent glue application without glue overheating to avoid wastage of glue.

Over time the glue deteriorates and loses its adhesive properties. Proceed as instructed below to completely empty the glue tank and change the burnt glue inside the glue tank:

Bring the glue to the operating temperature and remove glue from roller.

While glue quantity was very less, close the glue tank handle (As shown in Fig).

Close the roller heater temperature. Open the wiper and sensor from glue tank.

It is necessary to open the entire glue tank from bottom fixing plate. Do not clean the glue tank with metal tools, since they will damage it. Use solvent kerosene for cleaning.

Always use gloves to prevent burns.

## MAINTENANCE CORNER

### Problems/Causes / Remedies

| Problems  | Causes   | Remedies  |
|---|--|---|
| The motor does not start  | No power on one or more phases   | Make sure that the 3 phases are correct.                                    |
|   | Emergency button pressed   | Switch off the emergency button by turning it.                              |
| The Conveyor does not start.                                    | The motors of the unit have not yet reached the right speed                    | Wait.   |
|   | Glueing temperature not reached.   | Wait.   |
|   | Conveyor motor or inverter damage  | Check operation and if necessary replace it.                                |
| The glue tank does not reach the set temperature.               | Heater wire damaged.   | Check and replace it.   |
|   | Thermocouple wire damaged.   | Check and replace it.   |
|   | Temperature controller damaged.  | Check and replace it.   |
|   | Neural wire damaged.   | Check and replace it.   |
| Excess or less glue quantity on the panel                       | Not proper opening or closing of the glue tank lever.                          | Adjusting the quantity of glue by setting it.                               |
| No glue on the rear part of the panel.                          | Wrong panel insertion into the machine   | Keep the panel in contact with the inlet fence.                             |
| Inadequate pressing of edge band & workpiece.                   | Glue feeding too less.   | Adjust the quantity of glue.  |
|   | Pressure roller pressure not enough.   | Increase the pressure roller pressure.                                      |
|   | Glue does not melt completely.   | Increase the temperature& check the quality of glue. Replace if not proper. |
| Edge cut not working properly                                   | Pressure of the shear unit not sufficient.                                     | Adjust the pressure.  |
|   | Shear defective.   | Check the sharpness of shear blade, if necessary replace it.                |
| Edge band at the rear is not enough.                            | The position of switch that controls feeding material & cutter is not correct. | Adjust the switch to the correct position.                                  |
| End cutting not accurate.                                       | Glue residues on the tools or aligning units.                                  | Remove the glue residues and clean the entire area.                         |
|   | Fastening not efficient or excessive tool wear.                                | Check the fastening or replace the tool.                                    |
|   | Tool worn.   | Replace it.   |
| Edge projecting to the panel sides.                             | Distance between tools and panel sides not right.                              | Adjust it.  |
| Panel sides damaged by the tools.                               |  |   |
| The motors do not reach the right position for the end cutting. | Working pressure not right.  | Adjust the pressure.  |
| Trimming on the panel not constant                              | The guide does not follow the panel surface.                                   | Increase the guide pressure.  |
| Trimming at the beginning of panel is not perfect.              | Position or stroke of the guide devices wrong.                                 | Adjust the position or pressure of guide.                                   |
| Splinters present on the edge.                                  | Tool cutting edge worn out.  | Sharp the cutting edge of tool or replace the tool.                         |
| Trimming unit vibration.  | Fitting of Unit was wrong or tool not balanced.                                | Check the fitting of unit or balance the tool.                              |
| Edge scrapping not constant.                                    | The guide devices do not follow the panel surface.                             | Set the guide so that it is constant.                                       |
| Edge scraping finishing not accurate.                           | Tools worn out.  | Sharp the cutting edge of tool or replace the tool.                         |
| Buffing effect is not perfect.                                  | Buffing wheel position not correct.  | Adjust the buffing wheel position   |
|   | Buffing wheel worn out.  | Replace the buffing wheel.  |

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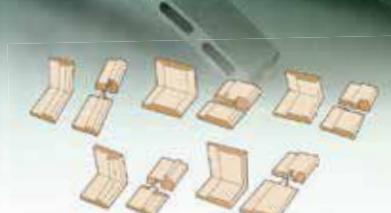
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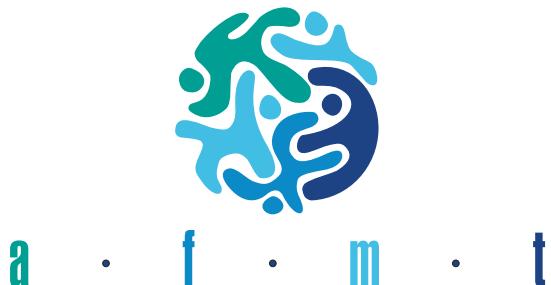
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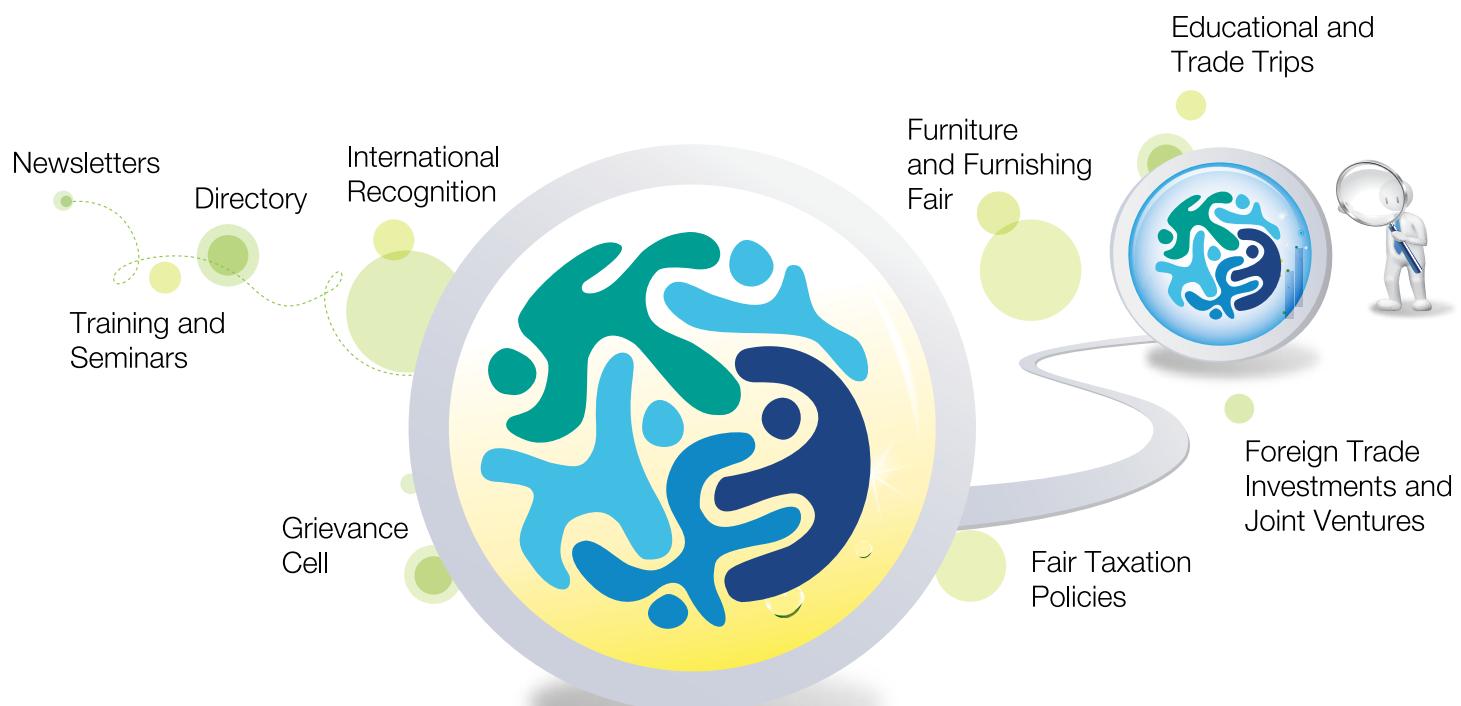
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# Green fire-rated doors from Sauerland

Sauerland Spanplatten has been active in the Indian door industry since 2008 and has introduced the tubular door concept enriched with their vast experience for 63 years and spanning exports to 65 countries.

This year Sauerland have upscaled the technology for the Indian door industry to introduce fire containment cores through their channel partners in India, for door set passing the 1-hour rating using Sauerland cores as per BS476: Part 22: 1987, or as per IS3614: Part 2: 1992.

The specialty of fabricating fire containment door with Sauerland core is that it eliminates use of any inorganic material in the construction (gypsum board, cement board or calcium silicate or fiberglass), making the door light weight and 100% recyclable. With additions of certain accessories one can make the door fire safe; smoke arrestor as well as sound reducing up to 38 dB.

Now for the first time in India, builders and architects can avail a triple acting door set which provides for the much necessary fire protection of 60 minutes, clubbed with sound reduction of 34 dB and clubbed with smoke containment technology.



Sauerland cores have very low formaldehyde level of E1, which means they are safe for internal use in residential buildings. These are the most light-weight fire doors, highly performance oriented for the 30- and 60-minute fire rated door category now available in India.

## Do it yourself

All a door manufacturer needs to do is arrange the red/white Meranti timber with minimum 650 kg/m<sup>3</sup> density, with moisture content under 10% for door frame and door leaf. Sauerland offers intumescent sheets and strips and fire-rated

hardware. It recommends BR201G MUF powder glue and 6-mm HDF skin (density 850 kg/m<sup>3</sup>) or very high interleave bonded plywood as skin to suit the application.

With this package making a “green” fire-rated door can make the manufacturer sell to the fire containment business, which is increasing by the day due to the increased construction of high-rise buildings. Sauerland offers to help door manufacturers with the processes; so catch up with them at IndiaWood 2016! (sleekboards@gmail.com).



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# EVENTS CALENDAR

## XYLEXPO

24-28 May 2016

Venue: Fiera Milano Rho Fairgrounds, Milan, Italy

Xylexpo, which held its first event in 1968, is one of the most important international show in Italy. The 25th edition will be held in Milan, from 24 to 28 May 2016, at the fieramilano fairgrounds located in Rho, Milan. For five days, thousands of skilled professionals from all over the world will come to see the best woodworking technologies first hand, as well as the best materials and components for furniture manufacturing. The exhibition is an ideal place to catch up with old customers, to meet new ones, to build partnerships and to size up the international competition.  
[www.xylexpo.com](http://www.xylexpo.com)

## WMF 2016

1 – 4 June 2016

Venue: China International Exhibition Center (CIEC) Beijing, CHINA

The 16th International Exhibition on Woodworking Machinery & Furniture Manufacturing Equipment and The International Exhibition on Woodworking Machinery Supplies & Accessories with an Exhibiting Area of 60,000sqm and over 600 Exhibitors will focus on intelligent and green manufacturing solutions. It is also set to assist woodworking and furniture enterprises in achieving energy-efficient, fully digitalized and sustainable production. With an aim to assist woodworking and furniture enterprises to capture the enormous business opportunities brought by the changing market needs, the event has several top-notch exhibitors, offering ultimate solutions for engineered wood. Exhibitors will bring their innovative machines and systems from all over the world.  
[www.woodworkfair.com](http://www.woodworkfair.com)

## Woodex for Africa

09-11 June 2016

Venue: Gallagher Convention Centre, Johannesburg, South Africa

Woodex for Africa is the country's only expo focussing exclusively on the timber industry. The event creates a platform for woodworking professionals to connect with specialised dealers, to catch up with the latest timber trends and to secure new business contacts. Held annually since 2012, it has received huge industry support and the event is now established as Africa's leading industry showcase. The earlier events received outstanding exhibitors and visitors, with exhibitors reporting positive feedback in terms of quality of visitors, networking opportunities, market exposure and business conducted. The show is representative of a large part of the South African timber industry and presents a wide range of machinery, tools, fits and finishes, components, equipment, new technology and materials in the timber industry.  
[www.wooddexforafrica.com](http://www.wooddexforafrica.com)

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## IWF (The International Woodworking Fair)

24 - 27 August 2016

Venue: Georgia World Congress Center, Atlanta, United States

The International Woodworking Fair 2016, a biennial trade show, is the 2nd largest show in the world serving the industry and provides buyers from around the world the unique opportunity to see side by side the most comprehensive innovative new technology available to the marketplace for machinery, supplies, and services for the industry showcased by over 900 exhibitors. The International Buyer Program will have an International Business Center onsite with trade specialists providing export counselling and business-to-business matchmaking with foreign buyers to U.S. companies exhibiting at the event.  
[www.iwfatlanta.com](http://www.iwfatlanta.com)

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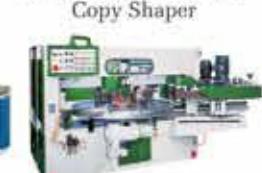
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